

Impacts of socio-political upheavals on the health systems of Sub-Saharan Africa, past and present

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Samevatting

Sedert die 15e eeu was daar gereelde invalle in Afrika suid van die Sahara, wat hulle oorsprong in noord-Afrika en Europa gehad het. Hierdie intervensies het geweldige demografiese en politieke veranderinge tot gevolg gehad. Drie oorvleuelende fases kan geïdentifiseer word, met die Koloniale era as die keerpunt. Elkeen van hierdie fases het ontwikkelinge in gesondheidspraktyke tot stand gebring asook verbeterde maatreëls teen tropiese siektes gevestig. In hierdie artikel word 'n historiese oorsig verskaf van siektes, met spesifieke klem op die rol van mobiliteit en bevolkingsaanwas in die verspreiding van siektes. Samevattend beskou - blyk dit - deels as gevolg van die VIGS pandemie tans, dat die gesondheidstelsels in Afrika meer as tevore tot hulle uiterste beproef word, en dat gesondheidsdienste sedert die Koloniale era agteruit gegaan het. Afrika se hoop word as't ware geplaas op 'n nuwe *de facto* mediese "kolonialiseringsproses", hierdie keer deur die Wêreldgesondheidsorganisasie (WHO), die Wêreldbank, en die donateurmeenskap.

Introduction

This paper is concerned with tracking the degree to which health, and by implication the development of health systems, is impacted upon by changing socio-economic and socio-political conditions. The study takes sub-Saharan Africa (SSA) as its site of reference but because health is a universal human preoccupation its findings ought to be generalisable to any society.

Because health systems are so intimately interwoven with cultural, religious and philosophical outlooks, the discussion uses a fairly detailed delineation of the complexities involved as a point of departure. Examples are provided by way of drawing out the conceptual distinctions involved in positive feedback loops.

There follows a discussion of average life expectancy and its suitability for use as an indicator with which to measure not only general personal health but also the 'health' of health systems themselves. It is maintained that, except in short-run atypical scenarios, the quality of health care cannot usefully be disaggregated from the system of health management within which it obtains.

The argument then proceeds to the heart of the matter. This is an analysis of SSA's socio-economic and socio-political status, tracked over several centuries, to determine its ever evolving impact on levels of general health. For the sake of convenience, three admittedly overlapping phases are identified, namely pre-colonial, colonial, and post-colonial and these are further sub-divided where to do so would seem to be helpful. An attempt will be made to show how the end-results of each phase function as sociological catalysts for change in the immediately following phase. It will be claimed that the common underlying dynamic which underpins all the shifting health scenarios is that of people's mobility – both in the sense of penetration and coming together, and withdrawal and moving apart. In its essentials then the following is an account of the inexorable processes that have come to be labeled 'globalization', and the degree to which this has impinged upon Africa's peoples in the sphere of health care.

The following section explores the complexities of impacts involving feedback loops and seeks to establish some yardstick by which to gauge good health. It concludes with some salient remarks concerning life expectancies.

Impacts and positive feedback loops

When discussing the impact of a complex entity (such as a socio-economic climate) upon another complex entity (such as a health system) one must be very clear about the fact that the impact itself will not be a simple one but will generate complex feedback loops. This phenomenon has its counterpart in the realm of sub-atomic physics where the mere fact of an experiment's being observed will affect (feedback to) the outcome of that experiment. A hypothetical example will make this clearer:

If the day is very hot (condition *X*) such that Jimmy goes for a swim to cool off (condition *Y*) then, although *Jimmy* may cool down, his cooling down does not make the day any cooler. There is therefore no feedback loop from *Y* back to *X*. The day stays hot. This is a simple impact.

A complex impact, on the other hand, involves an ongoing interplay between multiple causes and effects. The classic self-reinforcing phenomenon in the field of health at present is of course HIV/AIDS which helps to create precisely those deprived socio-economic conditions under which it thrives¹ – a very vicious circle indeed.

From the foregoing it seems obvious that the subject matter of this article involves complex impacts with feedback loops, whereby the end result of an impact is constantly modifying the original condition (the impacting agent). It is therefore a chicken-and-the-egg scenario with which one has to contend, and it is in the very nature of such enquiries that there can be no simplistic, path findings.

An indicator for good health

Before proceeding, a distinction must be acknowledged between mental and physical health. Once again one is faced with the potential for feedback loops. Does mental well-being draw on physical well-being or is it the other way around? Or do they constantly interact with and reinforce one another?² And how best can one measure each of these well-beings?

Another conundrum that presents itself is whether it is better to live a short happy healthy life, or a long miserable unhealthy one? At issue is whether a relatively early death after a sudden illness is preferable to being kept alive for years on end in a sub-optimal condition. There is no obvious answer to this question either and even those who chose the short, happy option might change their minds as their allotted time drew to a close. And who is to say, definitively, what ‘happy’ or ‘miserable’ consist in? There has been increasing interest in the issue of ‘well-being’ in recent years, most noticeably on the part of Sen,³ but see also Bloom, Lucas, Edun, Lenneiye and Milimo.⁴ The problem is how to measure it and this is discussed by Sen at some length. Given

