WellcomeHistory

ISSUE 38 **SUMMER 2008**

wellcome trust

Trading children

Mental health and physical rehabilitation of trafficked West African boys and girls

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In September 2001 a group of 68 children, aged between 18 months and 18 years, was rescued from a sinking ship off the coast of Cameroon and returned to Togo. In April of the same year, a larger group of children from several countries including Togo was rescued from a vessel off the Nigerian coast and brought to UNICEF headquarters in Cotonou, Benin.

Scholars and activists can point to numerous incidents almost every year over the past two decades. UNICEF officials estimate that at least 200 000 West African children are bought and sold by professional dealers each year. Trafficking in children affects all countries in Africa. Indeed, child trafficking in West Africa has become such big business that vendors often operate hubs in Europe, North America and South Africa, feeding their human cargo into a much larger international child slave network.

Above:
A girl carrying her brother.
Drs John and Penny Hubley

Cover:
Two boys cattle farming in Tanzania.

Note:
Wellcome History wishes to make clear that the children pictured have no connection to trafficking.

The incidents of 2001 provide a window into a deepening humanitarian crisis in West Africa, but they are also part of a set of deeper historical processes in the region. Wily businessmen have not suddenly turned to child trafficking in recent decades, but rather, as Beverly Grier (2006) has argued, the trade itself is built on a series of important post-colonial developments with antecedents reaching deep into the colonial and pre-colonial periods that created a dependency on child labour. My intention in this project, a chapter of a larger book, is to account for the diverging approaches to the mental and physical welfare of children 'rescued' from various trafficking operations over the past two decades. The larger project provides a historical explanation of the structure and currents in the child labour traffic of West Africa, and to tie this explanation into the literature on the African slave trade, the decline and end of slavery, and the rise of 20th-century labour patterns. By taking as a case study the children bought, sold and brokered in and through Ghana, Togo and Benin – children who originate throughout West Africa – my hope is that this book will enable scholars and activists to see the shifting and evolving terrain of child labour markets over a period of two centuries, and stimulate discussion and further historical analysis, perhaps with implications for policy development and implementation leading to the amelioration of the conditions of Africa's child labourers.

The idea for this project came from a series of marginalia by French colonial officials working in Togo in the 1920s and 1930s, which drew me to the key location and intrinsic role of Togo in larger West Africa economic flows. The small territory of French Togoland was, in the minds of many administrators, "nothing more than a conduit" of trade in goods and people. People moved back and forth through the region because there was little obstruction in the form of border administration or local opposition; indeed, as Paul Nugent has shown, colonial politics and economics incentivised such borderlands movements. And while colonial administrators rarely took note of children, whether as subjects of political power or pawns in an economic transaction, other parallel communities, including Christian missionaries and African intermediaries, observed the significance of child labour and the child labour market. What the French administrators of the 1920s and 1930s were observing was the rearticulation of a trade in people in a region with a long history in people trading, and a historical transition that bears some similarity to the distinction that David Kyle and John Dale (2001) identify as "migrant exporting schemes" versus "slave importing operations".

The children 'rescued' in 2001 and throughout the past two decades are primarily agricultural and domestic workers, and to a lesser extent children bonded to religious shrines; sex workers and child soldiers feature, but they remain a small percentage. Religious slavery is a pre-colonial institution, demand for agricultural and domestic labourers expanded rapidly in the colonial period, while sexual slavery and child soldiering only gain a foothold in West Africa in the 1980s. With the arrival of formal colonial rule in West Africa, the economic and political role of urban centres was cemented and additional demands for household labour and domestic service expanded dependence on child labour. The burden for the economic operation of the colonies was quickly shifted onto the colonised. Incentives to expand cash cropping, particularly cocoa and coffee, through much of tropical West Africa, created urgency in the labour market. The position of labour recruiter, a job with striking similarities to that of slave purchaser, became very profitable. The first labour recruiters were Europeans, but Africans quickly took on this role. Individuals and groups moved from village to village luring parents into informal contractual arrangements – promising to bring children to work in towns or on farms and to remunerate them regularly, or promising prosperity and education opportunities.

> Released children are placed in halfway houses where they receive treatment for post-traumatic stress disorder, sexual health, and wounds and injuries

During the colonial period, the small numbers of children rescued from systems of bondage were placed under the care of missionaries in privately run missions, or in government institutions and orphanages. Little emphasis was placed on the mental and physical wellbeing of these children. Colonial officials were indisposed to disrupting 'traditional' bondage systems, such as the *trokoisi* religious slavery prevalent in south-eastern Ghana. The Great Depression had profound implications for the economies of West Africa, deepening the dependence on cheap, controllable labour. Budgetary cutbacks directly affecting children included the closing of state and parochial schools, orphanages and other welfare programmes. In many larger cities greater numbers of children were forced to fend for themselves, particularly older children, frequently the first to be cast out of homes in economic crisis. Many cities witnessed an explosion in child homelessness and prostitution from the 1930s onward.

Many of the economic and development models of the 1940s and 1950s that paved the way to West African independence were responses to the social and political crises emanating from the deprivation of the 1930s. Each developmental model posited a problem in a scientific and rational way and offered concrete solutions for implementation: problems such as urbanisation, prostitution, epidemic disease and demobilisation of soldiers, among others, were dealt with through scientific studies and micromanaged solutions. What was conspicuously absent from the agenda of modernity in the 1950s and 1960s, however, was how to deal with the growing dependence on child labour in cities and farms throughout decolonising Africa. Child labour and the market in children for the purposes of labour outside of the family were consequently also absent from grand plans for nation- and state-building implemented by African leaders in the 1960s and 1970s.

From the 1970s to the early 1990s, international political developments significantly impeded campaigns to eradicate child labour and child trafficking in West Africa and beyond. The realisation that much of independent West Africa was deeply embedded in exploitative economic systems drawing on the labour of children resurfaced as a concern after the Cold War. Several countries were early foci of such research, particularly Mauritania and Sudan, where US-based religious organisations collected funds to purchase the freedom of children who were subsequently 'adopted' by individuals, couples, families and churches in programmes that mirror adopt-a-child plans sponsored by Oxfam, World Vision and other NGOs.

Recently, more aggressively interventionist programmes of rescue and rehabilitation have gained popularity in Ghana, as well as neighbouring Togo and Benin. Local NGOs troll the streets and beaches of Accra, the waters of Lake Volta and the forested regions of central and south-eastern Ghana looking for children in exploitative systems of labour. These children might be engaged in street hawking, cocoa harvesting, fishing or religious ceremonies. Government agents of the Ministry of Women, Children and Social Welfare, supported by various local and international NGOs and West African regional bodies, negotiate the release of the children from their respective contracts. They are subsequently placed in halfway houses where they receive treatment for post-traumatic stress disorder, sexual health, and wounds and injuries, as well as rape counselling. In the rare case where a child's family can be tracked down, the children are reunited with them. In the vast majority of cases, the children are provided with formal technical training and resettled with financial support from national and international organisations.

This article is based on NGOs reports and interviews with trafficked and rescued children, as well as the rescuers.

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Chemoprophylaxis against sleeping sickness in late colonial Africa

GUILLAUME LACHENAL

After World War II, a new strategy to fight sleeping sickness was launched. Mobile medical teams in French and Belgian colonies began to use prophylactic injections of pentamidine (registered as Pentamidine and Lomidine) in mass campaigns.

'Lomidinisation' was the name given to the new preventative method, which – it was hoped – would replace the previous strategy, based on the screening and treatment of infected people. During the 1950s, more than 10 million injections of Lomidine were given to the populations of endemic foci in West and Central Africa. A quick eradication of trypanosomiasis was proudly announced by colonial authorities.

No more than 30 years later, public health specialists held a radically different view. Sleeping sickness, though contained in most African countries, was clearly not eradicated. Moreover, it became clear that the extensive use of preventative injections of Lomidine had been based on false premises. From the mid-1970s, laboratory experiments demonstrated that Lomidine hardly gave protection to individuals for more than a few days. The French military doctor René Labusquière, a specialist in tropical medicine, expressed a consensus when stating in 1974 that Lomidine injections to healthy individuals were "useless, dangerous, and therefore uselessly dangerous". From then on, official histories of colonial medicine chose to forget this episode of public health. Once celebrated as a biomedical revolution, sleeping sickness chemoprophylaxis was actively erased from medical memories. Such a reversal is an intriguing case; it offers an occasion to investigate the role of indecisiveness and faith in the history of a modern public health technology.

Lomidine, like the other members of the diamidine family, is an international drug. Synthesised in 1938, it was tested before the War by British chemotherapists as a cure for various parasitic diseases. Its testing in Africa began during the War, in the outpost of the Liverpool School of Tropical Medicine in Freetown, Sierra Leone. Thanks to informal contacts between field medical services, it was transmitted to French and Belgian colonial doctors, who included Lomidine in their standard protocol to treat trypanosomiasis. In 1942, Belgian doctors at the Princess Astrid Institute in Leopoldville (now Kinshasa, Democratic Republic of the Congo) tested its preventative effects. The injection of a single dose of Lomidine to the entire population of a village drastically reduced the prevalence and incidence of sleeping sickness in the following months, compared with untreated villages. Lomidine, they concluded, was a very effective chemoprophylaxis. From 1945, large-scale trials of Lomidine chemoprophylaxis were run in French Equatorial Africa, French West Africa, Cameroon, Nigeria, Sierra Leone, Angola and Portuguese Guinea. In 1948, the African Conference on Tsetse Flies and Trypanosomiasis proposed a standard protocol and recommended its implementation in all areas contaminated with *Trypanosoma gambiense*. Lomidine, produced by the French firm Specia and by its British subsidiary May & Baker, added its voice to the optimism of the times.

Lomidinisation appeared as an antidote to many of the problems faced by colonial medical services in the postwar years. The liberalisation of colonial regimes, forced by the political mobilisation of colonised peoples and by international pressures, had an immediate side-effect: populations increasingly avoided mass medical campaigns. Unable to respond to that 'epidemic of indiscipline' with compulsion and coercion, colonial doctors had difficulties implementing medical surveys. In that context, chemoprophylaxis offered new perspectives. Though it was particularly demanding for patients and medical teams – the whole of a concerned population had to be given intra-muscular injections – it was also promising: Lomidinisation could be the last assault against sleeping sickness. Instead of lifelong treatment of trypanosome carriers and costly screening campaigns, Lomidinisation was an intense and ambitious effort. Put simply, eradication was worth a renewed burst of policing. In Cameroon, for example, the beginning of Lomidinisation coincided with new public health legislation (1948), making compulsory the presentation to medical surveys and the treatment and segregation of contagious subjects.

