

Health and Sovereignty in the New Asia: Visions of Development¹

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RESÜMEE

Der Beitrag untersucht den Zusammenhang von Vorstellungen über Natur / Umwelt und Visionen asiatischer Entwicklung. Im Mittelpunkt steht dabei das Verhältnis von Krankheit, Gesundheitspolitik und Entwicklung. Rekonstruiert wird ein Prozess früher optimistischer Erwartungen in menschliche Fähigkeit, mit Hilfe von Technologie Natur zu meistern, hin zu einer pessimistischen Einsicht, dass dies nur begrenzt möglich ist. Asiatische Nationalisten und Sozialreformer rekurrierten auf koloniale Diskurse über das tropische Asien, waren jedoch davon überzeugt, dass Technik die Umwelt beherrschbar machen konnte. Ausdruck dieser Überzeugung war die globale Kampagne zur Ausrottung der Malaria, deren Schwerpunkt in Asien lag. Krankheitserreger machten jedoch nicht vor Grenzen halt, innerhalb derer Entwicklung zunehmend definiert wurde. Ebenso blieben Krankheiten ein Charakteristikum urbaner Räume. Zu Beginn der sechziger Jahre griffen Beobachter daher wieder auf vom Kolonialismus eingeführte Vorstellungen über die Unbeherrschbarkeit tropischer Natur zurück: nicht staatliche Institutionen oder nationale Entwicklungspolitik erschienen verantwortlich für die Persistenz von Armut, sondern Natur und Umwelt.

Already in Tokyo, house-fronts are dirty and Asian, but Hong Kong in the East, just as Cairo in the West, is the first true symbol, of clothes drying on projecting iron rods, or tattered gunny bags making do as screens, of ill-fed and diseased children, of fouled hu-

1 An earlier version of this article was presented at the workshop on Asian Experiences of Development at the National University of Singapore, June 2006. I am grateful to all the participants, and particularly to Marc Frey, Medha Kudaisya, Ronald Pruessen and Yong Mun Cheong for their comments and assistance. I am solely responsible for any mistakes.

*manity sprawling on the roadsides ... this Asia of teeming millions, of dirty and impotent millions. All Asia is prostrate with the common disease of poverty...*²

Ram Manohar Lohia (1952)

This declaration by Ram Manohar Lohia to a conference of fellow Asian socialists in Rangoon, in 1952, captures some crucial features of the imagination of development in post-colonial Asia: the notion of common sights, smells and dispositions across 'Asia'; the focus on the thickness of population, the 'teeming millions'; the biologization of poverty ('a disease'). In Lohia's vision there is more than an echo of a long tradition of discourse that David Arnold has called 'tropicality' – Asia as an area of heat and humidity which possessed distinctive vegetation, flora and fauna, a distinctive epidemiology, and produced distinctive (distinctively undesirable) human and social characteristics.³ This was a vision of tropical Asia dominated by the power of nature, and 'naturally' poor. Yet Lohia departed from many of his colonial forebears in his optimism that radical economic and social reform – that is to say, policy – could overcome the sloth and despair induced by geography. 'This is no time for laissez-faire', Lohia concluded, 'at least in Asia'.⁴ This article examines the shifting role of nature – and particularly of disease – in shaping visions of Asian development. The basic narrative of the paper lies in the gradual shift from optimism to pessimism about the possibility of conquering nature using technology, and I argue that this shift was shaped by the particularly complex bio-political terrain of Asia's borderlands, on the one hand, and growing cities on the other. A number of Asian nationalists and social reformers, I suggest, drew on aspects of colonial discourses about tropical Asia, but took a more optimistic view, that the tropics could be 'conquered' in the name of national development. From the early twentieth century, the belief grew that technology, discipline and social reform could conquer the tropics, thus transforming not only the natural environment, but social structures and even embodied behaviours. Within that vision – shared by a diverse group of scientists, officials, and political activists – there were contrasting emphases: a dominant view, which placed technology front and centre, and a current that emphasized redistribution and social transformation. Given its easy availability, its widespread political acceptability, and the sense of enthusiasm it was able to evoke, the techno-centric approach to conquering the tropics prevailed. The global malaria eradication campaign of the 1950s, which focused intensively on Asia, epitomised the faith in this approach, and represented the apogee of late-colonial-into-post-colonial optimism. However, the malaria eradication programme encountered several difficulties, and experience began to suggest that 'nature' would not be so easily subdued. Two questions in particular troubled governments and observers:

- 2 Ram Manohar Lohia, An Asian Policy [speech in Rangoon, March 1952], in: Marx, Gandhi and Socialism, Hyderabad 1963.
- 3 David Arnold, "Illusory Riches": Representations of the Tropical World, 1840–1950, in: Singapore Journal of Tropical Geography, (1999), pp. 6–19.
- 4 Lohia, Marx, Gandhi and Socialism (note 2), p. 292.

the first was that the space of malarial distribution did not correspond to the increasingly well-defined spaces of national economies – the anopheles mosquito was no respecter of sovereignty, and at times cast doubt on the ability of states to master ‘their’ territory. The second area where the narrative of epidemiological transition broke down was in Asia’s growing cities, increasingly central to the problematic of development.

By the 1960s, nature re-emerged as an explanation for poverty, for the inaction of states, and as the primordial condition of Asia. Frustrated states turned, more or less gradually, towards two kinds of policies which would characterize Asian approaches to development in the following generation, even as the paths of Asian nation-states diverged: an obsessive focus on population control, and an increasingly coercive urban policy of ‘slum clearance’ and ‘beautification’.