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- 1 R Palmer and D Mullins, “The future impact of HIV/AIDS on land in Africa”, March 2000, (Available at http://www.oxfam.org.uk/what_we_do/issues/livelihoods/landrights/africa_gen.htm?searchterm=palmer+mullins as accessed on 23 April 2007).
 - 2 See S Jacyna, “Medicine in transformation, 1800-1849”, WF Bynum, et al. *The Western medical tradition 1800 to 2000* (Cambridge, Cambridge University Press, 2006), p. 17 on the putative relationship between consumption and “sorrowful passions”. See also HJ Cook, “Introduction”, Bynum et al., *The Western Medical Tradition*, p. 3.
 - 3 A Sen, *Development as freedom* (Oxford University Press, Oxford, 1999), pp. 70-77.
 - 4 G Bloom, et al., “Health and poverty in sub-Saharan Africa”, *IDS working paper 103* (Institute for Development Studies, Brighton, 2000).

the extreme subjectivity into which questions of mental well-being resolve themselves, and the fact that no universally agreed upon indicator of overall well-being has emerged yet, this discussion will arbitrarily confine itself mainly to physical well-being in the hope that it acts as enough of a proxy for mental well-being. If physical well-being can be measured by life expectancy, and if extreme mental distress often results in suicide, then at least there may be some grounds for this argument.

Bloom et al⁵ suggest that, due to deficiencies in data collection in SSA, infant mortality rate (IMR) might be a better measure of general health than life expectancy, but then they go on to say that IMR is in any case a major component in the formula for calculating life expectancy. Indeed, in the absence of adult mortality data, estimated IMR is often the only variable that goes into the calculation of life expectancy.

Given then that the health of a population can be gauged accurately enough from a reading of life expectancy, how should one measure the health of the health systems themselves? It would seem axiomatic that a dysfunctional health system is going to show up in people's physical well-being (and vice versa). The effectiveness of a country's health system should therefore also be mirrored in average life expectancy although it is granted that, in the short term, appearances could be deceptive. It is surely unusual that an improving health system results in deteriorating levels of health. This is not to say, however, that an improving health system cannot be found side by side with deteriorating overall health. Obviously in a situation where a health system improves in response to a pandemic (such as HIV/AIDS) this anomaly may in fact occur until the pandemic is brought under control. What is being claimed here is only that an improving health system will not be the proximate cause of (result in) a deterioration in public health.

The next task is to find some objective yardstick which can serve as a proxy for a country's socio-economic and socio-political health. There are so many variables implicit in these factors that finding a suitable indicator is well-nigh impossible but it is submitted that if anything could suffice then it should be the United Nations Development Programme's (UNDP) Human Development Index (HDI). Unfortunately this has the drawback that it has only been calculated since 1990 (although some efforts have been made to 'retroject' it back to the 1970s by 'after the fact' recalculation) so although it has the

5 A Bloom et al., "Health and poverty in sub-Saharan Africa", *IDS working paper 103*, p. 6.

advantage of being readily available, and of having been universally applied, to both developed and developing countries, it is of limited value in analyses that extend further back into the past than 1990.

Because this study will attempt to track the process of how African health outcomes served to create socio-political and socio-economic conditions which, in their turn, lent momentum to their own chains of causality, over a span of about 600 years, it will be necessary, in the absence of documented indicators for health systems, to use life expectancy as an indicator for both personal well being and the quality of the health system that prevailed at the time. Normally one would expect a fairly close correlation between the two. It is also difficult to see how societal conditions could improve while public health was deteriorating (and vice versa) and this intimate link between the two is reflected in the fact that life expectancy is a one-third component of the HDI - so there is a built-in bias towards a correlation. At the same time however, SSA with its appalling HIV/AIDS problem is distinctly atypical and could throw up anomalous results – over the short term at any rate.⁶

In essence then, no hard and fast distinction will be drawn between these two variables and it will be assumed that, by and large, good health in the populace is concomitant with a well functioning health system.

Life expectancies

It remains to say a word about life-expectancy. In 1900 average world life expectancy was thirty years of age.⁷ It is generally agreed that, in the complete absence of any effective health care (in a Garden of Eden setting, as it were), average human life expectancy tends to hover around 22 years of age, but not below that. Very high infant mortality rates (IMRs) distort the picture though – someone surviving childhood had a fair chance of reaching forty years of age in the Garden of Eden environment.⁸ But IMRs are of course important indicators of general health in their own right and should not be ‘bracketed out’, so 22 years may be regarded as the lowest base from which to measure progress. In London in the late 18th century average life expectancy

6 A Bloom et al., “Health and poverty in sub-Saharan Africa”, *JDS working paper 103*, p. 4.

7 M Rosenberg, “Life expectancy”, January 2006, (Available at <http://geography.about.com/library/weekly/aa042000a.htm> as accessed on 23 April 2007).