Right: Blood sampling for trypanosomiasis in Cameroon, 1951. © *Infocam*

Between 1948 and 1955, Lomidinisation was massively applied in French colonies and Belgian Congo. Mobile teams, composed of local male nurses headed by colonial doctors and assisted by secretaries and policemen, were organised on the classic model of screening–treatment teams. The injection of

Lomidine to every healthy subject was added to the other tasks, which included the examination of the blood of the entire population and the treatment of parasite carriers. The operations had to be further rationalised and Taylorised, since the intra-muscular Lomidine injection was the 'bottleneck' in the 'production line'. A particular emphasis was put on the injection rate: one every minute was an achievable goal. Campaigns reached remote areas, benefiting from the progress of transportation and road infrastructure at that time. Intensity peaked in 1954, with more than 1 million people injected in French Africa. Results were "prodigious". Cases became rarer and rarer. Infection indexes dropped "vertically", and official reports celebrated "one of the greatest sanitary victories of our civilisation".

Nevertheless, the success of Lomidinisation appeared fragile from the outset. Lomidinisation proved very effective at combating severe epidemics; at the same time, its efficacy and safety appeared very uncertain when considered at the individual scale. Some subjects who had received Lomidine were found infected the following year. Experts had radical explanations: almost certainly, they proposed, these subjects had managed to escape from the medical team between their registration and their effective injection. Individual indiscipline explained individual failures. On top of this, Lomidine caused worrying side-effects: it induced hypoglycaemia and hypotension, which caused nausea and collapse; the injection itself was irritating and caused pain and oedema; the fact that injections were given serially to several hundred people increased the risk of error and contamination, and complicated the surveillance. But all of these practical problems hardly challenged the trust in the method: according to colonial doctors, the cause of most accidents was the indiscipline of Africans, in the form of "lazy nurses" or "malevolent villagers". Strikingly, British colonial doctors refused to use Lomidinisation on a large scale. They limited their trials to small communities with intense epidemics, such as mine employees in Northern Nigeria. Classically preferring the fight against tsetse flies, British colonial doctors considered Lomidinisation too costly and too unpopular, and also dangerous. Moreover, Lomidine prevention had no effect on the epidemics caused by *Trypanosoma rhodesiense*, the parasite causing sleeping sickness in British East Africa.

Above: Microscopists examining blood samples in Cameroon, 1951. © *Infocam*

Lomidine's success as a chemoprophylaxis had been tested at the individual scale only once. The experiment, conducted by Belgian doctors in Leopoldville during the War, submitted two Congolese natives injected with Lomidine to daily bites of tsetse flies. Trypanosomes were found in their blood only nine months later, which was taken as a proof of the preventative power of Lomidine. Without any control subjects, the trial design was very weak, as British researchers claimed at the time. But the subsequent success of the community-scale trials closed the controversy: the effectiveness of preventative Lomidine was considered to be demonstrated. From this crucial experimentation to the assessment of the efficacy of mass campaigns, the community remained the only scale on which to evaluate the rationale of Lomidinisation. There was one exception: Europeans were systematically excluded from Lomidinisation. It was deemed inefficient and too risky in their case, notably because it could mask the early development of the disease and complicate its treatment. Meanwhile, Africans were compulsorily submitted to Lomidinisation, even in the absence of any epidemic menace, for "the health of their race" and for the sake of eradication. The application of Lomidinisation thus relied on – and reactivated – the racialisation of colonial medical thinking.

According to colonial doctors, the cause of most accidents was the indiscipline of Africans, in the form of "lazy nurses" or "malevolent villagers"

Several factors contributed to the abandonment of Lomidinisation during the 1960s: the dismantling of colonial medical services, the disappearance of sleeping sickness in most African countries, and a dramatic series of accidents. Contaminated Lomidine injections caused epidemics of gaseous gangrene on several occasions in Gabon, Cameroon and Chad, affecting more than 500 people and causing more than 50 deaths. Justified by the absence of recent sleeping sickness cases and significance of the quest for eradication, it was a high price to pay for the affected communities.

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Understandings of immunisation: some West African perspectives

MELISSA LEACH AND JAMES FAIRHEAD

A schoolteacher in the town of Gueckedou, on Guinea's border with Liberia, saw rebel forces with child soldiers destroy his town in 2001. Reflecting a few years later on the childhood immunisation programmes now well established in the region, he worried that they were creating a new generation of children – strengthened, but more violent.

The notion of strength, and the processes that build or deplete it, is central to local understandings of many issues in this part of West Africa – from health to the power of communities and regions. Not surprisingly, people have come to frame and evaluate immunisation and its effects through this particular logic. Much of the time, they do so appreciatively. Yet as this teacher expressed, the strengthening effects of immunisation can also be a source of ambivalence and anxiety.

Attention to local social and cultural perspectives such as these can greatly assist the challenges associated with immunisation programmes. Since the 1950s, immunisation has brought nine major diseases under varying degrees of control. As a universal technology promoted through globalised approaches, from the smallpox eradication campaigns of the 1960s and 1970s to the World Health Organization's Expanded Programme on Immunization (EPI) since 1974, it has achieved remarkable success. Yet as immunisation plays into diverse personal, social and cultural worlds, its reception has varied – with acceptance and increasingly active demand among many, but anxiety, distrust, refusal and resistance among others. Today, as scientific and technological advance coupled with growing international and philanthropic investment make strides in addressing the 'supply-side' challenges of immunisation, addressing such 'demand-side' challenges assumes greater importance for expanding immunisation coverage.

Above: A nurse vaccinates a child.

Health professionals often assume that that low demand or refusal reflects public ignorance or misinformation, which need to be corrected through education. Meanwhile, recent cases of resistance to immunisation – such as to tetanus toxoid campaigns in Uganda and Cameroon, and oral polio vaccines in Nigeria – have reignited concern over 'anti-vaccination rumours'. Yet representations of ignorance and rumour overlook the local knowledge and cultural perspectives that lead people both to demand immunisation and, sometimes, to shun it.

In The Gambia, for example, mothers go to great lengths to build and protect their own and their children's strength, which they see as dependent on proper quantity and flow of blood and body fluids. They value immunisations in these terms, as introducing a powerful substance that, going into the blood, either builds its strength or builds in the blood defences against disease: "The injection strengthens the health of the child. It gives the child good body." Within this logic, many feel that vaccinations are effective against illness in general. It has been found that 29 per cent of urban and 48 per cent of rural mothers could name no biomedically 'correct' vaccinable diseases, yet were actively seeking immunisation – reflected in national coverage rates of 90 per cent in 2003. Such ideas about strength, fluid and substance do not conform to biomedical notions of an immune system, disease-specific vaccines, and strong distinctions between prevention and cure. Yet they ground strong appreciation of immunisation in areas across The Gambia, Guinea, Sierra Leone and beyond.

The same framing can also underlie anxiety. Thus in a context where mothers often miss clinic sessions due to workloads and problems at home, they often worry greatly that a backlog of such vaccinations will have 'stacked up' and that nurses will give their child several at once. This can be too much substance for the blood and body to cope with.

In these West African regions, ideas of strength and proper circulatory flow frame not just bodily discourse but also wider social and political reflection. The routine immunisation delivery by trusted health agents is interpreted as part of the valued throughflow of people and goods that builds healthy, strong communities. Vaccination has long been delivered primarily through the state, promoting strong bodies that in turn help to build a populous, strong national body politic. Yet within this framing, vaccination services can also weaken or bypass established structures. 'Rumours' that vaccines contain sterilising agents or HIV can make sense in these terms, linking bodily weakening with weakening of a body politic, as a population or area is sapped of fertility and strength. And externally led, one-off vaccination campaigns and National Immunisation Days, in contrast with routine health delivery, do not become part of local strength-building relations. Instead, it is easy for campaigns to be experienced as invasive and alien, and this calls into question their agenda.

These West African perspectives, rooted in understandings of strength-building and depletion that link bodily processes with wider national and international politics, thus provide a further layer to White's (2005) argument that international disease eradication programmes in Africa have – since the 1960s – often been experienced as a kind of "un-national sovereignty". The involvement of global institutions in African immunisation has only increased in recent decades, through global disease eradication campaigns and now initiatives led by global philanthropic and public–private organisations. Attention to local framings shows why such broader political shifts provide a context in which vaccine anxieties can flourish, and the significance of worries about strength-depletion.

To understand why people accept (and why they sometimes reject) immunisation requires engaging with local cultural framings, both of the technologies involved and of particular programme approaches. Such framings, as in these West African examples, may link bodily and wider political understandings. They will often differ strongly from those of biomedical science and health professionals. Yet appreciating them is essential to inform strategies to improve immunisation uptake, design effective and acceptable programmes, and build appropriate, dialogue-based communication approaches.

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Haemorrhagic fevers in Africa: narratives, politics and pathways of disease and response

MELISSA LEACH

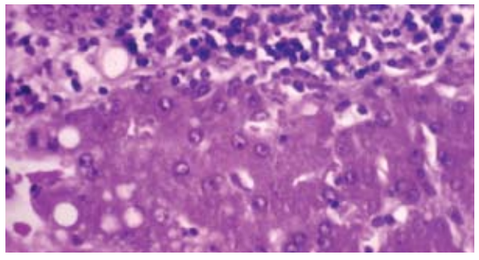
Haemorrhagic fevers capture popular imagination as deadly zoonotic diseases that come 'out of Africa'. Ebola, Lassa and other viral haemorrhagic fevers that are associated with wildlife vectors in forested environments figure prominently in current concerns about so-called 'emerging infectious diseases', their hotspots of origin and threat of global spread. Outbreaks attract rapid international control and policy responses.

This "outbreak narrative" (Wald, 2008) is only one among several storylines about haemorrhagic fevers, however. Other narratives present contrasting views concerning causes, dynamics, significance and control. Narratives matter because they shape the responses of health institutions and others. In this article I outline three other narratives that highlight shortcomings in dominant, epidemiologically driven outbreak responses, and that might offer pointers towards more effective ways of dealing with haemorrhagic fevers.

Above: A boy has a blood test to check his immunity. *Prof. Dieter Stürchler*

Right: Section of a liver from an individual killed by Ebola.

Media and fictional sensationalisation helped to entrench the first, global outbreak narrative following the first recorded outbreak of Ebola in 1976 in the Democratic Republic of the Congo (DRC, then Zaire). The global threat from this 'rapid-killing' disease (50–90 per cent of people afflicted die) caused by a filovirus with a little-understood animal reservoir in Central African forests was elaborated in Garrett's 1994 *The Coming Plague* and Preston's 1994 *The Hot Zone* as well as the 1995 blockbuster film *Outbreak*. Lassa haemorrhagic fever, identified by scientists in Sierra Leone in the 1980s to be caused by an RNA virus whose animal reservoir is a rat, *Mastomys natalensis*, has a lower mortality rate (80 per cent of cases are asymptomatic and 1–15 per cent of those clinically diagnosed die from it). Yet in the forested countries of Sierra Leone, Guinea and Liberia, about 5000 people die from it annually. As with Ebola, global outbreak narratives emphasise its threat among globalising and urbanising populations, and biological warfare.