I

By the 1930s, a more optimistic narrative emerged to challenge the determinism of tropical medicine, out of the conjunction of nationalist thought and international professional networks. On this view, technology, knowledge and education could overcome the diseases of the tropics, and also the habits and bodily dispositions of tropical peoples. The historian of medicine Warwick Anderson has characterized this shift as the moment where ‘biomedical science ceases to be an environmental discourse in the Asian Tropics and becomes primarily a discourse on social citizenship’.⁵ An increasing number of observers – from colonial medical officials to Asian social reformers – felt that education might lead to the ‘modification’ of the human characteristics produced by tropical conditions.⁶

The new knowledge of nutrition played a central role in this transformation, by suggesting a materialist critique of the notion of tropical medicine. The global economic depression of the 1930s served as a catalyst for the wider circulation of new knowledge of human nutrition, with the League of Nations playing a central role in its transmission. Beginning with an investigation of the impact of unemployment on the nutritional status of workers in a number of European countries, the League swiftly moved to an authoritative declaration on minimum standards of human nutrition. Notably, the League’s seminal report suggested that their findings were as significant in tropical countries as in temperate, industrial lands. Developments in the scientific knowledge of vitamins provided a language that could draw together Europe and the colonies, ‘core’ and ‘periphery’, economics, geopolitics, and the government of the individual human body.

5 Warwick Anderson, *The Natures of Culture: Environment and Race in the Colonial Tropics*, in: P. Greenough / A. Lowenhaupt-Tsing (eds.), *Nature in the Global South: Environmental Projects in South and Southeast Asia*, Durham, N.C. 2003.

6 Anderson, *Natures of Culture* (note 5), pp. 40–41.

The explicitly comparative framework of nutritional discourse was open to application to colonial problems. Indeed, a significant amount of the 'new knowledge of nutrition' emerged from colonial laboratories. Perhaps the best known of the new nutritional studies were John Boyd Orr's contrast of the diets and health of the Maasai and Kikuyu, and Robert McCarrison's experiments contrasting the health and vigour of rats fed with Punjabi diets with the malnutrition experienced by their counterparts fed on the rice-based diet of the 'Bengalis and Tamils'.⁷ W. R. Aykroyd, director of the Coonoor Nutrition Research Laboratories, undertook the most wide-ranging research on questions of nutrition in South India. His pioneering research with Indian colleagues had shown that the preponderance of highly milled rice in the south Indian diet led to a range of nutritional deficiencies, as a result of the lack of proteins and of 'protective foods', and a particular lack of leafy vegetables and proteins. Significantly, Aykroyd and others suggested that nutritional deficiencies, more than the 'tropics' or particular cultural failings, explained the acute susceptibility of the Indian poor to infectious disease.

The implication was that education, and even a 'nutritional policy', might improve public health. A range of Asian nationalists took up the nutritional critique, their visions of the future sought to transcend the pessimism of colonial discourse on the tropics. Foremost amongst them was Gandhi. Gandhi's writings on nutrition are full of references to the latest research on the subject. He gave pride of place – because of its authority and its universality – to the League of Nations Health Committee's seminal findings on the Physiological Bases of Human Nutrition in 1936. A summary of the report immediately appeared in the pages of *Harijan*.⁸

In Gandhi's view, harnessing this international scientific knowledge could go towards increasing national vigour and vitality. Underlying Gandhi's experiments with food and hygiene was a critique of the economic impact of colonial rule on rural India. Not only did polished rice weaken the vitality of the Indian 'race', it was an example of the (economic and moral) impoverishment of India's villages through mechanisation:

*If rice can be pounded in the villages after the old fashion the wages will fill the pockets of the rice pounding sisters and the rice eating millions will get some sustenance from the unpolished rice instead of pure starch which the polished rice provides. Human greed, which takes no count of the health or the wealth of the people who come under its heels, is responsible for the hideous rice-mills one sees in all the rice-producing tracts.*⁹

In an article simply entitled 'Green Leaves', Gandhi declared that "since the economic re-organization of the villages has been commenced with food reform, it is necessary to find

7 J. Boyd Orr/J. L. Gills, *Studies in Nutrition: The Physique and Health of Two African Tribes*, London 1931.

8 Findings of the International Commission of Experts appointed by the Health Committee of the League of Nations, in: *Harijan*, 25 April 1936. The original report was: League of Nations, *Report on the Physiological Bases of Nutrition*, League of Nations Document A.12 (a), 1936.

9 Polished vs. Unpolished, in: *Harijan*, 26/10/1934.

out the simplest and cheapest foods that would enable villagers to regain lost health.”¹⁰ Gandhi’s critique culminated in the redefinition of his Constructive Programme in 1940: ‘it is impossible for unhealthy people to win *swaraj*’, Gandhi declared, “therefore we should no longer be guilty of the neglect of the health of our people”.

Interestingly, a regional imagination continued to shape the discussion of health in Asia, but now in a more complex way. An undifferentiated discussion of the epidemiology of ‘the tropics’ gave way, in light of nutritional analysis, to a consideration of the problems of the ‘rice-eaters’ of Asia. Aykroyd suggested, for example, that the illnesses common to a large part of South, Southeast and Eastern Asia came not from the determining influence of the environment, or even the ecology of rice cultivation, but from the interconnected regional economy. Malnutrition, he suggested, was a consequence of the regional economy involving the import of rice by the densely-settled parts of eastern India (and southern China) in exchange for the export of labour and skills to the frontier lands of Burma, Malaya and Ceylon.¹¹ During the Depression, the price of rice fell more sharply even than that of other commodities, and cheap, poor quality imported rice continued to flood south India.¹²

Alongside nutritional knowledge, new birth control methods, new insecticides, innovations in housing and in latrine construction allowed for the emergence of a more optimistic view of the possibility of transcending the tropics. As Warwick Anderson has put it, by the 1930s, ‘it is the irresistible technical force of modern colonialism – better cooling, refrigeration, “physiological” housing, railways, the telegraph – that stuns the new generation of scientists, exciting wonder and trepidation’, where once it had been sublime tropical nature that had fulfilled this role.¹³ Often with the support of the Rockefeller Foundation, keen to spread the gospel of ‘scientific’ social organization, demonstration areas and model health centres sprouted up across Asia in the 1930s – from northern China to Ceylon and South India. One of the most ambitious, and most publicized, was the Dutch colonial government’s Poekwertto Health centre in Java, run by the Rockefeller official Dr. J. L. Hydrick, whose faith in rural public health as a panacea for all ills is oddly touching. The League of Nations’ conference on Rural Hygiene in the Far East, held in Bandung in 1937, provided a forum for the exchange of ideas and enthusiasm, bringing British, French and Dutch colonial officials together with Chinese, Japanese and Siamese public health experts. The optimism was infectious. In their plans for the health services of post-independence India, the Congress Party’s National Planning Committee declared that India’s young health workers needed to be imbued with ‘missionary spirit’. ‘By example and persuasion’, these workers would ‘spread the gospel

10 M. K. Gandhi, *Diet and Diet Reform*, Ahmedabad 1949, p. 51.

11 C. J. Baker, *Economic Reorganization and the Slump in South and Southeast Asia*, in: *Comparative Studies in Society and History*, 23, 3 (1981), 325–39.