8 AJ Pelsler, “Health, environment and development in South Africa”, HCJ van Rensburg (ed.), *Health and health care in South Africa* (Pretoria, Van Schaik, 2004).

was a mere 23 years although it tended to be higher in the countryside. Life expectancy in the pre-industrial era, before the advent of modern medicine, was in fact very stable and had fluctuated very little since the advent of homo sapiens upon the planet.⁹

The second point to consider about life expectancy, in the light of its being so pivotal to the analysis to be performed, is whether factors other than health considerations might affect it appreciably. If it is the case that, say, while long winters have no appreciable effect on health, they nonetheless lead to markedly reduced life expectancies, then life expectancy is going to be a poor proxy for health, and a better predictor for degree of latitude (which dictates length of season). Interestingly enough, for reasons which no one can explain, “the incidence of multiple sclerosis varies with latitude, so that it is rare in tropical countries and gets gradually more common towards the North and South Poles”.¹⁰ As far as is known however, there are no factors totally unrelated to health that exert a marked and sustained bearing on life expectancy, which is why life expectancy serves as the UNDP’s main proxy for health status. Mortalities arising from war are of course a potential exception to this, but even the two World Wars had only a limited impact on life expectancy. This was because, notwithstanding the wars, the state of perpetual warfare was not a defining characteristic of the combatant societies.

Sub-Saharan Africa’s socio-economic and political status

SSA is a hugely diverse entity consisting of some fifty nations.¹¹ To fill such a huge canvas requires the use of very broad brushstrokes and so the outline of SSA that follows is of necessity patchy. Although reference will be made to South Africa fairly often it should be borne in mind that South Africa, with its significant First World component, is in many respects not truly representative of the region.¹² It therefore exerts a distorting influence when its

9 G Clark, “Mortality in the Malthusian era”, 2005, (Available at <http://www.econ.ucdavis.edu/faculty/gclark/GlobalHistory/Global%20History-5.pdf> as accessed on 23 April 2007); G Clark, “Genetically Capitalist? The Malthusian era and the formation of modern preferences”, January 2007, (Available at <http://econ.binghamton.edu/papers/clark.pdf> as accessed on 23 April 2007); see also G Clark, *A farewell to Alms: A brief economic history of the world* (Princeton University Press, Princeton, 2007 forthcoming).

10 DH Crawford, *The invisible enemy: A natural history of viruses* (Oxford, Oxford University Press, 2000), p. 145.

11 A Bloom et al., “Health and poverty in sub-Saharan Africa”, *IDS working paper 103*, p. 5.

12 O Ransford, “*Bid the sickness cease*”: *Disease in the history of black Africa* (London, John Murray, 1983), p. 7.

demographic or economic data is aggregated with the other 49 countries that make up SSA.

Africa's historical political development and socio-economic status can usefully be divided into three political epochs – pre-colonial, colonial, and post-colonial. This is essentially the same schema used by van Rensburg¹³ in his outline of the history of health care in South Africa.

This discussion will accordingly now turn to an examination of each of the three political timeframes and attempt to draw out the interactions and dynamics between the socio-economic conditions and the health systems that prevailed at the time. An effort will be made to illustrate how the health outcomes of each phase gave rise to socio-economic and political conditions which in their turn had the effect of producing changed health outcomes which then impacted upon the subsequent phases.

The pre-Colonial period: In Africa's Eden

According to van Rensburg,¹⁴ in the context of South Africa, we should:

[n]ote that there was not a total health services vacuum before European settlement. The indigenous peoples had their own traditional, tribal health care systems... it was mainly the magico-religious component of said systems that brought about a sharp distinction between them and Western medicine.

Although this is correct, van Rensburg's use of 'health care systems' as opposed to, say, 'health care practices' seems to be something of a misnomer. 'Systems' bespeaks the existence of formal structures, and a level of documented institutionalisation for which there is no evidence.

That semantic quibble apart, health in the 'state of nature' that appears to have characterized SSA was probably, if anything, better than that which obtained in Europe at the time.¹⁵ Notwithstanding important advances in, for example, the understanding of the circulatory system by William Harvey as far back as the early 1600s,¹⁶ European health was bedevilled by the slow rise

13 HCJ van Rensburg, "The history of health care in South Africa", HCJ van Rensburg (ed.), *Health and health care in South Africa*, pp. 51-109.

14 HCJ van Rensburg, "The history of health care in South Africa", HCJ van Rensburg (ed.), *Health and health care in South Africa*, p. 52.

15 O Ransford, "*Bid the sickness cease...*", p. 17.

16 R Porter, *Blood and guts: A short history of medicine* (New York, W.W. Norton, 2002), p. 60.

of cities which, as already intimated, proved to be hotbeds for every imaginable infectious disease (smallpox, cholera, tuberculosis, bubonic plague) in the absence of any but the most rudimentary, haphazard ‘cures’ which, as often as not, were sufficient to finish off the hapless patients altogether¹⁷ (a popular ‘remedy’ for deafness, for example, was to discharge a shotgun in the immediate vicinity of the sufferer’s eardrum). European cities were in fact so unhealthy that “their populations could not replace themselves by reproduction”.¹⁸ Europe had also already fallen victim to the consequences of mobility through the importation of exotic diseases, such as syphilis, from the Americas.

The immobility of the African populace prior to the coming of the Arabs and the Europeans had resulted in a symbiotic stasis whereby prolonged exposure to local parasites and pathogens:

had led to a selective survival of those more resistant men and women... [and] a state of equilibrium between hosts and parasitic clients which allowed them to live together in mutual tolerance... this situation could only survive as long as the people had little association with strangers.¹⁹

The point to be made here, and it is a crucial one, is not only that local diseases, parasites and pests (for example the tsetse fly) functioned as a defence for long-settled communities against intrusions by strangers (most especially non-Africans), but also that the prevalence of these localised equilibria served as powerful disincentives for peoples to move away from their territories.