A second narrative takes a more local focus, constructing haemorrhagic fevers as devastating disease events affecting local populations in African settings, requiring a universal kind of rapid response by external agencies. Thus the outbreak alert and response programmes to Ebola of the World Health Organization and the US Centers for Disease Control from the 1990s established a standardised set of medical and public health strategies to contain the disease. These centred on establishing isolation units for infected people and implementing barrier nursing techniques, tracking and controlling those who had had contact with infected individuals, health education, and limiting 'dangerous' local behaviours such as the washing and burial of corpses. The narrative generally presents local Africans as ignorant, and mired in negative cultural practices. Not much reported, however, is that such top-down control measures often meet with resistance. In Gabon in 1995–96, for example, American and French Ebola control measures were perceived as so inappropriate and offensive by villagers that they aroused deep suspicion, and international responses to a further outbreak there in 2001 met with fierce local armed resistance.

Vaccination is potentially a highly effective measure, but within this narrative of 'external control of local disease', pharmaceutical companies have little interest in funding vaccines for a disease of poor African populations. Vaccines against haemorrhagic fevers have indeed remained elusive. Filoviruses and RNA viruses offer particularly complex scientific challenges, and there are uncertainties about vaccine efficacy and side-effects in these disease contexts. A promising Lassa vaccine had to be halted in early trials, for example, when its vector was found to cause vaccinia infection in HIV-infected people.

In a third and contrasting narrative, haemorrhagic fevers are seen as long present among local populations who have developed culturally embedded ways to live and deal with them. Local knowledge and cultural logics can, so the argument goes, inform and be integrated into response strategies, helping to make these more context-specific, locally appropriate and acceptable. The work of anthropologists Hewlett and Hewlett (2008) has been pivotal in developing this narrative, and in its uptake by the WHO – which from 2001 came to include anthropologists in integrated Ebola response teams. Anthropological perspectives help to identify valuable, health-enhancing local knowledge and cultural categories that can be blended productively with scientific knowledge. In Uganda, for example, these included the coexistence of both endemic and epidemic ('*gemo*') models of disease. As an Ebola outbreak progressed, the shift in local understandings to their *gemo* framing triggered elaborate social protocols to control the disease, and these were successfully integrated into responses. This narrative also offers ways to understand local resistance and adapt accordingly – as for instance in the DRC in 2001, when the high screens used to hide victims' bodies were found to contradict funeral norms. It can build more effective, dialogue-based health education. Non-governmental organisations addressing Lassa fever in Sierra Leone in the late 1980s used participatory theatre to build on local understandings of the risks of contact with rat excreta, for example. Compared with Ebola, anthropological studies of Lassa fever are lacking. Yet understanding local categories and fears would assist with several current challenges: encouraging more cases to be identified early and brought to hospital, and addressing prevalent anxieties that hospital Lassa treatments themselves "kill" (Merlin, 2002). Overall, this narrative emphasises the need for responses to be adapted to local circumstances. Context matters, and technologies and practices suited to one place might be rejected in another.

For all their contrasts, these narratives share a focus on short-term responses to haemorrhagic fevers. Different again is a fourth narrative that turns attention to longer-term ecological and social dynamics and more structural shifts that may be impinging on the nature and frequency of outbreaks, and on regional vulnerability to them. Evidence that Ebola outbreaks are increasing in frequency and severity underlines the relevance of such longer-term perspectives. Some virologists now argue that identifying and addressing the underlying causes of the emergence of infectious diseases is vital to interrupt potentially dangerous cycles of viral–animal–human coevolution.

In Gabon, international Ebola control measures were perceived as so inappropriate and offensive by villagers that they met with fierce armed resistance

Within a narrative of long-term dynamics, one line of argument would focus on the poverty, inequality and "structural violence" (Farmer, 2003) in regions where haemorrhagic fevers are rife. Declining health systems and overcrowded hospitals in which viruses multiply are one manifestation of this. Conflict is another, as in West Africa, where a decade of civil war closed the Lassa research unit in Kenema, Sierra Leone, and halted regional cooperation between the Mano River Union countries – only recently being rebuilt. In this view, tackling haemorrhagic fevers cannot be separated from tackling poverty and its causes, and building accessible and equitable health systems.

This narrative can also focus on long-term environmental dynamics. Thus deforestation through agriculture and logging – and its political, economic and poverty-related causes – has been assumed to contribute to haemorrhagic fevers, by bringing populations closer to their forest animal viral reservoirs and secondary vectors. Yet many questions remain unresolved, and causative patterns uncertain. Ebola's natural reservoirs and transmission cycle remain ambiguous, with competing theories – centred on bats and rodents – in play. Outbreaks of both Ebola and Lassa have often centred on the forest–savanna ecotone, suggesting (little-understood) interactions with forest–savanna dynamics and land use, which will themselves be influenced by the uncertain effects of climate change. This narrative thus suggests a role for long-term ecosystem surveillance with interdisciplinary collaboration, including local knowledge of ecosystem–land use–vector dynamics. Yet it also suggests that full predictability and control of such ecosystem shifts and people's interactions may be an illusory goal, so strategies may need to focus on more flexible, adaptive responses.

Each of these narratives – of global outbreak, of local disease event requiring external response, of local knowledge and cultural logics, and of long-term dynamics – thus constructs haemorrhagic fevers in its own way. They pick out different temporal and spatial scales, they use and validate different kinds of knowledge, and they assign cause, blame and vulnerability differently. Each suggests somewhat different pathways of response, involving different combinations of actors. Elements of each will undoubtedly have roles to play in the vital task of addressing haemorrhagic fevers in the decades to come, underlining the need for further elaboration of the understandings and strategies implied by each narrative, and identification of the conflicts, as well as potential complementarities, between them. This may also help to redress a balance. So far, outbreak narratives and their central medical and epidemiological precepts have dominated the powerful international apparatus that orchestrates infectious disease responses. Might it be time for research drawing attention to local knowledge, culture and context, and to long-term social and ecological dynamics, to be drawn into dialogue with them, in ways that can lead to more sustainable and socially just pathways of disease response?

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Negotiating tradition: African healers, medical competition and cultural exchange in South Africa, 1820–1948

KAREN FLINT

My work traces the historical construction of what are today deemed 'traditional' African therapeutics and healers in the South African province now known as KwaZulu-Natal. To understand this history, I argue that we must consider cultural actors and processes not commonly associated with traditional African medicine – i.e. white biomedical practitioners, Indian healers and the implementing of white rule.

Right: Medical treatment in the Zulu nation.

While the region's medical 'traditions' and cultures – African, Indian, and European – are often treated as their own 'systems', bounded and separate from the others, my book argues that this was not the case. Between 1820 and 1948 African healers transformed themselves from politically powerful women and men who threatened to undermine colonial rule and law into successful venture capitalists who competed for turf and patients with biomedical doctors and pharmacists in the major urban areas of Natal. Instrumental to this transformation was the colonial decision to license African herbalists. The resulting competition greatly influenced the ways in which different medical practitioners came to envision themselves and their own medical authority.

Biomedicine, I argue, sought to establish its authority by invoking notions of science and racial superiority while legally restricting 'African' medicine and its practitioners from using 'white' tools, titles and substances, and attending to white patients. African and Indian practitioners, on the other hand, sought to modernise and professionalise their occupations by winning the confidence of a new multiracial urban clientele while also seeking to circumvent the legal

restrictions imposed upon them. An examination of the political, social and economic encounters of such practitioners and their patients demonstrates the multicultural origins of so-called 'indigenous medicine', and the ways in which 'African' medicine negotiated, accommodated, adapted and resisted its encounters with South Africa's other medical communities. Consequently, my work challenges academic and popular notions of cultural exchange in South Africa and contributes to a growing body of scholarship focused on the construction of cultural identity.

To tell the story of Zulu healers and changes in African therapeutics within the Zulu nation (1820–79), my study moves away from more conventional medical histories and notions of medicine. I argue that African healers and therapeutics healed not only the physical and social body, but also the body politic. As the Zulu kingdom emerged and consolidated its power, medicine played an important role in defeating Zulu enemies, strengthening the King, and creating a new sense of national pride and obligation. While historians of medicine influenced by Foucault have written about biomedicine as a means of social control and a tool of empire, medicine and healers within the Zulu context often achieved similar ends, albeit by different means. Recognition of the important political role of played by healers helps to explain why white native administrators and legislators in neighbouring Natal (1830–91) reacted as they did to a certain subset of African healers within their own territories.

Above: A Zulu healer.

In contrast to Natal's administrators, white doctors initially seemed to respect the work of African healers, and some sought their assistance. By the early 20th century, however, biomedical doctors grew increasingly sceptical of such healers and their abilities, and began to claim that African healers were 'unscientific' and 'ineffective'. The reasons for this transformation reflect changes in biomedicine, the development of competition between indigenous healers and biomedical practitioners, and the professionalisation of biomedicine in Europe and the colonies. My work looks at the unique circumstances that led to the decision to license healers and how the resulting competition influenced biomedical and African healers' ideas of what constituted medical authority.

I aim to show that medicine was not only a site of power and contestation, but also a site of cultural exchange. As African urban healers sought to 'modernise' African medicine they adopted certain tools, language and practices from Indian therapeutics and biomedicine. Likewise Indian and white medical practitioners appropriated African terms and concepts to make their own medicine more acceptable to African patients. My work raises important questions regarding the 'indigenous' nature of African medicine, and demonstrates that groups such as Indian *inyangas* (herbalists) were not only users of so-called indigenous medical knowledge, but its shapers and contributors as well. This is particularly important today when 'indigenous' knowledge systems are finally being recognised and supported by a new South African government. Problematically, however, policy makers drawing up legislation regarding indigenous knowledge are often naive about the history of 'indigenous' or traditional medicine. Post-apartheid officials thus risk discriminating against and excluding certain African and Indian healers and practices much as their white imperial predecessors had done.

Though the specifics of this story are grounded in the history of the Zulu kingdom and Natal, the study has broad applicability to the histories of colonialism and medicine. Given that many histories of colonialism and medicine are told from the perspective of biomedicine, my work offers a different view from which to expand definitions of medicine and understand the relations between biomedicine and colonial subjects. By shifting the focus to 'indigenous' therapeutics and the way in which healers and patients interacted with biomedicine, my work not only reveals the impact that colonialism had on indigenous forms of healing but also the impact that indigenous therapies had on the practice and professionalisation of colonial biomedicine. Consequently, I problematise what some scholars assume is biomedicine's colonial hegemony and add to the growing number of Gramscian-influenced scholars who emphasise the importance of negotiation between the coloniser and the colonised in the creation of hegemonic discourses and practices.