12 Ibid.

13 Anderson, *Natures of Culture* (note 5), p. 42.

of healthy living, communal and personal, and thus take other villagers a step or two away from their age-long prejudices and superstition on the road to better living'.¹⁴

As Asian nationalists began to 'see like a state' public health assumed a central place in their visions of national development, because it promised a way of overcoming natural conditions. That is to say, precisely those conditions which colonial officials had long used to explain Asia's poverty and excuse themselves from responsibility: the tropical environment, and its production of lassitude, inertia and sloth, and sensual excess. Perhaps the example par excellence of this transformation in nationalist thought – characterized by Partha Chatterjee as the 'moment of arrival' of Indian nationalism¹⁵ – is the National Planning Committee of the Indian National Congress, in which Jawaharlal Nehru and Subhas Chandra Bose were the driving forces. In a series of reports on public health, population, and on 'women's place in the planned economy', the Planning Committee gave voice to a vision of the future where science, technology, and personal and national discipline would conquer tropical poverty.

The Planning Committee decried the vicious circle of poverty and under-nutrition leaving the Indian poor with 'inadequate safeguards against the rigours of nature or ravages of disease to resist which they are very poorly equipped'.¹⁶ In the eyes of the Planning Committee, the qualitative issues of individual nutrition linked closely with the question of the quantity and 'quality' of the population as a whole. Increasing food production, as much as redistributing its consumption, was at the heart of the Planning Committee's vision. The Planning Committee declared that: 'all social customs, religious taboos and injunctions which now stand in the way of the husbandry of soil resources and efficient utilisation of available food resources have now to be abjured to mitigate the effects of chronic food shortage and poverty'.¹⁷ The health of the population became a reason of state. An unhealthy population would pose an obstacle to the state's plans for industrialization and social transformation.

This was but a first step. The planning committee declared itself interested in the 'possibilities inherent in careful scientific breeding of the human race'; in creating a new, improved race of Indian bodies that, healthy and vigorous, would allow for the country's 'development'.¹⁸ The health of the population becomes, here, an instrument, a tool for government in the service of greater aims – planned industrial development, and socio-cultural modernization. In the words of Mohan Rao's recent study, the Planning

14 National Planning Committee, Report of the National Health Sub-Committee, Chair: S. S. Sokhey; K. Shad (ed.), Bombay 1947, pp. 43-4.

15 Partha Chatterjee, *Nationalist Thought and the Colonial World: A Derivative Discourse?*, London 1986.

16 National Planning Committee, *Population: Report of the Sub-Committee* (Chair: Dr. Radhakamal Mukherjee), K. T. Shah ed., Bombay 1948, p. 8. See also National Planning Committee, *Report of the Sub-Committee on National Health*, Bombay 1948. Although the proceedings of the Planning Committee were published in edited form after the war, the discussions took place between 1938 and 1940.

17 NPC, *Population* (note 16), p. 127.

18 Ominously, the Planning Committee included Nazi Germany on its list of countries where 'successful' experiments on eugenic lines had been conducted.

Committee's vision was one of 'harnessing bodies not just for the economy, but for a sublime, and sublimating, nation state'.¹⁹

The techno-scientific breakthroughs of the Second World War – the insecticide DDT, antibiotic drugs, and X-ray technology – cemented the optimistic, transformative narrative of health and development. Converted bombers taking flight to blanket swathes of land with DDT transformed the bounds of the possible, suggesting the real possibility of disease control. This technology, married with the winning of sovereignty and state power by a newly mobilized and confident cohort of Asian nationalist leaders, made the post-tropical future look bright. Many were confident that, once the tropics were conquered by technology, history – human, secular history – would prevail over geography.

II

What emerged at the end of the Second World War, in fact, was a layered, regional, imagination of development. Two overlapping narratives tied together questions of health, ecology, and economic transformation in Asia. The first was the older, tropical, narrative; that is, the vision of what Pierre Gourou called 'hot, wet Asia', sharing fundamental, biological and political characteristics. The second was a historical discourse on poverty: an explanation of Asia's poverty in terms of a shared history of colonial exploitation and underdevelopment, the solution to which would lie in the assertion of national economic sovereignty, perhaps within the framework of some sort of broader, regional cooperation.

Thus, a number of discussions immediately after the war revolved around the idea that Asia posed a particular, and unified, set of problems with respect to the government of welfare; a set of commonalities and regularities in the sphere of political economy, governed by climate, resources, population and – as a residual category – 'culture'. Implicit in these discussions was a quest to define the scope of action open to post-colonial Asian states. Asian governments and the new international organizations alike saw a set of deeper regularities governing the conditions of life and health across Asia.

The conception of 'Asia' as an administrative category for the government of life and welfare drew on a range of disciplines, many of them colonial disciplines. The first was tropical geography and tropical medicine. 'Asia' found its unity, on this view, in patterns of climate and disease ecology. In the words of a WHO expert, writing in 1947:

The Central and South-Eastern parts of Asia, together with Indonesia, i.e. the 'Monsoon Asia' of geographers, should be considered as one epidemiological area. It would include the endemic foci of cholera and territories most readily infectible [sic.] by that disease ... it is free from yellow fever but is severely affected by malaria, by flea-borne and mite-borne rickettsioses and by the ubiquitous smallpox. Most of the area suffers from the food

*deficiencies of the rice eaters, from a high tuberculosis morbidity and mortality in its cities and the extension of the prevalence of that disease in the rural districts.*²⁰