What characterized SSA, prior to the mid-1400s when Portuguese explorers began to patrol the coastlines, was a very sparse population of over seven hundred tribal groupings each with their own culture and language, and largely completely isolated from one another. Those who survived childhood were generally in fairly robust health, although unlikely to live much beyond forty years of age.²⁰

Health treatments would have been specific to each of these tribes and although they were, if anything, more efficacious than what was being practised

17 See for example H Trevor-Roper, *Europe’s physician: The various life of sir Theodore de Mayerne* (New Haven, Yale University Press, 2006), pp. 274-275 for royal remedies such as “vomitories of metallic mould in wine”, “diuretic powder compounded of crab’s eyes, fish heads, crickets, grasshoppers, millipedes, etc.”, “arthritis powder compounded of scrapings of an unburied human skull... to be taken at the full moon”, and “oil of scorpions”.

18 KF Kiple, “The history of disease”, R Porter (ed.), *The Cambridge illustrated history of medicine* (Cambridge, Cambridge University Press, 1996), p. 25.

19 O Ransford, “*Bid the sickness cease...*”, pp. 4-5.

20 O Ransford, “*Bid the sickness cease...*”, pp. 17-20.

in Europe at the time, they did not occur within an empirical paradigm²¹ but, as van Rensburg makes clear, a religious one, and were thus somewhat less likely to progress as a consequence of being exposed to the scientific discipline of trial and error.

These traditional treatments included the use of alcohol as an anaesthetic, bleeding staunched by the application of red hot stones, births by caesarian section, the removal of jigger fleas from septic toes, the careful extrication of guinea worms as they emerged from the legs of the infected, and a whole host of palliatives derived from local flora. But there were “no specific remedies for the killer infections to which they were exposed, and they were incapable of remedying the malnutrition from which so many suffered”.²² And as Schweitzer²³ noted, what was found to work was not communicated beyond the confines of the tribe. There appeared to be no healing ethos as such.

This section has shown that SSA's societies up until about the mid-15th century tended to be marked by a finely balanced equilibrium with the natural environment. Life was far from comfortable, but altogether harmonious and natural, and the hard facts of what ‘natural’ entailed helped keep population growth in check.

European and Arabian penetration of Africa

All the foregoing changed dramatically with the coming of strangers from across the seas, and the stability that had characterized African society for millennia was lost for ever. Over the four hundred years prior to formal colonisation, a wide variety of catalysts worked in upon one another to set off massive waves of migration that would profoundly alter the landscape of African health care. Each of these agents can unfortunately be little more than flagged here. The list is derived from Ransford²⁴ except where indicated otherwise:

- In the mid-1400s Portuguese sailors went ashore on the south Atlantic coastline and captured people who they then sold as slaves in the Ghanaian kingdom centred on Lagos.

21 See S Jacyna, “Medicine in transformation, 1800-1849”, WF Bynum, et al. *The Western medical tradition 1800 to 2000*, pp. 37-69 for a discussion of the rise of the empirical “Paris School” and “Laboratory Medicine” in the immediate aftermath of the French Revolution.

22 O Ransford, “*Bid the sickness cease...*”, p. 35.

23 A Schweitzer, *More from the primeval forest* (Fontana, London, 1958, first published 1930) p. 18.

24 O Ransford, *Bid the sickness cease*, pp. 35-36.

- In time, 14-million Africans²⁵ were transported from the west coast into slavery but the slavers introduced exotic crops, such as maize, on their return trips from the New World and these crops led to such a marked improvement in Africans' diet that the population loss occasioned by slavery was offset by increased longevity.
- Arab slavers occupied Zanzibar and began to penetrate deep into the east coast interior in search of more slaves and other forms of plunder. Only about one in every six Africans actually captured by the Arabs survived to be transported.
- Morocco conquered the ancient West African kingdoms in the late 1500s and this unleashed waves of refugees across the continent.
- Periodic waves of Bantu migration cut a swathe across Africa from the west coast, across the central interior and down into southern Africa. These intermingled with Hamitic invaders moving in from the north-east.²⁶
- In the mid-1600s it was discovered that cinchona (from Peru) acted as a prophylactic against malaria (literally 'malaria' - Italian for 'bad air'). In the early 1800s quinine was distilled from cinchona which made viable the penetration of many of Africa's previous no-go areas, as well as coastal settlement along the Atlantic shoreline. David Livingstone was instrumental in popularising the drug for use by missionaries and explorers after having tested it on two of his children.
- The abolition of the Atlantic slave trade saw the slaving ships turn to gun-running and at least one million redundant firearms were sold to African chiefs after hostilities ceased in the American civil war. This encouraged widespread (and lethal) hostilities in Africa between petty chiefdoms.
- Chaka Zulu embarked on an expansionist phase in the 1820s which drove thousands of refugees northwards again.
- Ashanti raiders from the north in the 1800s destabilized the tribes of Angola who fled eastwards.

The upshot of all this ferment was convulsive displacements of people, and a catastrophic decline in African health and development, as disease was carried hither and thither across a continent consumed by strife.

25 R Brown, "European Colonial rule in Africa", *Africa South of the Sahara 1998* (London, Europa, 1998), p. 19.

26 Union of South Africa, "Summary of the report of the Commission for the Socio-economic Development of the Bantu Areas within the Union of South Africa", Report UG 61/1955 (Pretoria, Government Printer, 1955), p. 1.