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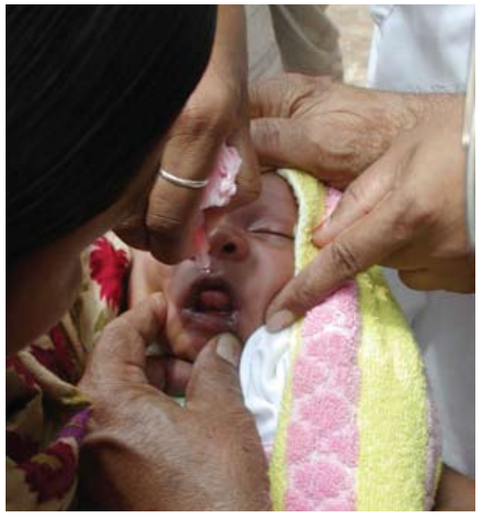
Of vaccines, conspiracy theories and reproduction

BARBARA M COOPER

Why in 2003 and 2004 did Muslim scholars urge women in Maradi, Niger, and other Hausa-speaking regions to refuse to vaccinate their children against polio?

While World Health Organization reports of late downplay the urgency of exploring these questions as polio eradication programmes have met with greater success in more recent campaigns, it seems nevertheless important to understand how the crisis came about in the first place. What is the history of medical and moral intervention in this region that feeds a popular perception that vaccinations will lead to female sterility and genocide? Much of the media rhetoric we have seen on this phenomenon emphasises a kind of Muslim irrationality, a retrograde reaction against the gifts of modernity. But surely there is some deeper history to be told, something that explains how vaccination and reproduction came to be seen to be antithetical to one another.



Above: Baby recieving a polio vaccine. *Rafiqul Islam*

In July of 2003, just as the WHO was poised to enter a key phase of the polio eradication campaign in Nigeria, the Supreme Council for Islamic Affairs claimed that the oral polio vaccine to be employed had been contaminated with carcinogenic, anti-fertility and AIDS-inducing agents. One leader, Datti Ahmed, who carried the authority of a medical doctor and was president of Nigeria's Supreme Council for Sharia Law, claimed publicly: "There were strong reasons to believe that the polio immunisation vaccines were contaminated with anti-fertility drugs, contaminated with certain viruses that cause HIV/AIDS, contaminated with Simian virus that are likely to cause cancer…". The campaign to stop the immunisations led to the establishment of a committee by the federal Government to investigate the allegations. Traces of oestrogen were indeed found in a batch of the vaccine, but it was nevertheless declared safe by the federal Government. But the rumours feeding the refusal to vaccinate did not abate. Only after a committee established by the Sultan of Sokoto, a locally recognised spiritual leader, declared the vaccine safe – and after a new source for the vaccines from a Muslim country was found – was it possible for the campaign to move forward. In the intervening ten months the virus had spread, and recriminations abounded on all sides as to who was at fault. More recently the WHO has declared a victory in eradicating polio in neighboring Niger, and remains optimistic about the prospects for eradication in Nigeria.

In my preliminary work I have explored the history of the decline of primary healthcare in Niger, and its replacement with infant and maternal health clinics, in a context in which the state does not appear to have the capacity to regulate the expanded circulation of counterfeit drugs. I argue that the polio vaccination crisis did not result in any simple way from Muslim fanaticism, nor was it the result of wilful ignorance or antiscientific attitudes. The lack of confidence in vaccination programmes promoted by major international institutions is grounded in a rather deep grasp of the asymmetries of power, the illogics of Western research agendas and the disregard for the best interests of ordinary Africans – things that characterise the lived landscape of most Africans in a risky and contingent world. Obviously some have capitalised upon the uncertainties of the contemporary moment to gain political advantage. And clearly there is a deeply gendered dimension to this crisis, in which girls and women are first and foremost understood to be potential mothers.

Much of the media rhetoric emphasises a kind of Muslim irrationality, a retrograde reaction against the gifts of modernity

Nevertheless, I attempt to show that this crisis was a very long time in the making and was in many ways a by-product of the neoliberal economic policies that have rendered real primary healthcare a mirage for most Africans. Africans face a barrage of media messages promoting family planning, exhorting abstinence in the context of AIDS, and selling the virtues of a variety of quick fixes to the medical vacuum in which they live. But they are not passive consumers of such messages, and it is clear that they seek out further information with which to inform and frame the risky decisions they must make, through informal discussion, the internet and reference to recent experiences. They also

draw upon the rich reservoir of local understandings of the social, spiritual and material world around them to interpret the gifts outsiders bring. Reasonably enough they ask themselves, just what is it that the West will exact in exchange for the gift of life for *this* child? A forfeiture of all children to come?

This study of the polio vaccination crisis will form part of a much larger study of the history of debates related to reproduction in French West Africa during the long 20th century. France's pronatal colonial policies and its strong prohibitions on open discussion of contraception and abortion have had quite important implications for the region. I suspect that much of the conservatism in the region so regularly attributed to Islam has its origins at least in part in colonial-era population policy. Although developments in Niger will provide my point of departure, I see this as a study that will shed light on the history of reproduction and health in the whole of French West Africa because of broadly shared legal, medical and economic dynamics. Among the questions I hope to explore are why so many women in Niger historically have found themselves imprisoned for infanticide when children are so highly prized, how the uniform training of *sages-femmes* and the medicalisation of childbirth have affected local perceptions of medicine, and how a region initially understood to be underpopulated came to be characterised uniformly as suffering from overpopulation.

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Dilemmas of modernity: Ayurvedic education in 20th-century Bengal

PROJIT BIHARI MUKHARJI

In 1857, when much of South Asia was torn apart by revolt and mutiny, a group of Calcutta aristocrats petitioned the government to implement a standard educational curriculum for physicians practising indigenous medicine.

A few years later, an ex-student of the Presidency College and a noted social reformer, Kissory Chand Mitter, published a pamphlet with a similar plea. Opinion was building up among a section of the indigenous elite that if the indigenous systems of medicine were to be revived and reformed, a standard educational process had to be ensured. As some nationalist leaders sought to incorporate the call for governmental support of indigenous medicine into their agendas, the need for a standard education process started being felt even more urgently. As long as the precise content was left undefined, as it had been through much of the 19th century, it was possible for a diverse range of opinion to be associated with the nationalist/revivalist/reformist project. In the 20th century, as questions arose about the scope of Ayurvedic education and the curriculum had to be defined, a range of differences surfaced.

Right: Ayurvedic diagnosis.
Mark de Fraeye

Lord Curzon's decision to partition Bengal along religious lines in 1905 was a watershed in Bengali history. Nationalists were forced into a more militant and aggressive stand and many students left government-run schools and colleges. A National Council for Education was formed in Calcutta and 51 National Schools opened. It was in this context that the first Ayurvedic college, the Calcutta Ayurvedic Institute and Pharmacy, was opened in 1905. Unfortunately, like the National Schools, the college closed down within a few years as the Swadeshi agitation slackened.

The next attempt to open an Ayurvedic college was by Dr Jamini Bhushan Roy, who held an MA in Sanskrit from Calcutta University as well as an MB from Calcutta Medical College. When the Astanga Ayurved Vidyalaya opened on the day of the Bengali New Year in April 1916 it had 12 students. Roy, who became its first Principal, wanted to combine Ayurveda and allopathy with a view to rejuvenating the former. He therefore enlisted the help of both doctors and *kavirajes* (the name given to practitioners of Ayurveda in Bengal). The college soon gained great popularity and at one time attracted students from as far afield as Nepal and Sri Lanka.

Kaviraj Ramchandra Mullick made another short-lived attempt in 1921, when he opened the Govinda Sundari Ayurved College and Hospital. Unfortunately, Mullick died soon after and the venture outlived its founder by just a couple of years. This was followed by the establishment of the Shyamadas Vaidyashashtra Peeth by Kaviraj Shyamadas Vachaspati, on the request of the Congress leader C R Das. Vachaspati, arguably the pre-eminent *kaviraj* of his times, had kept away from the new colleges on account of his disapproval of mixing allopathy and Ayurveda. He was an ardent advocate of *shuddha* (pure) Ayurveda. One of the areas where Ayurveda was often thought to be deficient was surgery, but here too Vachaspati refused to incorporate allopathic medicine, requesting instead his friend and colleague Kaviraj Haran Chandra Chakraborty to help. A resident of Rajshahi and a student of the illustrious Kaviraj Gangadhar Ray, Chakraborty is said to have learned 'Ayurvedic surgery' through a close study of the *Sushruta Samhita* and by conducting clandestine post-mortem examinations. Chakraborty had been born into a family of Brahmin priests and had practised as a priest in his youth. By involving Chakraborty in the college, Vachaspati sent a clear signal that though he was opposed in principle to the incorporation of allopathy, he was definitely not a blind traditionalist, but supported innovation.

In 1932, Kaviraj Gananath Sen, who had previously taught at J B Roy's College, left to found his own institution. The Vishwanath Ayurved Mahavidyalaya and Hospital was once again the result of disagreement about the extent to which one needed to incorporate allopathic medicine to make Ayurveda 'scientific'. Sen argued that scientific elements were already present in Ayurveda's rich textual heritage and all that was needed was careful sifting, and retrieval and exclusion of the unscientific accretions.

Despite repeated attempts, a uniform syllabus was not developed until the 1970s, and the three colleges were incorporated into Calcutta University only in the 1980s. Consecutive postcolonial governments also insisted that a larger body of 'modern science' be incorporated into the syllabus. The government sought to achieve this by repeatedly appointing allopathic doctors as heads of Ayurvedic colleges.

Charting this history brings out many of the anxieties and tensions inherent in Indian nationalism, with its claims to a homogenous, glorious past and its aspirations for a Western-style modernity. In my current Wellcome Trust-funded project, I will be investigating these debates around 'science' and 'modernity' within the context of Ayurvedic education in 20th-century Bengal.

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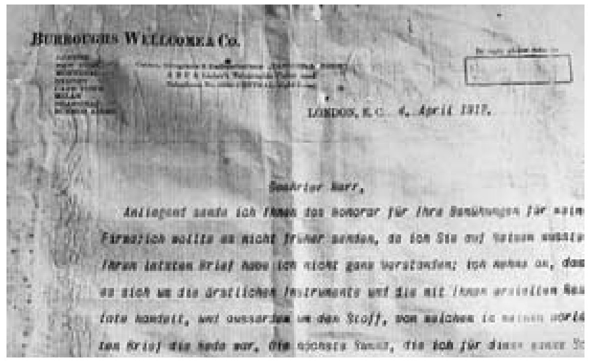
John Buchan, Burroughs Wellcome & Co., and the case of the Glasgow Spy

CHRIS BECKETT

A tale of espionage, forgery, astute bureaucracy and literary inspiration has emerged from the Wellcome Foundation Archive.

At the climax of *The Thirty-Nine Steps*, John Buchan's popular spy thriller set in London and Scotland on the eve of World War I, hero Richard Hannay confronts his treasonous quarry of three men in a quiet villa on a Kent clifftop (linked to the beach below by 39 steps cut into the chalk). He is suddenly struck with the deflating thought that the gentlemen before him may really be what they appear to be: innocent tennis-playing Englishmen relaxing by the sea on a Sunday.



Right: Counterfeit Burroughs Wellcome & Co. stationery used by Graves.