The leaders and administrators of post-colonial states reinforced this view of 'Asia', as possessing a certain unity, but their focus was less on the disease environment and more on the ontological fact of Asia's poverty. Indeed, a focus on Asia's poverty undermined the power of tropical nature as an explanation for the region's disease patterns. Jawaharlal Nehru suggested, at the anti-colonial Asian Relations Conference of 1947, that 'backwardness' was the essential problem that united Asia; across the region, he said, 'standards of life are appallingly low'.²¹ There was an unfortunate commonality in that 'most of the Asian countries suffered from extreme backwardness in respect of health'. A committee at the Asian Relations conference explained the persistently high mortality and morbidity across Asia in terms of material deprivation: 'the reason for infant mortality and lower vitality', they argued, 'is also largely economic. It was stated that in Ceylon two-fifths of the population did not obtain sufficient energy from their diet'.²²

The social welfare committee of the Asian Relations Conference discussed the continent's problems in singular terms. The high levels of mortality and morbidity in 'Asia' were due to a veritable catalogue of ills: 'an extreme inadequacy of existing health services'; 'unhygienic environmental conditions'; a 'lack of education and certain social practices which have had an adverse impact on the physical and mental health of the people'. Above all, illness was due to poverty.²³

The implications of this definition of the problem of public health as part of a broader nexus of poverty and under-development had clear implications. The new international organizations and postcolonial Asian governments held the view that concerted policies of public health might form part of a broader series of interventions to bring about agrarian transformation and industrial development. A number of modernizing colonial administrators, and some British and American doctors, concurred.²⁴

The relationship between health and development remained ambiguous. On the one hand, public health policies would constitute an effort to liberate Asia from the deadening hand of 'nature'. Yet, there was also, in the immediate post-war period, a counter-argument, which held that liberation from the tropics would come not through technology, but with social justice, and the redress of historical inequalities. The tropics continued

20 World Health Organization Archives, Geneva. First Generation Files [hereafter WHO.1]: 452-1-5. 'Delimitation of Regional Health Areas on an Epidemiological Basis', Third Session of the Interim Commission of the WHO, 31 March 1947.

21 Asian Relations: Report of the Proceedings and Documentation of the First Asian Relations Conference, New Delhi, March-April 1947, New Delhi 1948.

22 Report on Social Services, in: Asian Relations, pp. 183-5.

23 K.C.K.E. Raja, Health Problems of India, Pamphlet from the Asian Relations Conference, Indian Council of World Affairs 1947 (Nehru Memorial Library collection).

24 On British colonial views on post-war development in their African territories, see F. Cooper, Decolonization and African Society; J. Lewis, Empire State Building: War and Welfare in Kenya, 1925-52, Oxford 2000; T. N. Harper, End of Empire and the Making of Malaya, Cambridge 1999.

to exert an influence on how development was imagined, but now in dialogue with a more transformative, social rather than environmentalist, discourse.

III

The 1950s and early 1960s saw the height of techno-optimism in the imagination of healthy development. The orthodoxy in international public health, by the early 1950s, was that radical new technologies would allow for the control, or even eradication, of ‘tropical’ diseases, as a precondition for development. Deploying an agricultural metaphor, a UN report declared that there was ‘the tangle, the jungle undergrowth, of disease which has to be cleared before a country has a fair chance of development’.²⁵ Most prominent amidst this ‘jungle undergrowth’ was malaria, widely accepted as the number one international health priority – not least because of the availability of DDT, and its seemingly miraculous results during and immediately after the Second World War. David Arnold has shown that ‘the identification of malaria with tropical backwardness and torpor became a recurring theme’, particularly in the writings of Pierre Gourou.²⁶

The notion that malaria was one of the most important factors underlying the prospects of development was widely held. Jawaharlal Nehru, addressing an Asian malaria conference in Delhi, put the challenge in universal terms: ‘In this, as in other matters which affect us underdeveloped countries’, he declared, ‘the pace, the speed of advance, become all the more important. ... If you don’t go fast enough, the others will’. ‘The others’ in this case referred to all manner of natural forces, from evolving anopheles mosquitoes to the ‘iron laws’ of human population growth. Nehru himself suggested that non-human actors might shape the outcome of events: ‘In many of these regions of Asia, maybe elsewhere, malaria has been a more powerful determinant in the course of human history than people imagine’; the implication was that it might still prove to be so.²⁷

Nothing better symbolised the narrative linking biology with development than public representations of the malaria control programme, from the mid-1950s. In 1954, the Indian government issued a postage stamp to mark the intensification of anti-malarial efforts under the Five Year Plan, funded and orchestrated by the WHO and the American Economic Cooperation Administration.²⁸ As a cultural marker, it tells us much about the way in which national and international public health was imagined in the 1950s. In the image, we see the staff of Asclepius, with its characteristic intertwined snakes, rising from the ground like a telegraph pole, confronted by a giant mosquito. It symbolises

25 UN, Preliminary Report on the World Social Situation, New York 1952., p. 25.

26 David Arnold, “Illusory Riches” (note 3), p. 15. See Pierre Gourou, *The Tropical World: Its Social and Economic Conditions and Its Future Status*, London 1966 (4th ed.).

27 Report on the Third Asian Malaria Conference, Delhi, 19-21 March 1959, WHO. SEA/Mal/16, Annex 3, Opening Address by Jawaharlal Nehru.

28 On the intensified National Malaria Control Programme in India, see: D. K. Viswanathan, *The Conquest of Malaria in India: An Indo-American Co-operative Effort*, Bombay 1958; Government of India, Directorate General of Health Services, Annual Reports, various years; Roger Jeffery, *The Politics of Health in India*, Berkeley 1988.

the connection between public health and national development. In the foreground of the picture is agriculture, on which malaria control would have the most immediate impact. A path leads from the well-ploughed fields to the small rooftops of a meticulously planned town. In the far distance, symbolising the end-point, are two smokestacks evoking the industrial modernity to come. The image exudes exactly that strong aesthetic dimension that James C. Scott holds to be central to 'high modernism'.²⁹

Spraying with DDT was a means of making land cultivable and releasing labour for the modern industrial economy. Indeed, malaria eradication would cement the space of the 'national economy' itself, making the space of production congruent with the space of state sovereignty, removing 'natural' obstacles to cultivation. The invocation of the Terai region signifies an escape from the tropics, for it had been notorious in the colonial imagination as representing the lethality of the Indian environment. The Terai, David Arnold has shown, was once 'almost defined by death. This tract was considered so deadly as to be impassable for Indians and Europeans alike through a large part of the year'.³⁰ The key was to be able to show that malaria eradication would allow for an increase in food production, at a time when, from east and west, alarm grew about the global 'population explosion'.³¹