The colonial period: Medical missions

Van Rensburg,²⁷ apropos of the history of health care in South Africa, writes that:

[M]issionary societies took a major part in the pioneering of the new land, and...health care services mostly made up an important part of these frontier posts...various missionary societies constructed a network of smaller mission hospitals, especially in black rural areas to serve mainly blacks.

The willingness of missionaries to go where others might fear to tread is a vital point and is echoed by Gelfand²⁸ in his study of the medical missions in Zimbabwe:

The outstanding feature of the medical missionary and nurse was that, through their faith, they chose to go out to help the poor and less fortunate in places where no such help existed. They went to lonely, unhealthy places, cut off from the outside world. There they served without material recompense.

This statement speaks volumes for the profound impact of medical missionaries upon African health – firstly that the missionaries’ motivations were quite other than the usual combination of commercial interests and political ambition,²⁹ and secondly that missionaries were prepared to penetrate to areas where no government was likely to be able to persuade its employees to relocate to. Taylor³⁰ points out that the remote mission hospitals and clinics were frequently all but unreachable by road but that Africans “used to traveling long distances on foot...found their way in their thousands to the mission hospitals”.

The missionary movement was a direct consequence of Africa’s penetration by European explorers, and the continent’s often dreadful socio-economic conditions thereby coming to the attention of philanthropic Europeans. This was largely due to the publication in 1857 of David Livingstone’s accounts of his travels. As Ransford³¹ has it:

27 HCJ van Rensburg, “The History of health care in South Africa”, HCJ van Rensburg (ed.), *Health and health care in South Africa*, pp. 59-62.

28 M Gelfand, *Godly medicine in Zimbabwe* (Gweru, Mambo Press, 1988), p. 13.

29 See for example OE Prozesky, “The life, work and influence of Johannes Julius August Prozesky (1840-1915): Missionary of the Berlin Missionary Society in South Africa” (PhD thesis, University of Natal, Pietermaritzburg, 1995).

30 M Gelfand, *Godly medicine in Zimbabwe*, p. xiii.

31 O Ransford, *Bid the sickness cease*, pp. 64-65.

[Livingstone] ended with an irresistible call to his countrymen to send out civilizing missions into the African interior... [He] inspired a new era of philanthropic endeavour in the continent. East Africa, even more than the West Coast, became a place of atonement for the slave trade.

The missionaries were therefore generally in advance of the political 'Scramble for Africa' which commenced in the 1880s and they came to Africa at a time when it was considered almost suicidal to do so - on account of its fearful reputation for disease. Missionaries who bade farewell to their families in Europe fully expected never to see them again and most of the time their fears proved well-founded.³²

As Good³³ points out, the missionaries' growing awareness of the physical suffering of Africans prompted them to extend their mandate to include health care and again this was usually in advance of any formal colonial government endeavours.

How extensive was the medical missionary effort? The first hospital in SSA was established by the Franciscans in Mozambique in 1518³⁴ and it might be only a slight exaggeration to say that the history of medical care in SSA is the history of the medical missions. What is arguably of even greater importance is the role the missionaries played in establishing the disciplines of nursing amongst the indigenous peoples, and the medical training facilities they provided which in time produced Africa's very first black doctors.

The Colonial administrations

According to Ransford:³⁵

[I]t would be wrong to believe that Europe's colonization of Africa was motivated solely by a desire to exploit the Africans. It became associated too with a growing philanthropic impulse to improve the standard of living of far-away subjects and to lighten their burden of sickness.

This is nothing less than the first stirrings of the modern day 'development industry'. Ransford³⁶ goes on to remark:

32 O Ransford, *Bid the sickness cease*, pp. 6, 87.

33 CM Good, *Pioneer medical missions in colonial Africa*, p. 1.

34 O Ransford, *Bid the sickness cease*, p. 87; See also WR Louis, *Ends of British Imperialism* (London, IB Taurus, 2006), pp. 127-182.

35 O Ransford, *Bid the sickness cease*, p. 5.

36 O Ransford, *Bid the sickness cease*, pp. 76-77.

The European powers somewhat belatedly recognized their responsibility for indirectly spreading disease through Africa, but once this was appreciated they reacted strongly in an attempt to improve the situation. The elimination of malaria was seen as the first priority.

If nothing else the colonial administrations eventually came to realise that the health of the indigenous people was in their own best interests as, once they had settled in the colonies, they were obliged to live alongside the local people. They also generally needed their labour on the plantations and mines and a sick populace was not going to achieve much. Towards the end of the colonial period the life expectancies of the indigenous peoples had increased to unprecedented levels largely due to the cessation of internecine warfare, the introduction of regimens of public health, mass vaccination programmes, and the strong support given to the already existing medical missionary establishments.³⁷

The land grab that characterized the 1880s was as much a matter of national prestige as it was of greed,³⁸ but the formal drawing up of boundaries, no matter how artificially they represented the true state of affairs, 'on the ground' so to speak, necessitated the imposition of administrations and this in turn entailed the need for the colonial powers to take responsibility, however half-heartedly, for what happened in their territories. For the first time ever Africans were documented, counted, made to acquire personal identities and present themselves for vaccination. Systems of elementary health care had arrived.³⁹

Colonialism carried within it the seeds of its own problems however. The building of roads and railways led to dramatically increased mobility; industry and mining entailed unnatural concentrations of people and rural-urban migration; urban living combined with the introduction of strong liquor led to social problems; a burgeoning, more long-lived populace meant the emergence of a new set of diseases – those associated with middle age. Accelerated mobility, and the introduction of occupying military forces to safeguard against uprisings,⁴⁰ meant that diseases which had hitherto been endemic easily became epidemic. The upshot for African health would have been much worse than it was, however, had the effects of these trappings of modernity

37 M Gelfand, *Godly medicine in Zimbabwe*, pp. 108-130.

38 WR Louis, *Ends of British imperialism*, pp. 51-126.

39 S Jacyna, "Medicine in transformation, 1800-1849", p. 61 for the role of documentation in the imposition of modern 'discipline'.