It is, however, only a momentary lapse of confidence on Hannay's part. In the nick of time, he recalls some wise words on the art of disguise from his South African scouting chum Peter Pienaar: "A fool tries to look different: a clever man looks the same and is different." Suddenly, every feature of normality about the three men that had caused Hannay to doubt his judgement now reinforced his certainty of their guilt. "If you are playing a part," said Pienaar, "you will never keep it up unless you convince yourself that you are it."

Armgaard Karl Graves, referred to in press reports as 'the Glasgow Spy', was the first person to be convicted in Scotland under the Official Secrets Act (1911). On 23 July 1912, at the High Court of Judiciary, Edinburgh, Graves was found guilty of making or obtaining a telegraphic code for the purpose of communicating information relating to the British Navy and land fortifications. The code had been concealed within the pages of a Burroughs Wellcome & Co. diary, and the firm's headed paper had been used to cloak communication with an accomplice in Brussels.

Graves seems to have been a graduate of the Pienaar school of deep cover. He went to considerable lengths to establish his identity as a doctor who had practised in Australia, and was now visiting England to undertake further training in Edinburgh and to conduct clinical experiments. His first port of call was not the Firth

of Forth but the Wellcome Medical Museum in Wigmore Street, London. This was not the casual visit of a medical man with wide interests and time on his hands but a calculated move in establishing a consistent identity. The archive contains a revealing record of this visit, 14 February 1912. After showing an interest in various Burroughs Wellcome & Co. products ("he would like literature re all our newest products sent to his Edinburgh address," it was noted), Graves reinforced his credibility by association: the Medical Officer of Southern Australia was presently staying in London, he explained, and should be contacted as a valuable source of business. Graves's final comment was to remark that he had not received a Burroughs Wellcome & Co. diary since 1909 and would greatly appreciate one (thereby pushing further back into time his fictive identity). In fact, Burroughs Wellcome & Co. had been carefully selected as a suitable source of cover for communication. Counterfeit Burroughs Wellcome & Co. envelopes and headed paper had been fabricated in advance of the mission and were used on occasion to convey coded information about Britain's expanding naval capacity (construction of the Royal Naval Dockyard at Rosyth began in 1909), and to send payment to Graves in return. The note of his attendance at the Wellcome Museum included an observation that could not pass unrecorded, in the midst of a national mood of contagious spy fever: Graves was German.

In Edinburgh and Glasgow, Graves fleshed out his identity still further. He applied for a position as a locum, and his medical knowledge was sufficiently convincing to a Dr Leith, who interviewed him. But, as Leith was to tell the court, he did not like the German accent. "It is does not do in Leith?" quipped the Solicitor-General, to the local court's amusement. Not a spy for the shadows, Graves had a gregarious personality. He was on friendly terms with the local pharmacist ("he was an educated and a very interesting man" said Roderick MacLennan, and "never a nuisance"). Alfred Morris, Assistant Manager of Glasgow's Central Station Hotel – where Graves had stayed for three weeks, and where he was arrested on 14 April – took him to the Art Club one evening and introduced him as his friend the German spy. "Many people in the hotel knew the joke," he said.

However, for Robert Simpson, Assistant Redirection Officer at Edinburgh Post Office, Graves was a little too forthcoming. Simpson stated at trial that Graves's "lack of concealment" struck him, as a Scotsman, as peculiar, and thought "he must have a purpose in being so loquacious". The strict application of Post Office procedure by another employee contributed to Graves's undoing: he was refused collection of a letter addressed to James Stafford Esq. (one of Graves's many aliases). The letter, which bore the name of Burroughs Wellcome & Co. imprinted on the envelope, was returned to its ostensible sender. At the company's office in Snow Hill, London, the envelope was immediately recognised as counterfeit. When Inspector Edward Parker of the Yard, who was already on the case, called at Snow Hill on Saturday 13 April he was told, somewhat proprietarily, that the matter had been placed in the hands of the company solicitor, who was not available until Monday. Parker left his card, and when he returned on Monday, he left a detailed receipt – an inventory – of everything: two letters in German and an inner envelope containing one five-pound note and one ten-pound note. In the intervening period before Parker took away the items, Burroughs Wellcome & Co. had photographed all: the set of sepia photographs sits today in the archive, along with Inspector Parker's calling card, a number of internal notes and newspaper cuttings of the trial (in three files, Wellcome Foundation Archive, Wellcome Library, WF/L/08/19-21).


No. 271.
How a "Secret Code" Was Deciphered.
ALLEGED SPY CHARGED.
Said to Have Sent Plans to German Government.
GERMAN SPY.
The Times, 24/7/12.
Private Dept:
THE LETTERS OF A SPY.
CORRESPONDENCE READ IN THE SCOTTISH CASE.
VERDICT AND SENTENCE.
GERMAN SPY.
CLOSE OF THE CASE.

Graves was sentenced to 18 months' imprisonment. If his memoir is to be believed, the unsuccessful Glasgow Spy undertook subsequent work for the British Secret Service. His life remained colourful: in 1916, he was arrested in Washington on a charge of blackmail (the charges were eventually dropped), and in 1929 he was arrested in Los Angeles for grand theft. As for Buchan, his biographers tell us that in the summer of 1912 – as Graves stood in the Edinburgh dock – he rented a cottage for the season beside the Yarrow. As Unionist parliamentary candidate for Peeblesshire and Selkirk (here recall Richard Hannay's impromptu political speech-making at the Masonic Hall at Brattleburn), Buchan divided his time between Scotland and London, tending his prospective seat, although he did not pursue his parliamentary ambitions to conclusion. In 1916, he became a second lieutenant in the intelligence corps. His informed interest in local and international affairs, and his connections to the diplomatic establishment of the day, make it inconceivable that he was unaware of Graves's trial. It is, then, but a short step to infer that the case of the Glasgow Spy enriched, in some contemporary measure, the fertile medium from which, but two years later, *The Thirty-Nine Steps* sprang, with Scudder's black notebook and cypher, and the threat of naval secrets escaping abroad.

Above: Press coverage of the Graves trial.

Chris Beckett is an Assistant Archivist of the Wellcome Foundation Archive, Wellcome Library, London.

The Medical Marketplace and Medical Tradition

CATHERINE COX AND HILARY MARLAND

At the start of the 21st century intense interest in and usage of complementary and alternative medicines, high levels of self-dosing, and energetic debate about the benefits of diet, exercise and healthy lifestyle coexist alongside biomedical treatments, and indeed continue to challenge them and question the reductionism they embody.

It seems timely to revisit the question of how different systems of medicine and approaches to healing survived and reinvented themselves at the point when biomedicine was beginning to dominate medical discourse and practice. The workshop on 'The Medical Marketplace and Medical Tradition: Interfaces between orthodox, alternative and folk practice in the 19th and 20th centuries', held at University College Dublin, was intended to reopen this subject, inspired partly by the current research programmes of the history of medicine centres at Dublin and Warwick (engaging with the medical marketplace, folk practices and systems of medicine in the modern period). The workshop sought to explore the cultural contexts within which a variety of medical systems could survive, reinvent themselves and flourish, the question of authority in medical practice, self-healing cultures, the role of belief and religion in shaping curing approaches, and the history of choice for patients. It was the first of several events to be co-organised between the two centres around this theme, and a first step too in bringing together a cluster of European scholars engaged with these issues.

Frank Huisman opened the workshop with a thought-provoking exploration of the struggle for cultural authority in healthcare in The Netherlands in the late 19th century. In 1913, three Dutch lawyers submitted a petition to parliament in which they requested the abolition of the monopoly of medical treatment for qualified doctors, which had been established in 1865. They also cast doubt on the expertise of the medical profession, arguing that medicine and healthcare should be in the service of the patient instead of the physician. Their petition caused considerable political and social commotion, debate in government and the production of numerous articles, brochures and pamphlets, interrogating the cultural authority of medicine.

Evert Peeters continued to develop the theme of cultural authority to practice and treatment in the context of Belgium, probing the position of 'modern' medicine in the late 19th century, as the prestige of medical science was increasingly related to bacteriology and laboratory breakthroughs. He argued that scientific authority was constantly disputed, while interest in holistic discourses enabled an energetic and vitalist counter-medicine. Natural therapists in particular, Peeters demonstrated, challenged the authority of modern medicine through the creation of an alternative lay authority. The movement of Catholic natural lay therapists and hydropathists in Belgium around 1900 provided a fine example of this; such healing approaches, based on neo-humoralist traditions and associated with the 'priestly' healing embodied in the cult of Kneipp, emphasised the importance of 'natural harmony' and links with nature. The new bacteriological discourses and modern approaches were incorporated into the theorising and regimes of these practitioners, but at the same time they continued to express dissatisfaction with the forces of modernity and the march of industrialisation, and to emphasise the importance of holistic approaches to lifestyle and healing.

Caitriona Foley's paper explored the rich range of medical beliefs in circulation during the 'last Irish plague', the 1918 influenza epidemic, demonstrating a still-vibrant discussion about the role of miasmas and links with environmental causes, which coexisted and competed with bacteriological discourses. Foley strongly emphasised the fragmented nature of medical knowledge at the beginning of the 20th century. Her paper also examined ideas about susceptibility to disease and fear of infection, linking these to a range of beliefs and practices. Odour, for example, was considered a key indicator of the existence of infection, and responses involved breathing in herbs as a protection, reminiscent of much older practices and explanations concerning the spread of disease.

Right: Bavarian advertisement for water treatment, 1902.

Carsten Timmermann's presentation looked at how folk medicine adapted and scaled up to incorporate the new challenges of industry and science in early-20th-century Germany, drawing on the rich example of Dr Madaus & Co. Older traditional healers, with healing customs and practices centred on the household, were transformed into new-style commercial practitioners and outsourced into shops. Yet an effort was made to retain the essence of traditional knowledge and folk practices in creating a science of plant medicines and evolving new ranges of products, as well as continuing to inform and educate the public on the efficacy of folk medicine. The move to modern techniques and salesmanship incorporated an emphasis on lifestyle reform and natural therapy.

Leah Songhurst shifted the focus to the very recent past in her examination of the popularity of St John's Wort as an over-the-counter herbal remedy in the UK. Its folk history and the findings of recent scientific trials have, she demonstrated, accredited this preparation as a viable 'mood disorder' medicine, and it is used as a widespread alternative treatment for mild and moderate depression and anxiety. The paper explored through this case study, partly drawing on oral evidence, patterns of consumption and current opinion on orthodox, alternative and folk remedies, as well as the strategies of those marketing St John's Wort – increasingly including major drug companies. Songhurst also emphasised the lack of attention to careful diagnosis among people taking this preparation, who in some cases become 'habitual users'. Thus, the use of St John's Wort has begun to replicate many of the criticisms levelled at those marketing and prescribing antidepressants.