It was not long, however, before the language of 'natural forces' re-emerged strongly, with increasing reports of natural resistance to DDT, of obstacles and shortcomings standing in the way of the smooth workings of the malaria eradication machine. Already in 1955, exhorting the world's governments to support an intensification of the malaria control programme, the American malariologist Paul Russell posed the problem as an acute struggle between nature and development:

*Already four or five of the fifty-odd major malaria-carrying anopheline species had developed different kinds of resistance to DDT in certain areas ... Since there was not at present any satisfactory substitute method of attacking malaria, it was very important to eradicate the disease before the vector anophelines became resistant to the insecticide. It was not known exactly how many years the insects would remain sufficiently susceptible to DDT to allow of malaria eradication; the minimum appeared to be six or seven years and the maximum ten.*³²

Perhaps as significant as 'natural' resistance was the fact that national sovereignty was always vulnerable to the influence of transnational movement. The international health campaigns of the 1950s were organized on a territorial basis, each centred on a pilot project or a training centre – the most important of them staffed by international consultants. The boundaries of these regions were assumed fixed, usually according to geo-

29 James C. Scott, *Seeing Like a State: Why Certain Schemes to Improve the Human Condition Have Failed*, New Haven 1998.

30 David Arnold, *The Tropics and the Traveling Gaze: India, Landscape, and Science 1800–1856*, Delhi 2005, p. 49.

31 Cf. Matthew Connelly, *Fatal Misconception. The Struggle to Control World Population*, Cambridge 2008.

32 WHO, Committee on Programme and Budget, Sixth Session, 1955, OR, 63, p. 198.

graphical or epidemiological features (Burma's hill zones, Ceylon's 'dry', 'intermediate' and 'wet' zones), or, as in India, according to the lines of provincial boundaries.³³ Yet the population of South and Southeast Asia in the 1950s was anything but stable. If the borders between nation-states were increasingly rigid, the boundaries of regions were constantly in flux.³⁴ The 1950s saw a significant and continuing movement of population across the borders of India's partition. Civil and political conflict spurred the frequent movement of population in Burma and Indonesia, to say nothing of the tens of thousands of Asian Muslims who made the pilgrimage to Mecca each year.³⁵ Not only were the pathogenic targets of the international health campaigns constantly slipping out of control, so, too, were human victims, or 'vectors', of infection. The plans for disease eradication assumed populations to reside within static regions, densely or sparsely populated, hypo- or hyper-endemic with malaria. They assumed, furthermore, that the space of claimed sovereignty would also constitute the space of national disease control programmes. Yet as Agnese Lockwood, an American political scientist, observed in Burma at the time:

*The whole programme ... is seriously jeopardized by the inaccessibility of insurgent-held regions. To be effective, a programme must cover the infested areas and their population 100 per cent. Not only do mosquitoes fly from one place to another but, even more serious, they gradually develop resistance to insecticides. At the present time, a race is developing in Burma between the vector resistance and the government's ability to make the entire country accessible to malaria spray teams.*³⁶

There was a constant 'threat of infection across borders with India, Pakistan, China, Laos, Thailand'.³⁷

Although the malaria control programme was conceived as a transnational initiative, the WHO planners ultimately assumed a series of 'homogeneous' national spaces that did not exist. Where the reach of state sovereignty was weakest, so the threat of infections crossing borders was greater. At the end of the 1950s, Edmund Leach concluded that the Burmese state's 'claims regarding territorial suzerainty were optimistic in the extreme'. Leach argued that 'the authority exercised by the central government over the Independent Sovereign State of Burma over its outlying regions in the year 1959' was in some senses 'a fiction'. Nor did the sharp dichotomy between the densely populated Valleys of Burma and the 'isolated' Highland societies prove an adequate representa-

33 WHO, SEA/Mal/5 (1956); WHO, SEA/Mal/7 (1957); WHO, SEA/Mal/6 (1956).

34 See the essays in P. Kratoska/R. Raben/H. Schulte Nordholt (eds.), *Locating Southeast Asia: Geographies of Knowledge and Politics of Space*, Singapore 2005.

35 A report on the implications of the Haj for malaria eradication exposed another challenge posed by population movement, this time of an inter-regional kind: M. A. Farid, *The Pilgrimage and its Implications in a Regional Malaria Eradication Programme*, 9 April 1956, WHO/Mal/168.

36 Agnese Lockwood, *The Burma Road to Pyidawtha*, Carnegie Endowment for International Peace, *International Conciliation*, No. 518, May 1958, p. 433.

37 Ibid..

tion of Burmese society.³⁸ Even anecdotal evidence from the time suggests that people, including sick people, were very mobile, presenting a picture of ‘population’ very different from the one established in the documents on malaria and tuberculosis control in Burma. Ludu U Hla, Burmese journalist and folklorist, collected, in the 1950s, a series of life histories, narratives of his fellow prisoners in Rangoon central jail – each was a story of movement, from the Karen lands to lower Burma, from Rangoon to the Tamil Nadu countryside and back again; and, almost universally, from the country to the city.³⁹ Borderlands have always posed a particular problem for the planners of development in post-colonial Asia.

IV

Development was, to adapt Raymond Williams, imagined as a journey from the country to the city. In the realm of economic theory, this found expression in W. Arthur Lewis’s vision of the ‘dual economy’ and the transfer of labour from the ‘economic darkness’ of the ‘traditional’ sector to the ‘fructification’ of the modern capitalist economy. The journey from country to the city formed an almost ubiquitous cultural narrative in the postcolonial world – in cinema, in literature, both high-brow and low-brow, and in the popular imagination. With his genius for synthesis and comparison, Mike Davis has recently shown that the 1950s and 1960s marked the ‘takeoff’ of the mega-cities of the South, and, with it, the growth of urban slums.⁴⁰ The ‘housing problem’ remained one of the most pressing challenges of development, and one of the most neglected.