40 R Brown, *European Colonial rule in Africa*, p. 20.

not been compensated for by the phenomenal developments in modern day medicine after 1900 (but most especially post-World War II)⁴¹ and the new discipline of tropical medicine which arose in response to the health challenges posed by the colonies.⁴²

Le Fanu⁴³ has identified 12 ‘definitive moments’ that stemmed from modern medicine and, in the absence of a short history of modern medicine, an itemizing of some of these will provide an idea of the kinds of medical technologies and discoveries that were made available to Africans post-1939. In 1941 penicillin was discovered which heralded the antibiotic revolution.⁴⁴ In 1949 cortisone which cures over two hundred different illnesses was identified.⁴⁵ The 1950s saw a cure for tuberculosis – a major killer in Africa, the birth of ‘intensive care’ procedures and a vaccine for polio.⁴⁶ The year 1960 saw the advent of the contraceptive pill which was to launch family planning and revolutionize the position of women throughout the world. In short order the practitioners of tropical medicine⁴⁷ produced cures for elephantiasis, yellow fever, sleeping sickness, malaria, bilharzia, and so on. And those who underwent surgery were no doubt grateful for the 20th century advances in anaesthesia.⁴⁸ This all amounted to a stunning achievement by the West that was to improve humankind’s quality of life immeasurably – Africans’ no less than anyone else’s.

African development meant that the continent was able to lend considerable muscle to the Allied WWII effort and, after the war, the withholding of independence from those colonies that wanted it became increasingly indefensible – both morally and economically. By the time it became necessary to hand over the colonial infrastructure to the newly independent governments

41 See A Hardy and EM Tansey, “Medical enterprise and global response, 1945-2000”, WF Bynum et al., *The Western medical tradition 1800 to 2000* for a detailed account.

42 R Porter, “Medical science”, R Porter (ed), *The Cambridge illustrated history of medicine* (Cambridge, Cambridge University Press, 1996), pp. 184-189.

43 J le Fanu, *The rise and fall of modern medicine* (London, Abacus, 1999).

44 DH Crawford, *The invisible enemy*, pp. 191-193.

45 J le Fanu, *The rise and fall of modern medicine*, pp. 17-28.

46 R Porter, “Medical science”, R Porter (ed), *The Cambridge illustrated history of medicine*, pp. 184-189.

47 See PH Manson-Bahr and A Alcock, *The life and work of Sir Patrick Manson* (London, Cassell & Co., 1927) for an account of the origins of ‘tropical medicine’.

48 See S Jacyna, “Medicine in transformation, 1800-1849”, WF Bynum, et al. *The Western medical tradition 1800 to 2000*, p. 17 on the putative relationship between consumption and “sorrowful passions”. See also HJ Cook, “Introduction”, in Bynum et al., *The Western Medical Tradition*, p. 63. Jacyna quotes a young medical student, trying to convince his father he has the stomach for the profession, writing in 1801: “I have seen several operations since I wrote last & mind nothing about it, the more the poor devils cry the more I laugh with the rest of them...”.

of Africa in the 1960s many of these states inherited medical facilities and institutions on a par with the best the world had to offer.⁴⁹

The average life expectancy for SSA at the end of the independence cycle around 1982 had risen to 48 - as opposed to 68 years for Europe and Central Asia combined.⁵⁰ Given the logistics of supplying health care to such a vast, dispersed and diverse continent this was no mean achievement and it suggests that the colonial experience was not entirely negative.

The colonial era ended with the distinct potential for ongoing improvements in health care in that, by and large, the institutions to deliver this were in place. Although it was unfortunate that decolonisation often precipitated a withdrawal of skilled medical personnel back to the mother country this was partially compensated for by indigenous doctors taking up the slack. Ransford⁵¹ sums up the situation as follows:

The medical missionary phase is still very much alive in sub-Saharan Africa, but the old Colonial Medical Service withdrew from the continent after the dependencies gained their independence. Yet the final flowering of the service – the medical school phase – was perhaps its most significant. For greater emphasis was then placed on the training of African doctors and the establishment of medical schools whose teaching was adapted to local circumstances rather than those of western medicine.

It is perhaps a minor tragedy that developments in Africa post-independence, allied with the flexibility afforded by globalization, have resulted in many of these home-grown doctors quitting their native countries to practice overseas.