Catherine Cox's paper outlined the parameters of her new project on the medical marketplace and medical tradition. Ultimately, the project endeavours not only to identify the various medical options available in late 18th- and 19th-century Irish society, but also to interrogate the extent to which they represented conflicting medical systems, as they are often portrayed. Crucially, the overall project seeks to come to a better understanding of patient behaviour. The workshop paper focused on the interface between orthodox, heterodox and folk practice in 19th-century Ireland, with particular emphasis on the second half of the century. The piecemeal nature of the expansion of orthodox practitioners did not lead to the displacement of older existing practices of medical healing and the concomitant denigration of heterodoxy. In Ireland, these practices occupied a central position in medical provision among patients; their continued existence obliged 'orthodox' practitioners to incorporate aspects of their therapeutics. In their characterisations of various healing practices and their respective knowledge claims, 'regular' practitioners' attitudes were shaped by a vast range of criteria that incorporated contemporary debates on cultural nationalism and antiquarianism. While rejecting some heterodox practices, others were legitimated through the deployment of 'scientific rationality' reflecting the 'blurring of boundaries' between orthodoxy and heterodoxy.

Finally, Hilary Marland's presentation explored the vitality of domestic uses of the water cure in 19th-century Britain, as part of the wider popularity of hydropathy associated with large healing centres. Urging domestic use of water represented the eagerness of hydropathic practitioners to encourage patients to continue to apply in their own homes what they had learned while attending a hydro and to train themselves in water-cure techniques. It also represented the attempts of water-cure advocates to extend the benefits of their regime to those unable to afford expensive visits to hydros. The encouragement of domestic healing, while offering commercial opportunities though the sale of appliances and manuals, also stressed the importance of education in treatment approaches, hygiene and lifestyle practices intended to improve health, and the benefits of self-governance in health matters.

The papers presented at this workshop demonstrate that social and cultural approaches in the history of medicine are alive and kicking when it comes to interrogating the complex relationships between 'orthodoxy', 'alternative' and 'folk', developing new questions and working with historical resources in new ways. The workshop showed too how issues within the field relate to continuing concerns within 21st-century medical practice and approaches to treatment, which reveal that whatever the claims and successes of biomedicine, patients still seek recourse to their own remedies, practitioners and systems of healing. We plan to hold a second workshop to develop some of these themes further in spring 2009, and invite researchers interested in these issues to contact us.

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Above: Promoting Sudbrook Park, a hydropathy centre in Surrey.

Web databases of historical epidemiology of modern Japan

AKIHITO SUZUKI

During 2002–06, a large-scale project called FCRONOS ran at Keio University in Tokyo. Organised by an economic historian, Ken'ichi Tomobe (now at Osaka University), this project attempted to visualise historical and geographical changes through a 3D representational tool. As a part of this project, a team of historians and epidemiologists constructed two databases of diseases in modern Japan. One contains the number of cases and deaths from notifiable infectious diseases, and the other lists cause-specific numbers of deaths. Both give data for prefectures (46 or 47) as well as national totals. These databases are now on the web for general use by historians of medicine.

Notifiable Diseases 1877–1959

This database contains the number of cases and deaths from notifiable diseases. Initially, six diseases were listed: cholera, typhoid, dysentery, diphtheria, typhus and smallpox. In 1897, plague and scarlet fever were added. Paratyphoid and epidemic meningitis were added in 1911 and 1918 respectively. Although after World War II the list expanded to include 20 diseases such as leprosy, measles and tsutsugamushi disease, we have not included them in order to make the database simple and easy to use. The typhoid and dysentery figures are grouped based on whether paratyphoid and ekiri (respectively) were present.

Original data are mainly taken from the *Annual Report of Hygiene* (*Eiseikyoku Nenpo or Eisei Nenpo*), published by the Home Ministry's Bureau of Hygiene, which became the Ministry of Health in 1938. Whenever the reports give the monthly number of cases and deaths, we have used the data. For the period lacking monthly data, we have used the monthly number of deaths in the Cause of Death Statistics (*Shi'in Tokei*) and adjusted figures from the four-week quick reports published in the *Journal of Japanese Public Health* (*Nihon Koshu Hoken Kyokai Zasshi*).

Cause of Death 1902–59

Original data for the Cause of Death databases are taken from the *Annual Report of Hygiene* for the period 1902–37, and from the *Vital Statistics (Jinko Dotai Tokei*) for 1950–59. Although there were some disease categories taken from traditional Chinese–Japanese medicine, the classificatory systems were largely in accordance with international ones. Original entries in the tables are thus kept as they were. We have selected and formed some disease categories in order to facilitate quick and easy grasp of long-term trends of certain disease groups. These categories are divided into series, semi-series and group, according to the statistical and classificatory consistency.

We have tried to make the databases easy to use. All you have to do is to select diseases, prefectures and years, and click 'show data', which will generate a table. You can display original disease names when you are looking at the data of a series, semi-series or group.

We are acutely aware that the cause-specific mortality data for 1945–50 are largely missing. Due to postwar confusion, we do not have official cause-of-death statistics until 1950. The 'missing years' are, however, the most crucial ones in the epidemiologic transition of Japan. Due to the introduction of antibiotics, there was a dramatic decline in many infectious diseases in just a few years: between 1945 and 1950, deaths from typhoid fell around 90 per cent without any significant infrastructural improvement. Mortality from diphtheria became one-sixth of what it had been. No doubt the period immediately after World War II, which destroyed much of the urban infrastructure, was crucial for the making of the country that was to become the healthiest in the world by the 1980s. Work to fill the gap and to find what happened in the missing years is already in progress, and Professor Satoshi Sugita at the Medical School of Oita University has kindly made available his transcription of the *Weekly Bulletin* of the Public Health and Welfare Bureau of the General Headquarters of Allied Occupation, which now covers the period between October 1945 and December 1949. The PDF files will be extended shortly to the end of the occupation.

FCRONOS:
www.fcronos.gsec.keio.ac.jp/englishsite/e_home.html

Notifiable Diseases: **www.rekishow.org/db/LIDS/** (ID: dbtester; password: fcronos; English version will be available shortly)

Cause of Death: **www.rekishow.org/db/CSDS/**

Weekly Bulletin of GHQ/PHW: **www.rekishow.org/GHQ-PHW/** (Japanese only, but the transcription is in English; click 'GHQ' and download AllDoc.pdf)

For the two databases, contact Akihito Suzuki at Keio University (**E** asuzuki@hc.cc.keio.ac.jp). For the GHQ material, contact Professor Satoshi Sugita at Oita University (**E** ssugita@med.oita-u.ac.jp).

Above: The online Cause of Death database.

British Postgraduate Medical Federation archive

Thanks to a grant from the Wellcome Trust's Research Resources in Medical History scheme, the archive of the British Postgraduate Medical Federation (BPMF) has been fully catalogued and is now available for research.

The BPMF was established by the Senate of the University of London in April 1945, was granted incorporation by Royal Charter in March 1947 and was admitted as a school of the University in December 1947. The Royal Charter stated that the BPMF would "provide opportunity for the advancement in general medicine or in any of the special branches thereof and by arranging lectures and demonstrations or otherwise promote the investigation of disease".

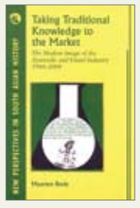
Above: The BPMF coat of arms.

The Federation included medical research bodies such as the Institute of Cancer Research, the Institute of Child Health, the Institute of Dental Surgery, the National Heart and Lung Institute, the Institute of Neurology, the Institute of Ophthalmology and the Institute of Psychiatry. The BPMF was wound up in 1996, and the Institutes became attached to the multi-faculty colleges within the University of London.

Much of the collection relates to the administration of funding for the BPMF, including information about courses it ran and details of research carried out at the Institutes. Some of the earlier files include discussion of training provision for demobilised army medical officers following World War II, and discussions about the admission of women to London medical schools. There are also minutes of the Governing Body, the Finance and General Purposes Committee and the Central Academic Council, which cover all aspects of the work of the BPMF.

The catalogue can be accessed online at **http://archives.ulrls.lon.ac.uk** or in hard copy in the Special Collections Reading Room, Senate House Library, University of London, Malet Street, London WC1E 7HU (**T** 020 7862 8470, **E** shl.specialcollections@london.ac.uk).

New publication



Taking Traditional Knowledge to the Market: The modern image of the Ayurvedic and Unani industry, 1980–2000 by Maarten Bode.

Taking Traditional Knowledge to the Market explores the paradox at the heart of the Ayurvedic and Unani medicine manufacturing industry – to present itself as modern and traditional, common and professional at the same time. On the one hand, the natural, wholesome and authentic nature of these medicines is juxtaposed with the 'synthetic', 'violent' and 'iatrogenic' character of Western medicines, which dominate the Indian market. They are linked to Indian popular culture, the heyday of Indian civilisation, and a humane approach to medicine. At the same time, large Ayurvedic and Unani manufacturers use modern science and technology to create a competitive edge and distance themselves from the image of backwardness that also sticks to Indian medical traditions.

Based on ethnographic fieldwork from 1996 to 2002, Maarten Bode studies five Indian Ayurvedic and Unani medicine firms: Hamdard, Zandu, Dabur, Himalaya and Arya Vaidya Sala. The narrative follows the perspective of these manufacturers and hence provides an insight into the categorisations and the characteristics of the consumer. Bode also reveals that research conducted by large Ayurvedic and Unani manufacturers on their best-selling brands followed logical-positivistic and biomedical lines, often ignoring humoral concepts and classical pharmacological notions.

Maarten Bode is involved in a research project, 'The Politics of Value and the Commercialisation of Ayurveda: Medicines, prescribers, dispensers and patients, 1980–2010', and has recently started his work as a researcher at the Department of Medical Anthropology and Sociology, Faculty of Social Sciences, University of Amsterdam.

Published in: New Perspectives in South Asian History, Orient Longman Private Limited (ISBN 13: 978 81 250 3315 8; 10: 81 250 3315 7).

Contact for London and Europe: Alan Ball (**E** melisende@btinternet.com), Melisende. For the rest of the world: orientswan@gmail.com, or visit **www.orientlongman.com**.

Archiving Clinical Radiology in Manchester

JAMES PETERS

The John Rylands University Library (JRUL), University of Manchester, has recently completed its Archiving Clinical Radiology in Manchester project. The project was generously funded by a grant from the Wellcome Trust's Research Resources in Medical History scheme.

Radiology is one of the most dynamic medical specialisms, and has had a significant clinical and social impact since X-rays were first used in the diagnosis and treatment of disease in the late 1890s. Over the past few decades, the development of ultrasound, computed tomography and magnetic resonance imaging has meant a radical expansion in radiological treatments, increasingly used for therapeutic as well as diagnostic purposes. The subject is likely to become one of ever-increasing importance to historians of medicine.

A project archivist, Geraldine Hunwick (now at the University of Newcastle), was appointed to catalogue the Library's existing radiology archives, create a small image library from photographs in the collections, and undertake a survey of radiology-related archives in the Manchester area.

