A Brief History of Biopolitics in Senegal

The Hygienist Ordering of Society

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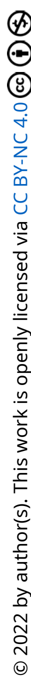

Abstract

The history of colonial medicine in African is also that of the establishment of the political and ideological order theorized by colonial physicians. This study explores the history of the fight against miasmas and viruses in the hinterlands of Africa, considered as "the white man's graveyard", and interrogates the bio-politics and governance practices associated with the administration of colonized societies through public health policies that have left their lasting imprint on space and bodies. For long, the dearth of Francophone historiography regarding issues around health in French colonies in Africa had not been helped by the justification of medical intervention as a benefit that vindicated the colonial enterprise and France's civilizing mission. In questioning the interactions between health and colonization then, English-speaking authors consider the newly introduced medicine as a paramount actor in the colonial enterprise and believe that one cannot be analyzed without the other. A number of authors have addressed the issue of yellow fever.
It was introduced into Africa, they think, through the triangular slave trade. Faced with the reputation of the colonies as unsanitary and squalid, biological pacification – more than political pacification – was the prerequisite for any conquest. It was not until the early 20th century that a new health policy was developed to protect the indigenous "native" population; a policy that subsequently became centered on the issue of demography. The administration was faced with difficulty in attempts to subject the natives to public health awareness and hygiene, on one hand, because of quarantines, compulsory vaccinations and sanitary cordons, and on the other hand, because the natives were considered as virus reservoirs from where all contagious diseases originated. For these reasons, the authorities progressively resolved to a policy of segregating the local population, which was placed in areas forbidden to Europeans and other similar people. Medical research used indigenous people's bodies as guinea pigs, and these past practices, so amply documented in medical archives, keep coming back in the speeches of groups opposed to current vaccination policies.

Keywords

Health Policy, Hygiene, Discrimination, Western Medicine, Surveillance, Biopolitics, Epidemic Management, Tropical Medicine, Colonization, Pasteur Institute, Pastorians

Introduction

How did Western medicine develop in African countries under French colonial administration and how did it become interwoven in the vestiges of political and ideological aims of imperial policies? This paper proposes to revisit the institutional history of how French colonial medicine was established in West Africa and Senegal, its practices, and the role of French doctors in the genesis, development, and dissemination of tropical medicine in French colonial Africa. The history of health policies in the colonies is an indicator of social order, both in the way social relations are reflected on bodies and spaces, and in the manner political institutions organize protection, prevention and care. Due to/Beyond the interest of the issue, the history of colonial medicine is riddled with a multitude of opposing views and perspectives. Some works celebrate the work of colonial physicians (Sarraut, 1923; Lapeyssonnie, 1988), while others propose a critical reading of colonial medicine in Africa, its legacies and achievements (Curtin, 1961, 1968; Arnold, 1988, 1993; Headricks, 1981; Pam, 2018). This article analyzes the role of colonial physicians, the strategies deployed in the medicalization of West African societies, the way in which the struggle against miasmas and viruses in the colonies was constructed and transformed over time. I will also showcase the conquest of the "infested" shores of the Atlantic in the face of *vomito negro* (yellow fever), the horror of colonialists, and which was the object of the first intercolonial research network bringing together French and English scholars and the Rockefeller Foundation.

Institutional and administrative workings of the colonial health policy

French health policy in Senegal was built up – over the course of colonization and recurring health crises – into a system organized with a view to furthering colonial domination and exploitation. From 1896 onwards, it used an early network of hospitals, which became larger afterwards, a set of administrative structures and coercive legislation designed to "medicalize", that is, regard indigenous societies as diseases to be treated, and foster the economic development of the newly conquered territories. The evolution of health institutions can be divided into two distinct stages, both characteristic of a different political orientation. The first one starts from the conquest to the "pacification", during which sanitary policies are exclusively geared towards the protection of the military element, since no conquest is possible without it. Then, as the colony developed, it was extended to the main administrative and economic centers of the Four Communes[1], and then to the secondary centers of the larger protectorate. Until then, the French sanitary policy in colonies covered only the Europeans and their service agents. The second orientation of the sanitary policy emerged in the early 20th century to support the development of the colony.

Under pressure from the local European population there, seriously affected by yellow fever, the authorities developed medical structures in the colonies. During the same time, in the aftermath of World War I, French people's main task was to rebuild their country. To achieve this, the colonies played an essential role in France's economic and financial recovery. This justified the implementation by Albert Sarraut, then Minister of Colonies, of an action program based on both the "economic value" and the "human value" of the colonial territory. In order to develop an abundant workforce, demography became the basis of the work of health physicians, which was summed up by Governor General Albert Sarraut's famous expression: "faire du Noir", meaning to foster the growth of a much-needed black labor force (Piessac [de] 1927). This policy was implemented through a hygienist policy, the creation of the Indigenous Medical Assistance (AMI) and the section of visiting midwives trained at the School of Medicine. However, the adoption of new preventive measures led to resistance because these clashed with age-old customs. So educating girls was viewed as a solution to get the natives[2] to adopt the new medical practices.