The post-Colonial period

The beginning of SSA's post-colonial period was probably best signaled by the independence of Ghana (previously The Gold Coast) in 1957. The 1960s saw a veritable avalanche of newly independent states although there were the exceptions. Liberia, formed in 1847, had always been independent and South

49 P Chabal, "The quest for good government and development in Africa: is NEPAD the answer?", *Journal for International Affairs*, 78, 3, 2002, pp. 447-462; M Gelfand, *Godly medicine in Zimbabwe*.

50 World Bank, "World Development Indicators". Available at (<http://publications.worldbank.org/subscriptions/WDI> as accessed on 23 April 2007).

51 O Ransford, *Bid the sickness cease*, p. 88.

Africa had been independent since 1910, although 1961 marked its departure from the Commonwealth when it became a Republic.

The euphoria that invariably accompanied independence tended to be short-lived. Following Nugent,⁵² “[the] optimism had mostly evaporated by the 1970s... and was transformed into a pervasive sense of pessimism during the 1980s and 1990s”. The following descriptive passage from Todaro⁵³ typifies the ‘pervasive sense of pessimism’ referred to be by Nugent:

[W]idespread and chronic absolute poverty, high and rising levels of unemployment and underemployment, wide and growing disparities in the distribution of income, low and stagnating levels of agricultural productivity, sizable and growing imbalances between urban and rural levels of living and economic opportunities, serious and worsening environmental decay, antiquated and inappropriate educational and health systems, severe balance of payments and international debt problems, and substantial and increasing dependence on foreign and often inappropriate technologies, institutions and value systems [became the order of the day].

The locus of political and economic power after independence was invariably urban-based and this resulted in severe neglect of the rural areas. Unfortunately urban-bias does not seem to have done Africans that much good either - not by way of state services such as health care anyway. An aggravating factor, especially in the context of SSA, was that for many countries their concept of ‘nationhood’ was still poorly developed and stayed that way. Thus according to Chabal:⁵⁴

...the [African] state is not much more than a relatively empty shell...politically feeble because it is neither institutionalized nor functionally differentiated from society.

These sentiments are echoed by Hugon:⁵⁵

The establishment of many of the African states, in reality still in the process of being formed, has preceded the concept of a nation. Citizenship is an embryonic idea.

The upshot of this was that for many states their effective reach, in terms of administration, health, and even defence, barely extended beyond their

52 P Nugent, *Africa since independence* (New York, Palgrave Macmillan, 2004), p. 8.

53 M Todaro, *Economic development* (London, Addison Wesley Longman Ltd., 1997), pp. 27-32.

54 P Chabal, “The quest for good government and development in Africa: is NEPAD the answer?”, *Journal for International Affairs*, 78, 3, 2002, p. 452; M Gelfand, *Godly medicine in Zimbabwe*.

55 P Hugon, *The economy of Africa* (Pretoria, Protea Bookhouse, 2004), p. 27.

capitals, and their borders and countrysides became to all intents and purposes terra incognita insofar as the central administration was concerned. Angola, the Democratic Republic of Congo (DRC) and Somalia provide striking present-day instances of this phenomenon.

What this effectively meant for much of the populace was that, undocumented and uncaptured, they were no one's responsibility. Rural people especially, although they may have been subject to a local chief or leader, were generally not accorded citizenship in the sense of being able to claim the recognition of rights or entitlements from the state. In the modern world this is tantamount to having fallen off the map, to not existing. And people who do not exist cannot be properly catered for in terms of health care, cannot be planned for, and cannot be 'developed' by a centralised state. It is precisely this constituency that the medical missionaries still reach out to, and that the colonial authorities generally made some effort to record and 'capture', even if only by counting.

What is the status of health care in SSA at present and how has it been impacted upon by prevailing political and economic factors? Are Simms, Rowson and Peattie⁵⁶ justified in speaking of the 'collapse' of Africa's health systems? A graphic representation of the rate of decline in under-five mortality between 1990 and 2001 featured in the World Bank's encyclopaedic *Global burden of disease and risk factors* very clearly indicates that SSA (including South Africa but with some exceptions namely, Zambia, Mozambique and Malawi) is regressing. In the rest of the world only Cambodia, Iraq, North Korea, Ukraine and Moldova fare as badly.⁵⁷ Should one look to health expenditures for clues in this regard or can all the blame be laid at the door of HIV? Reekie⁵⁸ casts doubt on the usefulness of expenditure statistics when he writes,

it is not very clear how big a contribution government health expenditure makes in any country to the actual health of the population. Throughout the world today we see evidence of... deteriorating health associated with increasing health expenditure.

56 C Simms, M Rowson and S Peattie, "The bitterest pill of all: the collapse of Africa's health systems", *Save the Children*, London, 2001.

57 AD Lopez, CD Mathers, M Ezzati, DT Jamison and CJL Murray (eds), *Global burden of disease and risk factors* (Washington, World Bank and Oxford University Press, 2006).

58 WD Reekie, *Health care options for South Africa: Lessons from the UK and the USA* (Free Market Foundation, Sandton, 1995), p. vii.

Certainly in the case of SSA, and as hinted at by Bloom et al.:⁵⁹

...one might find increased health expenditure, as a consequence of a belated response to HIV/AIDS, associated with rapidly deteriorating public health.

Once again then it appears as though the best indicator for the soundness of health systems will be average life expectancy in which is incorporated the IMR. But it must be acknowledged that derisively low health expenditures per capita probably do tell a story all their own.