It was in the alleyways of Asia’s growing urban slums that the dreams of disease eradication were lost; the lanes through which, quite literally, pathogens and the ‘carriers’ of disease could not be traced. The city was where the narrative of epidemiological transition crumbled. Whereas medical science and modernization theory, put together, suggested that the transition from the country to the city would signify a transition from epidemic to chronic disease, the true picture was more complicated, and less predictable: a recent account suggests that:

*The urban poor are the interface between underdevelopment and industrialization, and their disease patterns reflect the problems of both. From the first they carry a heavy burden of infectious diseases and malnutrition, while from the second they suffer from the typical spectrum of chronic and social diseases.*⁴¹

Early optimism that the revolution in pharmaceutical technology might circumvent the problems of poor housing and overcrowding, for example in the treatment of tubercu-

38 Edmund Leach, ‘The Frontiers of “Burma”’, in: *Comparative Studies in Society and History*, 3, 1 (1960), 49–86, p. 61.

39 Ludu U Hla, *The Caged Ones* ([1958] trans. Sein Tu, Bangkok 1986).

40 Mike Davis, *Planet of Slums*, London 2006.

41 E. Werna/I. Blue/T. Harpham, cited in: *ibid.*, p. 147.

losis, proved ill-founded. Instead, Indian medical researchers in the early 1960s found that the urban environment posed formidable obstacles to the penetration of the medical gaze. The very chaos of the urban landscape and the fluidity of population rendered any hope of tight control over patients taking drugs at home very difficult. Investigators at the National Tuberculosis Institute of Bangalore pointed out that they could not find, let alone supervise, the tuberculosis patients whose courses of drug treatment they were overseeing:

...in many cities in India, and presumably in several other countries, an address is not necessarily adequately described in terms of a street and a number. One needs description in terms of landmarks, distances and directions from these, perhaps in terms of names of inhabitants of neighbouring houses, for example, those of shop owners.

While there seemed to be scope for ‘improvement in address-taking’, the researchers concluded that ‘it would seem unlikely that this problem can be solved until the whole street-naming and house-numbering system has been improved’.⁴² That is to say, a degree of control over tuberculosis patients taking chemotherapy could not be achieved until the map of south India’s cities had been rendered more ‘legible’ to bureaucrats and medical policymakers.⁴³ These problems were, in a sense, a symptom of the social change and massive urban influx of the 1950s and 1960s.⁴⁴

The lanes through which the WHO and its local partners had to pursue recalcitrant patients were difficult to navigate, if they were marked on the map at all. As one of the early social surveys of Bangalore made clear, ‘the area between Commercial Street and Russell Market are mostly congested. In the above areas, there are no sufficient open places between houses. The streets with the houses on both the sides are very narrow. Dust and dirt surround these houses. Sanitation is very poor in these localities’.⁴⁵

The fundamental problem was an almost complete absence of the kinds of diffuse medical surveillance which Michel Foucault, David Armstrong, and others have highlighted in their writings on public health in modern European history.⁴⁶ Michel Foucault observed, in the case of eighteenth century Europe, that for a process of outpatient treat-

42 Stig Andersen/D. Banerji, A Sociological Inquiry into an Urban Tuberculosis Control Programme in India, in: Bull. of the World Health Organization 29 (1963) 5, p. 685-700, p. 689. The 1961 census of Madras, too, talks of “a number of dwellings ... [which] offer no surface on which a number could be painted, not even a substantial door post or indeed a door at all”: Government of India, Census of India, 1961, Volume 9, Part 11 C, ‘Slums of Madras City’ (1965), p. 96.

43 This is James C. Scott’s term. J. C. Scott, Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed, New Haven/London 1998.

44 A social survey of Bangalore noted that: “The rapid growth of industries and trade attracted many outsiders to settle and work in some factory or other in the city ... Government service, domestic services, general labour, factory labour, cart driving, brick laying and mason work, trade and money lending businesses have attracted outsiders”. K. Venkatarayappa, Bangalore: A Socio-Ecological Study, University of Bombay 1957, p. 32.

45 Ibid., p. 41.

46 M. Foucault, The Politics of Health in the Eighteenth Century, in: P. Rabinow (ed.), The Foucault Reader, London 1984; D. Armstrong, Political Anatomy of the Body: Medical Knowledge in Britain in the Twentieth Century, Cambridge 1983.

ment (the shift towards a 'domestic form of hospitalisation') to work, there needed to be a 'medical corps dispersed throughout the social body, and able to offer treatment for free or as cheaply as possible'.⁴⁷ In Asia's growing metropolises, it was precisely this level of dispersion of medical care within society that was missing.

Thus even as international organizations armed with wonder drugs aimed to 'universalise' the Third World city as a site for technological intervention against disease, another kind of universalism threatened to re-assert itself: the 'universal' colonial—and now post-colonial—city: Unchanging; filthy; pathogenic, and capable of subverting even the wonder-drugs of the age.⁴⁸ The problems of environmental sanitation which a 1949 Government of India report had highlighted remained intractable.⁴⁹

What emerges, strongly, in many accounts of the urban environment is an almost miasmatic theory of disease; contagion comes from the filth of the environment, which is the ultimate 'menace to public health'. 'The sewage and sillage tend to settle down', one Madras census commissioner declared in 1965, 'causing a perpetual stench that pervades the entire neighbourhood, pollutes nearby wells in houses and constitutes a menace to public health and the aesthetic susceptibilities of the people'.⁵⁰ One of the striking features of his despairing, yet almost lyrical, report on Madras City, is its timeless nature. The descriptions of pathogenic urban squalor move rapidly across time and space: contemporary accounts from the early 1960s are juxtaposed with extracts from colonial reports of the early twentieth century, suggesting that nothing much had changed.⁵¹ The census commissioner's description of Madras's housing problem is substantiated by a description of the Greater Bombay Housing Scheme committee in 1946:

*overcrowding in rooms or tenements, close construction, bad lighting and ventilation, dirty and dilapidated appearance owing to total neglect of maintenance, filthy surroundings, insufficient and substandard sanitary arrangements and amenities and on the whole a sub-human sickening look and atmosphere about the place, often reeking with the smell of rotting food or garbage thrown round about, slush, overflowing sewage owing to chokes and filthy soil pans, with most of the pull chains missing and flushing tanks out of order.*⁵²

The reach of this environmentalist discourse on ill-health was broad.