JRUL's radiology-related collections include:

- the papers of Ian Isherwood, professor of diagnostic radiology at the University of Manchester, 1975–93
- the papers of Derek Guttery, an industrial physicist, who amassed a major collection of material relating to the history of radiology
- the Christie Hospital Collection, which contains records of the North West's leading cancer hospital.

The papers of Professor Isherwood (b.1931) document his major contributions to medical radiology, particularly in pioneering the use of computed tomography (CT) and nuclear magnetic resonance (NMR) in imaging. Isherwood oversaw the installation of the first commercial CT head scanner in the world, at Manchester Royal Infirmary in 1972, followed by the installation of the first commercial whole-body CT scanner in Europe in 1975, and the first cryogenic superconducting NMR scanner in Europe in 1983. The acquisition, installation and operation of these and other scanners are fully documented in the papers, and are particularly valuable for the interactions between medical technologies and clinical practices. A keen historian of his specialism, Isherwood also amassed a wide range of documents concerning the development of radiology since the discovery of X-rays.

Above: Prof. Ian Isherwood (left) and Sir Godfrey Hounsfield with an NMR scanner at Manchester, 1991. *JRUL*

This theme is also well covered in the Guttery papers. Guttery (1931–1999) spent most of his career in industrial radiography. In his spare time, he amassed a very wide-ranging collection of documents relating to radiology. A highlight is his collection of trade literature, a unique assemblage of pamphlets, booklets and catalogues dating from the early 20th century onwards. This is a particularly rich source for the development of X-ray and electro-medical apparatus over the course of the last century. The papers also include numerous files of documents relating to a wide range of individuals, companies and specific subjects in the field of radiology, both in Britain and abroad.

The Christie Hospital Collection includes historical material concerning the use of radiological methods in the treatment of cancer. The Christie Hospital has been active in treating cancers since the late 19th century, and has a national reputation for its research into cancer treatments, including radiotherapy. The archive includes a wealth of administrative, publicity and research material documenting these developments.

Detailed catalogues have been produced for these collections, available via JRUL's ELGAR website of archival finding aids (**http://archives.li.man.ac.uk/ead/**).

The collections include photographs of radiologists and their machines, as well as other visual material such as the trade catalogues. Digitised images of some of these items can be viewed on JRUL's online Digital Library (**http://rylibweb.man.ac.uk/insight/mancoll.htm**).

The project also undertook a wide-ranging survey into other radiology archives in the Greater Manchester area. The project recognised that valuable material documenting the recent developments in radiology was at risk of loss, if immediate steps were not taken to identify and preserve it. This exercise included interviews with practising and retired radiologists and radiographers, and surveys of records held at the University and local NHS Trusts. This succeeded in identifying some valuable archival material, and concluded with a review of the issues involved in archiving the history of complex medical technologies such as radiology.

Overall, Archiving Clinical Radiology in Manchester has succeeded in opening up and developing a research resource that will be of considerable interest to a wide range of historians of medicine, science and technology.

James Peters is University and Medical Archivist at the John Rylands University Library, University of Manchester (**E** james.peters@manchester.ac.uk).

Chinese Medicine Men: Consumer culture in China and Southeast Asia

KAI KHIUN LIEW

Medical historiography has predominantly been focused on the doctor–patient interaction on a micro level and the public health regime's relationship with society on a more macro scale.

In contrast to the limelight given to the cures of the healers and the suffering of the sick, intermediary agents in the medical marketplace have received far less attention. The paper trails left behind by traditional cottage manufacturers, street pedlars, drugstores and pharmacies are much thinner than the more carefully documented and archived patient records, medical manuals and doctors' diaries. More importantly, compared with the heroic portrayal of enlightened and benevolent medical practitioners, greed, profit and poison have been associated with the shady claims and deals of medicine men.

Sherman Cochran's *Chinese Medicine Men* illustrates these portrayals as regards the outlandish claims of remedies by highly successful drugstores operating in China during the early part of the 20th century. However, the core questions concern not the scientific credibility of these products but the adaptability to changing trends, the transnational trading networks and the consumer cultures that they reflect. To this end, he uses some prominent Chinese drug companies – Tong Ren Tang, Ailuo Brain Tonic, Five Great Continents Drugstores, New Asia Pharmaceutical Company and Tiger Balm – as case studies to review scholarly understanding of issues pertaining to medical pluralism, localisation and popularisation, and social–geographical categorisations (with regard to defining China's macro-regional boundaries).

Cochran's story takes place in the period from Late Imperial and Early Republican China to the Communist victory in 1949, a phase marked by not just by wars and disruptions, but also by a flourishing of economic activity as well as the burgeoning of a unique consumer culture. With the disillusionment over feudal China from the failed Boxer Rebellion to the 1911 Revolution, faith in Western culture, which was synonymous with being modern, became more pervasive. This mood filtered down to healing cultures in which what was understood as Western medicine became increasingly in vogue among Chinese consumers.

Rather than displacing 'traditional' businesses directly, this new fad was exploited by players in the medical market. Having been a street-pedlar-cum-herbalist, Huang Chujiu rose to financial success with his Ailuo Brain Tonic, which was presented as a Western medical product. From the claims to design and packaging, however, the identity of the tonic was a mix of pseudo-Western medical theories and images, and folk medical mythologies and icons. Similarly, although the Five Great Continents founder Xiang Songmao had little interaction with the West, his company produced about 780 Western-style goods under local trademarks. So keen was the organisation in claiming Western 'authenticity', yet making it appealing to local tastes, that the architecture of his stores and the wrappings and advertisements of his products became hybridised occidental kitsch. In contrast, Xu Guanqun's New Asia was keen to exhibit its modern credentials through the financial support of research institutes and influential local medical publications and journals. At the other end of the spectrum, Tong Ren Tang responded to the pressures of the modernity fetish by reinventing tradition. Using official patronage of the Qing Court in promoting its business, Tong Ren Tang deployed traditional styles and medicines more grandiosely in his medical halls, giving (in Cochran's expression) new meanings to old traditions as part of its marketing strategies to create a niche.

Another phenomenon of the medical market during the Republican period was the widening of the business and distributive networks of these companies through branches, chain stores and franchises across not just the Middle Kingdom but South-east Asia too. Tiger Balm ointments, Ailuo Brain Tonics and Five Great Continents's bottles of 'Man-Made Blood' became household names across the Yangtze river as well as the South China Sea. These organisations possessed the networks and resources that enabled them to negotiate otherwise impassable political and geographical terrains. Chinese medicinal products were able to change identities quite promptly to fit political swings, as in the cases of the rebranding of New Asia's 'Japanese'-packaged products into being Chinese-made goods in light of the anger arising from Japan's increasing military intransigence in China. While Xiang and his staff from Five Great Continents paid fatally for their resistance to Japanese troops, Aw Boon Haw from Tiger Balm was able to gain personal access to Chiang Jieshi, senior Chinese Communist Party leaders, and General Tojo in Tokyo.

The narratives of medical pluralism and transnational Chinese business networks may perhaps be familiar tales in the medical humanities as well as in economic history. What is more intriguing about *Chinese Medicine Men* is Cochran's attempts to historicise the phenomenon of East Asian consumer cultures through the unexpected arena of the medical market. Through the control of the mass media – ownership of newspapers in the case of Aw's Tiger Balm and investment in artists and painters by other Chinese drug companies to produce advertisement billboards and paintings as well as product labels – these companies represented a new generation of entrepreneurs who were able to both gauge and influence consumer tastes and fashion. To Cochran, these enterprises represented "agents of consumer culture", particular in the Tiger Balm Theme Parks or the semi-pornographic illustrations of provocatively attired females in many of the companies' calendar posters. Aside from introducing and localising 'Western medicines', these companies were in a way instrumental in internationalising, popularising and pluralising the medical market of Republican China.

Overall, *Chinese Medicine Men* is a milestone as well as a potential authoritative text in the study of medical markets within the field of medical historiography, where one is able to gain a more critical appreciation of the significance of fashion, advertisements, politics and business in medicine.

Cochran S. Chinese Medicine Men: Consumer culture in China and Southeast Asia. Cambridge, Massachusetts: Harvard University Press; 2006.

Dr Kai Khiun Liew is a Research Fellow at the Asia Research Institute, National University of Singapore (**E** arilkk@nus.edu.sg).

Everyday Nature: Knowledge of the natural world in colonial New York

W F BYNUM

Historians of science and medicine have traditionally privileged the creation of knowledge over its reception and use. But with the rise of social history, the uses to which knowledge is put are perceived as just as historically valid as investigations of discovery.

As Sara Gronim wryly points out, her own focus on colonial New York means that she is forced to deal with the reception, not creation, of knowledge. During her period, 1650–1775, New York was an intellectual backwater, even in the context of colonial North America. There was no Benjamin Franklin or Benjamin Rush in New York; indeed, during her period, New York was badly developed compared with Massachusetts, Pennsylvania or Virginia. It consisted mostly of settlements on what is now Manhattan, Long Island and, up the Hudson, Albany and Schenectady. The rest of the state was thinly settled along the Hudson, and wilderness elsewhere.

Until the mid-17th century, New York was actually New Netherland, the original settlers being mostly Dutch. The mix of nationalities meant that some tolerance was necessary, at a time when that virtue was in short supply. There was never quite the enforcement of forms of worship that took place in various of the New World settlements, and some of the place names still bear their Dutch roots. Others retain the Indian names that colonialists simply adopted. Physicians and others with pretence to learning were in short supply, and life in New York State was mostly concerned with eking out a living from a pretty harsh environment.

The state itself was still in the process of becoming, and Gronin makes excellent use of a series of maps, on which the physical features of the territory were gradually filled in. The blanks in the early maps are the most striking feature, and even the boundaries of the present state were unmarked. The areas marked 'Indian territory' became smaller, as treaties inexorably pushed the Iroquois and other groups westward. Attitudes towards the Indians hardened markedly after success in the war with the French in the 1760s; they mostly fought for the British colonials. By the time of the War of Independence, they were of less use and therefore needed to be marginalised.

Gronin offers a rich history of the political making of the state, but her primary focus is what the people who lived there made of their world. She deals with a range of issues, including witchcraft, medical beliefs, botany and geology. Botany commands centre stage, especially the activities of the wonderfully named Cadwallader Colden and his short-lived daughter Jane. Colden dabbled in astronomy, botany and mathematics, and courted connections with learned individuals in London; he also irritated his colleagues in government, which stymied his political ambitions. His daughter Jane, before her marriage and early death, ardently collected and labelled plants according to the new Linnaean system.

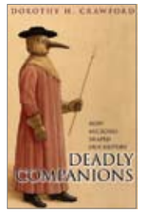
Medicine plays a relatively minor role in Gronin's account, but she does provide a good account of the adoption of smallpox inoculation in New York, and has some interesting comments on the use of plant remedies among the colonials, including what they learned from the Natives.