While the rest of the developing world makes encouraging progress in the direction of meeting the Millennium Development Goals (MDG) set for 2015, SSA alone is regressing to an even worse position than when it started out.⁶⁰ Health indicators as revealed by the latest bellwether World Bank and UNDP publications make for sobering reading when it comes to SSA⁶¹ and there seems little to be gained in hammering the point home with an arsenal of depressing statistics.

Mobility and HIV

Because it is such an enormous, complex topic the issue of HIV/AIDS has not been done justice to in this paper, but an argument that is being made for the effects of migration on health can hardly avoid a mention of how integral migrations, arising out of socio-economical and political factors (such as civil war), are to the spread of the HIV virus.

There are numerous theories as to how and where HIV originated but, if one puts the more bizarre conspiracy theories aside, it seems to have been developing in humans since at least the 1950s and to have arisen due to humans' increasing encroachment upon the natural environments of chimpanzees, macaques and green monkeys all of which host various strains of HIV or SIV (Simian-immuno virus). According to Ewald⁶² the two major HIV strains (HIV-1 and HIV-2 – the latter being the less virulent variety) may have diverged from one another about nine hundred years ago (they only have forty per cent of their genetic make-up in common).

59 G Bloom *et al.*, "Health and poverty in sub-Saharan Africa", *IDS Working paper 103*, p. 4.

60 World Bank, *World development indicators 05* (Washington, World Bank, 2005).

61 See for example DT Jamison, RG Feachem, MW Makgoba, ER Bos, FK Baingana, KJ Hofman and KO Rogo (eds), *Disease and mortality in Sub-Saharan Africa* (Washington, World Bank, 2006), p. 22.

62 PW Ewald, *Evolution of infectious diseases* (Oxford, Oxford University Press, 1994), p. 119.

Be that as it may, population pressures on forests (partly attributable to improved life expectancies) led to deforestation, increasing contact with apes within the depths of their habitats, and the consequent consumption of so-called 'bush meat'. The intrusion (migration into) virgin forests in Africa, for whatever socio-economic reasons, has resulted in one of the most pernicious pandemics ever to have threatened humankind. That transport routes serve as infrastructural arteries, along which HIV courses through the body of Africa, needs no elucidation here other than to highlight the agency, yet again, of mobility in the propagation of disease.⁶³

Conclusion

The history of the movements of people in Africa serves as a template with which to map the progress of its population's health, from the equilibrium with nature that marked the 'Garden of Eden' era, right down to the present day. Africa has not been unusual in seeing an explosive growth in population accompanied by the increasing tensions which will inevitably arise when people become more mobile and start to impinge upon one another's territory.

SSA's history, insofar as modern medical care is concerned, can usefully be tracked using the colonial interlude as a pivotal point of reference. The end of the Eden phase was marked by the arrival of travelers from the Arab world, and from Europe, but this impact was limited by these adventurers' lack of resistance to malaria and other diseases which ironically served as a form of defence for Africa against full-scale invasion. The discovery of the prophylactic properties of quinine against malaria changed that, and communications to the homeland from early European explorers opened up a floodgate of missionaries eager to save the souls of 'the heathen'. The chief catalysts for Africa's health development were the medical missionaries whose intrepid infiltration of the continent opened the way for the colonial administrations which were to follow.

The upheavals occasioned by the accelerated development of SSA, the portability of maize as a food source for migrants, and the introduction of surplus firearms in their millions after the American Civil War, resulted in huge migrations which served to spread opportunistic diseases to all corners of SSA and this weakened the people's resistance to imperialism. After the infamous

63 PW Ewald, *Evolution of infectious diseases*, pp. 119-120.

‘Scramble for Africa’, which saw European powers arbitrarily carve up portions of Africa for themselves in the cause of national prestige, it became evident to the colonial administrations that the good health of their newly subject peoples was in their own best interests as well. Healthy people entailed an expanded pool of cheap labour to draw on and also presented less of a health threat to the persons of the administrators themselves.

Although Colonialism had its negative effects, life expectancies increased steadily as medical advances in Europe, and those from the field of tropical medicine, were introduced into Africa, and as knowledge of the importance of public health and sanitation became disseminated and institutionalized.

The post-colonial era, after an initial period of euphoria, saw SSA once again descend into widespread armed conflict⁶⁴ with predictably negative outcomes for health care. The ensuing instability once again precipitated massive migrations of refugees. Africa’s general level of poor development, coupled with high fertility rates, has led to a population increase that places considerable strain on the natural environment which fact, in its turn, leads to the accelerated urbanization of rural peoples into huge urban shanty towns and slums such as Nairobi and Lagos – breeding grounds for disease.

At some point, the precise timing of which is not known, HIV emerged to ravage SSA and to expose its health systems (and by implication its leaders) as being inadequate to deal with a serious pandemic. In the ongoing absence of any effective vaccine, after two decades of intensive research and the investment of billions of dollars, HIV threatens to destroy SSA’s health care capacity. Unless the international community comes to the rescue and history repeats itself with a new wave of *de facto* medical colonisation – this time by the likes of the World Health Organization, the World Bank, the United Nations, donors such as Microsoft’s Bill Gates, and so forth – SSA’s health systems may well revert to the later pre-colonization status outlined earlier in this study.

⁶⁴ Detailed in DT Jamison et al., *Disease and mortality in Sub-Saharan Africa*, pp. 8-9.