I suggested earlier that 'Asia' was imagined as a single category for the administration of public health policies. Observers in the international organizations, and many of their

47 Foucault, *The Politics of Health* (note 46), p. 285.

48 On this tradition of colonial medical discourse, see W. Anderson, *Excremental Colonialism*, and D. Chakrabarty, *Open Space/Public Place: Garbage, Modernity and India*, in: *South Asia*, 14,1 (1991), pp. 15–31.

49 Government of India, Ministry of Health, *Report of the Environmental Hygiene Committee*, October 1949, New Delhi 1956.

50 Government of India, *Census of India, 1961*, Vol. XI: Madras. Part I – A (i): General Report, P. K. Nambiar, Superintendent of Census Operations, Madras 1966, pp. 225–6.

51 The report, for example, quotes from the 1908 Imperial Gazetteer of Madras: *Census of India 1961*, Vol. XI: Madras, p. 44.

52 Government of India, *Census of India, 1961*, Volume 9, Part 11 C: *Slums of Madras City*, Madras 1965, p. 6.

counterparts in national governments, saw Asia in terms of a set of shared problems and shared conditions, all of them amenable to technological intervention. However, an older discourse on 'Asia', focusing on the almost insurmountable problems of 'filth' and the tropical environment, had not disappeared.⁵³

The teeming tropical city became a frequently used trope in support of arguments for a shifting approach to development: away from welfare and social transformation and towards a narrow focus on population control. It appeared that the cities of the South, and particularly of Asia, held the power to evoke almost physical revulsion on the part of outsiders. This was present, most infamously, in the opening lines of Paul Ehrlich's crude Malthusian tract, *The Population Bomb*, describing a 'stinking hot night' in Delhi:

As we crawled through the city, we entered a crowded slum area... the streets seemed alive with people. People eating, people washing, people sleeping. People visiting, arguing, and screaming. People thrusting their hands through the taxi window, begging. People defecating and urinating... People, people, people, people.

This, Ehrlich declared, was "the *feel* of overpopulation."⁵⁴ More thoughtful observers, like Claude Levi-Strauss, were no more immune to this vision of the teeming urban tropics. Arriving in Calcutta, Levi-Strauss described "the herding together of individuals whose only reason for living is to herd together in millions, whatever the conditions of life may be. Filth, chaos, promiscuity, congestion; ruins, huts, mud, dirt; dung, urine, pus, humous, secretions and running sores..." Views such as these, increasingly widely expressed, backed a rising crescendo of calls for population control, using coercion if need be. The problem of development was not poverty but overpopulation; poverty was a direct result of overpopulation. As Vijay Prashad has shown, by the early 1960s, the 'housing problem' in Delhi was, once again, the problem of how to keep the urban poor out of the city, a path that would lead to the grotesque excesses of 'slum clearance' and 'beautification'.

It was not outsiders alone who produced this discourse of the pathogenic urban tropics, silencing issues that had, for a time, featured in discussions of development: land ownership, and power relations. It was, equally, a discourse generated by Asians, in Asia. This focus upon the pathogenic dangers of the urban environment spanned from India to Singapore, from Kuala Lumpur to Rangoon. Colonial and post-colonial, national and international medical discourses amalgamated in a way that challenged the optimistic narrative of progress in international public health.⁵⁵

What we see, then, is the re-emergence of the power of Asian nature, but in a specifically urban, pathogenic form. A specifically 'tropical' form of social medicine was taking root.

53 Cf. Warwick H. Anderson, *The „Third-World“ Body*, in: *Medicine in the Twentieth Century*. Ed. Roger Cooter / John Pickstone. London / New York 2000, 235-46.

54 Paul Ehrlich, *The Population Bomb*, New York 1968, 15-16.

55 On earlier colonial discourses on sanitation and the urban environment in Singapore, see: B. Yeoh, *Contesting Space in Colonial Singapore: Power Relations and the Urban Built Environment*, Singapore 1996.

One of the foremost centres for the revival of this tropical medicine within Asia was the Department of Social Medicine at the University of Singapore medical school in the 1950s – attracting students from throughout the region.

In this environmentalist discourse on health, the late-colonial (and post-colonial) metropolis remains defiantly mired in filth.⁵⁶ Within this environment, the threat of infection was everywhere. Mobile food hawkers were viewed with particular suspicion by public health authorities across South and Southeast Asia; they were the ultimate ‘vectors’ of disease.⁵⁷ In the words of a Burmese student of public health, writing a thesis on post-colonial Rangoon whilst at the University of Malaya in the mid-1950s: ‘the itinerant hawker is a very difficult person to locate when the authorities suspect him to be the cause of ill-health in consumers ... some do not have a fixed place nor travel the same streets’.⁵⁸ It was deemed that ‘as carriers of communicable diseases the sherbet (prepared cold drink) seller, and the ice cream vendor [are] the most dangerous’. Ignorance, of course, was at the root of the problem. The author of the thesis lamented that ‘society sees no evil in consuming food from a hawker or a road side stall. Many people do not have the basic knowledge of hygiene. Plainly, they do not know the consequences of eating dirtily. Or even if they do, as some do vaguely, they do not care’.⁵⁹

This provides an illuminating illustration of the complex relationship between medical discourse and the narrative of development. A narrative of progress, enlightenment and prosperity was always juxtaposed with a nihilistic picture of insurmountable environmental obstacles. The language of WHO reports and technical assistance publications, of techno-science triumphing over nature, was never unchallenged; always, there remained a language of ‘natural forces’, of overcrowding and over-population in a tropical environment which needed ‘ceaseless disinfection’.⁶⁰

Yet, if it could be employed to raise the spectre of breeding masses in the Third World, the persistence of poverty and risky environments could also be used by those in the Third World, to mock the promises of governments and international organizations; to question what it really meant to speak of a ‘right to health’. Such was the case of an Indonesian account of disease and death, which is mocking, even contemptuous, of the possibility of liberation through the international ‘gospel of hygiene’, or by modern medical care. The work in question is a short story entitled ‘My Kampung’, published in 1952 by Pramoedya Ananta Toer.