1 Gorée, Rufisque, Saint-Louis and Dakar.
2 The term indigène, "native" in the text is the term used in the colonial literature. It refers to here Africans. It is in keeping with the racialist vision of those days.

© asnom.org, Use of DDT in the post-war period against mosquitoes (intra-domiciliary treatment, bodies of water and places of life).

Scientists for the empire: from a microbiology laboratory to the Pasteur institutes

Pasteur's findings proved to be a turning point in the strategies for public health in the colonies. In 1881, Pasteur went to Bordeaux to visit recovering patients who had fled the colony of Senegal, in prey to an epidemic of yellow fever, and drew their blood to try to identify the germ responsible for the disease. In 1896, Emile Marchoux, one of Pasteur's disciples, founded the first outline of the Pasteur Institute in Saint-Louis. There he studied, among other things, the waterborne origins of typhoid fever, did research on malaria in Dakar and Saint-Louis and, for the first time, made known the cycle of the malignant third-party parasite in humans. In terms of health care, he carried out experiments on malaria prevention by prescribing quinine to the soldiers of the city's garrison.

In 1913, the microbiology laboratory was transferred to Dakar (the capital city of the Afrique occidentale française (AOF) – French West Africa, to become the Laboratoire de Bactériologie et de Zootechnie. Governor William Ponty defined laboratory's mission as researching and studying bacterial and protozoan diseases in humans, animals and plants; investigating their transmission by insects; and researching ways to prevent and treat them (Institut Pasteur Outre-Mer [IPOM], 1989).

Institut Pasteur in Dakar specializes in human microbiology, and its branch in Kindia, Guinea, in veterinary microbiology. French Equatorial Africa hosted the Brazzaville Pasteur Institute. These institutions succeeded in elucidating the epidemiological cycles and transmission modalities of diseases, and in defining preventive and control methods (for example, against sleeping sickness and yellow fever, whose vaccine was developed by the Tunis and Dakar laboratories).

From 1925 to 1931, the Pasteur Institute in Dakar directed a practical training course in microbiology and hygiene for indigenous physicians and laboratory assistants, for them to master the elements necessary for specific diagnoses (IPD/Rap, 1936). As part of a more global strategy to fight dreadful epidemic scourges, international collaborations were set up such as the inter-African conference on yellow fever in Dakar or courses in tropical medicine for naval physicians from Poland (IPOM/Dak, 13/102).

Creation of a specialized medical training and the genesis of medicine on a large scale

In the early 20th century, the French Colonial Union became fully aware of the inadequacies of sanitary health in French West African colonies. It launched a fundraising campaign among French companies involved in economic activities in colonies in order to set up a specialized course on colonial diseases at

the Sorbonne. The medical staff of colonies were indeed considered insufficiently prepared for diseases in tropical countries. A number of companies and banks undertook to subsidize this project for six years (ANS, H 10 [AOF] 1900). On October 3, 1905, this idea led to the creation of the “École d’application du service de Santé des troupes coloniales”, dubbed “École du Pharo” in Marseille, specializing in tropical medicine.

© asnom.org Screening by a trypanosomiasis survey team (Cameroon), circa 1926

In practice, the February 8, 1905 decree instituted the Indigenous Medical Assistance Service (Assistance médicale indigène, AMI), responsible for providing free medical care and hygiene advice to the indigenous population and for implementing vaccination programs.

However, the medical staff remained insufficient and the colonies did not attract many people in spite of the recruitment campaigns of doctors in France. According to the January 7, 1906 decree, the administration decided to create a corps of native medical assistants, meant to help the AMI doctors and to combat the influence of marabouts and charlatans.

The 1914 military draft campaigns exposed the shortage of personnel and the extent of health problems. The increasingly dominant role of the colonial economy in the wealth of the metropolis led the administration to envisage the creation of a medical school in Dakar, which was opened on November 1, 1918, to train the indigenous medical elite. Faced with recruitment difficulties, one solution was to hire foreign contractual doctors, mainly Russians who had immigrated to French West Africa, in the wake of the October 1917 Bolshevik revolution.

In 1927, they made up more than 38% of the medical staff in Senegal. This system was completed on February 15, 1926 by the creation of a corps of visiting nurses and health assistants to investigate social diseases and detect epidemic infections.

In the following years, several medical services were created: the Trypanosomiasis Prophylaxis Service in 1931, the Psychiatric Assistance Service in 1938, the Autonomous Sleeping Sickness Service in 1939, in addition to the Medical Inspection of Schools in French West Africa, and Togo in 1942. In 1944, the Dakar School of Medicine was renamed the Dakar School of Medicine and Pharmacy. The 27 July 1949 decree organized the health services in the AOF, based on two main divisions: the Hygiene and Prophylaxis general service to fight the major endemic diseases; and fixed services comprising a health units network at federal level, as well as territorial organizations.