This volume had its origin in a PhD thesis, but except for the full and meticulous footnotes, there are few traces left. It is elegantly written, and makes wonderful use of a range of primary sources, including letters, diaries and other manuscripts. It concludes with a moving account of the problems faced by those who decided to side with the British in the War of Independence.

Gronim SS. Everyday Nature: Knowledge of the natural world in colonial New York. New Brunswick: Rutgers University Press; 2007.

Professor Emeritus W F Bynum is based at the Wellcome Trust Centre for the History of Medicine at UCL.

Deadly Companions



CAROLE REEVES

Microbes kill 14 million (or 17m, depending on where you look in the book) of us a year. That's about a third of all deaths worldwide, which for brainless life forms is a remarkable feat of extermination and makes the prospect of bioterrorism very scary indeed.

Dorothy Crawford's compact, accessible, helpfully illustrated book explores the links between the emergence of microbes and the cultural evolution of the human race. It includes a historical account of major epidemics, why they emerged when they did, and their impact on our societies. The world's great scourges – cholera, HIV, influenza, malaria, measles, plague, schistosomiasis, sleeping sickness, smallpox, syphilis, tuberculosis, typhoid, typhus, yellow fever – all feature, as does the devastating potato blight (1846–49) during which over a million Irish peasants starved to death. And because the author is a microbiologist as well as a specialist in public understanding of medicine, we are treated to a jargonless insight into new genetic techniques for unravelling the origins of some infectious diseases, as well as the clever ways in which microbes adapt rapidly to changing environments.

In the 130 years since the visualisation of the first microbe (anthrax bacillus by Robert Koch in 1877), we've adopted a combative approach towards threatening pathogens. Vaccines, insecticides, pesticides and antibiotics have been developed and fired (often indiscriminately) at these invisible foes, which have retaliated with the advantage of reproductive and adaptive mutation rates millions of times faster than ours. The emergence of 'superbugs' such as MRSA and XDR-TB has also been facilitated by the overuse of antibiotics in farming. Most antibiotics are fed to livestock, mainly to promote growth.

Nevertheless, despite our exposure to 1415 pathogenic microbes known to cause human disease (out of the million or so in existence), the world human population has doubled every 500 years since the beginning of the Christian era. Crawford warns that this success story will come at an increasingly high price as we push against the margins of civilisation and invade new environments where ecosystems have remained unchanged for millennia. Pasteur made the prophetic statement: "The microbe is nothing, the terrain everything." Ninety-five per cent of deaths from infections occur in the world's poorest nations, from where most of the recent deadly human pathogens have emerged, including Ebola virus, SARS, H5N1 avian flu and HIV. We are living through history's worst pandemic, with 40m people infected with HIV, 25m dead and 10 000 dying daily.

How does Crawford see the future? She is cautiously optimistic that the genomic revolution will reveal new ways in which microbes interact with human hosts at the molecular level and open up possibilities for novel drugs, vaccines and immunotherapy (none of which will be of much use unless poor countries can afford them). She has produced a very readable overview of a complex history with fascinating, informative soundbites beloved of journalists, TV researchers and science writers – to whom I would recommend it wholeheartedly. Indeed, it's a book that anyone with an interest in the subject, even with no prior knowledge, will enjoy.

Crawford DH. Deadly Companions: How microbes shaped our history. Oxford: Oxford University Press; 2007.

Dr Carole Reeves is Outreach Historian at the Wellcome Trust Centre for the History of Medicine at University College London.

English Delftware Drug Jars

KAREN BUCKLE

In the second half of the 17th century a handful of potteries across the British Isles began producing delft-inspired earthenware. These white tin-glazed pots with simple cobalt blue designs were used widely by apothecaries to store a full range of drugs.

Short stumped albarello jars contained ointments and confections; large dry drug jars with wide mouths held "herbs, powders, ointments, conserves, electuaries and lohochs", while spouted jars with hollow pedestal feet contained a range of medicinal syrups and oils. The delft-inspired range of apothecary pots also included flat tiles for cutting and preparing pills. Despite gradual changes in shape and design (from pipe-smoking men and angels to songbirds, cherubs and the figure of Apollo), English delftware remained the predominant form of drug container in use by apothecaries into the 19th century.

Briony Hudson's catalogue of the collection of drug jars held by the Royal Pharmaceutical Society of Great Britain provides an illustrated tour through the various forms and designs of these jars during their heyday in the later 17th and 18th centuries. Featuring over 200 pages of beautifully produced images, this book offers a great means of exploring the practical, decorative and figurative side of drug culture in 1600s and 1700s England.

In comparison with the elaborate polychrome jars produced in Holland in the same period, the English jars find appeal in their simplicity. Nevertheless, while a perusal of these pages is visually enjoyable, the details supplied for each individual jar will also inform the more serious reader. This includes the provenance of each piece, the complete inscription on each container (a Latin label for its contents) and its interpretation, the date and place of manufacture, as well as a contemporary description of the drug it contained and its uses. These make the book a source of interest to any historian of medicine, especially when coupled with the several indices included early in the catalogue: Latin abbreviations used on drug jars, abbreviations and symbols used in recipes and prescriptions, apothecary weights, and a glossary. This last, for example, gives the convenient definition of a lohoch as a "thick pectoral remedy, sucked from the end of a liquorice stick".

Throughout this book we get a sense of the appeal of these drug jars. Objects of utility for the containment of diverse drugs, these white jars with their blue designs and cartouches inscribing the drug within would have made an impressive display filling the shelves of the apothecary shop, as well as serving powerful visual symbols of their trade. Since then, the English delftware jars have held this appeal as historical collections, especially within the pharmaceutical trade. Hudson traces the history of the current collection of drug jars in the Royal Pharmaceutical Society's museum, for which acquisition was begun in the 1930s by the Society's librarian, Agnes Lothian. Substantial additions were made over the rest of the century, the most important addition being (in 1957) the private collection of Geoffrey Howard – director of the pharmaceutical firm Howard and Sons Ltd, active member of the trade, and avid collector of fine art and delftware. Today the museum boasts a total of 172 jars and six pill tiles. Although not the largest collection of English delftware, it is in good company with other society and private collections, and with this catalogue it is now also one of most accessible.

With the history of the apothecary trade increasingly turning to the visual and material culture surrounding the retail and purchasing of drugs, this catalogue does more than simply showcase the collection of the Royal Pharmaceutical Society. It will not excite everyone. But those interested in pharmacy, the apothecary trade, and early modern medicinal culture may find more than they expected among these pages of blue and white tin-glazed jars.

Hudson B (ed.). English Delftware Drug Jars: The collection of the museum of the Royal Pharmaceutical Society of Great Britain. London: Pharmaceutical Press; 2006.

Karen Buckle is a doctoral student at the Wellcome Trust Centre for the History of Medicine at UCL.

New publication

Practical Materia Medica of the Medieval Eastern Mediterranean According to the Cairo Genizah
by Efraim Lev and Zohar Amar.

This volume uniquely looks into the practice of medical care in the medieval world, particularly among the Jewish communities of Egypt. It examines the medicinal prescriptions, lists of materia medica and letters between physicians, pharmacists and patients found in the Cairo Genizah.

Most histories of medieval medicine of the eastern Mediterranean are based upon theoretical Arabic writings. Here the authors examine, analyse and contextualise these medieval prescriptions from the perspective of ethnobotanists, and as a result provide an innovative insight into the everyday practice of medieval medicine and the historical use of the medicinal substances in the medieval Mediterranean world.

This book is a much-needed contribution to medical-historical scholarship relating to the everyday practice of medicine by the ordinary people of the medieval period. It is aimed at all those interested in the medieval Middle East and Mediterranean, history of medicine, medieval and Arabic pharmacology, and Jewish and Genizah studies.

Efraim Lev is a senior lecturer at the Department of Eretz Israel Studies and School of Public Health at the University of Haifa, Israel. He has published extensively on ethnopharmacology and history of medicine and pharmacology in the Levant. Zohar Amar is a senior lecturer at the Department of Land of Israel and Archaeology at Bar-Ilan University, Israel. He has published extensively on the history of nature in Israel, Ancient medicine and realia in the Levant according to Jewish and Muslim sources.

Published in: Sir Henry Wellcome Asian Series, Brill. ISBN 13: 978 90 04 16120 7; 10: 90 04 16120 1. See **www.brill.nl**.

Calendar of events

TO ADD AN EVENT TO THE CALENDAR PAGE, PLEASE SEND DETAILS TO THE EDITOR, sanjoy.bhattacharya@ucl.ac.uk

SEPTEMBER 2008

18 **Professionalism and Prestige: A British perspective on international nursing organisation in the 20th century**
Seminar with Prof. Anne Crowther
World Health Organization, Geneva, Switzerland
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

23 **Clinical Genetics in Britain: Origins and development**
Witness Seminar with Prof. Peter Harper
Wellcome Trust, London
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

26–27 **Joint Atlantic Seminar in the History of Medicine**
Yale University, Connecticut, USA
Contact: Julia Irwin (**E** JASMed2008@gmail.com)

OCTOBER 2008

2 **The Fruits of a New Internationalism? South Asian governments, the WHO and global smallpox eradication**
Seminar with Dr Sanjoy Bhattacharya
World Health Organization, Geneva, Switzerland
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

NOVEMBER 2008

6 **Modernity and Marginality: Professionalising yunani tibb in 20th century India**
Dr Guy Attewell
Centre for the History of Medicine, Glasgow
Contact: Angus Ferguson (**E** A.Ferguson@arts.gla.ac.uk)

17–18 **Politics of Epidemics in Africa**
Conference
Department of History, University of Ghana, Legon, Ghana
Contact: Laura McGough (**E** mcgoughlj@msn.com)

20 **The Rise of the Global Health Consultant: The life and times of Brian Abel-Smith (1926–1996)**
Seminar with Dr Sally Sheard
World Health Organization, Geneva, Switzerland
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

26–28 **The World Health Organization and the Social Determinants of Health: Assessing theory, policy and practice**
Conference
Wellcome Collection, London
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

27–28 **William Beveridge's Voluntary Action 60 Years On**
Conference
Australian High Commission, London
Contact: Georgina Brewis (**E** georginabrewis@yahoo.co.uk)

DECEMBER 2008

4 **Antiretroviral Therapy in Zambia: Colours, 'spoiling', 'talk' and the meaning of ARVs**
Seminar with Dr Lynette Schumaker and Dr Virginia Bond
World Health Organization, Geneva, Switzerland
Contact: Carol Bowen (**E** c.bowen@ucl.ac.uk)

For a fuller listing of lectures, seminars, conferences and other events relating to the history of medicine, visit http://medhist.ac.uk/events.

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The next issue of *Wellcome History* is due out in winter 2008.

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Contributor guidelines are available at www.wellcome.ac.uk/wellcomehistory

Contributions should preferably be pasted into an email and sent to the Editor (**E** sanjoy.bhattacharya@ucl.ac.uk).

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 ISSN 1477-4860.

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ML-4212/2K/08–2008/PE