56 See also, M. Lim, *The History of the Maternal and Child Welfare Services*, Singapore City 1956.

57 The ‘hawker’ problem absorbed much energy within the colonial government of Singapore in the 1950s. See, for example: National Archives of Singapore [NAS], Ministry of Health Subject Files (MH/630), DMS 4068/60, ‘Ad Hoc Committee on Hawkers’, and the voluminous correspondence therein. For an early post-independence statement on the ‘hawker problem’ in Indian cities, see Government of India, Ministry of Health, Report of the Environmental Hygiene Committee [October 1949], (Delhi, 1956).

58 Tin Maung Maung (Assistant Health Officer, Corporation of Rangoon), ‘Hawkers and Roadside Foodstalls in Rangoon’, DPH thesis, University of Malaya, Singapore 1958.

59 Ibid.

60 The phrase is from Warwick Anderson, ‘Excremental Colonialism’ (note 48).

The story appears in a collection of tales and sketches set in the Djakarta of the late 1940s and early 1950s, its characters are Djakarta's labouring poor. The subtitle to the collection, 'Caricatures of Circumstances and Their Human Beings' is strongly suggestive of the tone of the stories, with their atmosphere of futility and acquiescence.⁶¹ 'My Kampung' begins with a caricatured image of filth and pestilence, so characteristic of the colonial discourse on the tropical environment. Pramoedya evokes the grotesque and the corporeal, even as his tone alternates between resignation and sarcasm. The story begins: 'Friend, you've heard the name of my Kampung, haven't you? Kebun Djahe Kober, five hundred metres in a straight line from the palace. And you also know, don't you? Its gutters are covered in shit of the *kampung* residents' (p. 77). The proximity of the *kampung* to the Palace is an irony that runs through the story.

The narrator declares that not even a 'small guerrilla squad' – writing, here, in the aftermath of Indonesia's bloody war of independence – would suffer the mortality of this kampung, 'with its stink and condition', where 'people die one after another' (p. 78). There follows a sordid catalogue of the many residents of the narrator's alley, one of seven in the kampung, who had suffered 'cheap' deaths. There is the case of the man who dies from 'chronic venereal disease'; the mother who kills her favourite child with an overdose of worm medicine; the print setter who dies of lead poisoning, and the Chinese shop owner who flees on a ship to 'die in [his] own country', leaving his wife to die in the Kampung. And then there are the countless victims of tuberculosis: 'T. B. did not surprise anyone in my kampung anymore; it was something routine' (p. 83). In keeping with the tone of tragedy, bordering on farce, the narrator makes no attempt to pass judgement on the situation. Instead, he implicitly mocks the discourse of hygiene and public health: 'If killing with weapons is punished by the government, killing because of ignorance and poverty is not prohibited in my *kampung*, even if the killing is of one's own child. It is a routine situation and perhaps quite understandable' (p. 82).

If this portrait of the *kampung* Kebun Djahe Kober appears to mock the promises of positive health, hygiene and development which were so prevalent in the early 1950s, the effect was entirely intentional. It is the conclusion of 'My Kampung' that makes it such an explicit, and interesting, commentary on the global discourse of public health. 'You too, friend, can come to my *kampung* sometime', the narrator says, 'finding it is not hard at all' (p. 84). The *kampung*, after all, is a stone's throw from the Palace: 'five hundred metres in a straight line towards the southwest, there my *kampung* stands in all its glory, defying the doctors and the technical professionals' (p. 84). And then this striking point is repeated once more: 'the *kampung*'s located so near the palace where everyone's health and every little detail is guaranteed' (p. 84).

61 Pramoedya Ananta Toer, *My Kampung* [1952], in: *Tales From Djakarta: Caricatures of Circumstances and Their Human Beings* (translated from the Indonesian by Sumit Mandal), Jakarta/Singapore [1963], 2000, pp. 75-86.

Conclusion

David Arnold traces a direct line between colonial discourses of 'tropicality' and later, post-colonial visions of development:

*The image of the tropics as a world set apart by nature, a world characterized by poverty, disease and backwardness thus acquired a new scientific authority and specificity: the foundations had been laid for a reconceptualization of the "backward" tropics as the Third World.*⁶²

Undoubtedly, works by the likes of Pierre Gourou provide a direct line of continuity between nineteenth-century colonial views, and the notion of 'tropical development'. However, I would argue that the specific form taken by discourses about tropical 'nature' in Asia by the 1960s owed much to debates within Asia, and between Asian scientists, politicians and writers – often conducted within the new international organizations. In particular, the 'return of nature' to explanations of Asia's poverty stemmed from the frustrations encountered by post-colonial visions of an escape from nature through technology, social reform, and nationalist revolution, directed by sovereign states.

Above all, I would suggest that the notion of Asia as hostage to natural forces – the laws of human reproduction as much as the spread of pathogens – emerged out of the 'ungovernable spaces' frustrating attempts at planned transformation.⁶³ Modern power, Foucault argued, involved the development of governmental technologies to understand and control the 'mass effects characteristic of a population', a technology which 'tries to predict the probability of these events' – the birth rate, the death rate, rates of disease, life expectancies – and control for them.⁶⁴ This article has suggested that in two realms in particular, it seemed by the 1960s that such regularities all-too-often slipped beyond the grasp of governmental power: at the borders between states, and in the growing urban centres.

Although subsequent decades have seen very different histories of development across Asia – some states, this one in particular, are more 'governmentalized' than others – it would seem fair to suggest that borderlands and urban centres are still those spaces least amenable to government and development.

62 Arnold, "Illusory Riches" (note 3), p. 16.

63 Michael Watts, Development and Governmentality, in: Singapore Journal of Tropical Geography, 24. 1 (2004), 6-34, p. 26. Watts argues that "the Foucauldian project from which governmentality is derived is often chided for its panoptical sense of closure and overwhelming aura of domination, but ... [the case of Nigeria] reveals ragged, unstable, perhaps ungovernable, spaces and analytics of government that hardly correspond to the well-oiled machine of disciplinary biopower".

64 Michel Foucault, Society Must Be Defended: Lectures at the College de France, 1975-76, trans. D. Macey, London 2003, p. 249.