The General Mobile Hygiene and Prophylaxis Service (Service général d’Hygiène mobile et de Prophylaxie, SGHMP) was established in French West Africa by decree 214 of 22 January 1945, to combat major social diseases through several missions: research, mass screening, mass treatment, prophylaxis,

and training of specialized personnel. The SGHMP had a head office in Bobo-Dioulasso, Upper Volta, and five sections, each of which specialized in the study of an endemic disease: trypanosomiasis, leprosy, malaria, filariasis and eye diseases. In addition to these research units, the SGHMP had field units with mobile teams.

In 1951, the State Nursing School was established to support the new health policy's works.

After the Second World War, international political developments had a positive impact on the health organization of colonies and countries under mandate, thanks to the World Health Organization (WHO) and the creation of research institutes such as Orana (Organization for Food and Nutrition Research in Africa). When the former AOF territories became independent, European doctors had to leave and the federal structures for public health programs management were dismantled.

The medicalization of colonial societies

The singular confrontation between the colonies and yellow fever is highly instructive. The main difficulty colonial medicine had to overcome was to get people to accept the new medicine's standards. This challenge is related to the cultural representations of facts around health issues. In indigenous society, two worlds exist side by side: on the one hand, the visible and palpable world: humans, animals, vegetation, land, hills, rivers and stars; on the other hand, the world of the invisible, namely supernatural beings, elders and ghosts, genies and doubles of the living who, as the actual masters of the game, take part in people's lives and are very often accused of inflicting diseases.

Illness is experienced as the manifestation of a disconnect with the gods or ancestors, and healing is only possible through reparation for the fault committed. In Islamic societies, illness is considered an act of God's will and the faithful will regard suffering as a kind of trial. It is therefore logical for them to seek protection and healing from God. Qur'anic pages are macerated in concoctions or as a talisman to heal the sick. These various practices, which were in competition with colonial medicine, did not fail at times to lead to violent opposition

In view of the very high mortality rate in health structures, particularly as a result of yellow fever or of accidents linked to the early implementation of yellow fever vaccination, the natives sometimes suspected colonial doctors of practicing euthanasia. This is also the reason why the locals developed a whole range of strategies to dodge health measures.

Monitoring and punishing the dangerous classes

It was observed very early on that yellow fever hit whites more than natives; in the 19th century, all the medical literature constantly rehashed the fact, which confirmed during the whole century the idea that races were not equal. Yellow fever was an argument for what has been called the 19th century's "scientific racism". Blacks were regarded as immune to the disease and this belief influenced medical practices: Blacks became the colonial administration's tool during the epidemic crises linked to this disease during the period. This perception changed radically in 1927, following the recognition of a new paradigm that made the natives stealth carriers of the disease, hence dangerous spreaders whose surveillance became a priority for public health administration.

Faced with the challenge of curbing yellow fever and the natives' stubborn resistance, the rift between the different social groups materialized in a set of theories and practices that led to the emergence of the notion of "dangerous classes" or deemed as such. The natives, Syrians and to a lesser extent the Portuguese, were subjected to strict surveillance through hygiene services, medical structures and hospital statistics, the police and a rigorous legislative and regulatory system, all contributed to this surveillance process.

The health status of natives was monitored first in the dispensaries set up in all centers of some importance, where the sick became more and more accustomed to come for assistance; then in the homes, where monitoring was carried out by visiting nurses and health technicians.

In Dakar, the Roume polyclinic, set up in August 1933, was designed along these lines. As a real sentinel of the natives' health, the Polyclinic instituted – in addition to the obligation to register deaths at the city halls – a system to monitor its patients' health. Located in the heart of the indigenous area, the polyclinic was the main center for free medical assistance to the indigenous people of Dakar, as well as an excellent observation post for their health conditions. It was also a remarkable clinical teaching center for the School of Medicine's students. In 1933, the Social Hygiene Institute gave 286,989 medical consultations as against 128,754 in 1932; 144,163 in 1931 and 89,663 in 1930. Figures therefore more than tripled over four years. This also means these figures can be interpreted as a degree of acceptance of the colonial therapeutic system. The creation of an ear-piercing service is worth mentioning, in addition to the treatment of venereal diseases, especially syphilis, for which the establishment's statistics report more than 31,000 enforced treatments on 1,861 syphilitic patients, i.e., an overall proportion of 16.5 injections per patients. This practice, was warmly welcomed by the indigenous population, especially at the time of indigenous people's ritual festivals and celebrations, and it kept on developing. The service aimed at eradicating tetanus, a disease whose dissemination was increased by this custom. To encourage pregnant women to use the service, subsidies were granted to patients giving birth there.

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Syrians as the new scapegoats

There were several reports that Syrians were active agents in the spread of yellow fever and the medical profession believed it. Their surveillance was therefore a prerequisite for the protection of public health. This policy was implemented through the Governor General's decision to issue an identity card to Syrian itinerant traders and hawkers, requiring them to report to the nearest police station or to their residence administrator. This identification measure was coupled with strict control of the movements of Syrians: they had to notify their date of departure and destination to the police department or the administrator. Their ID cards was annotated accordingly. As soon as this measure was enacted, the administrative services proceeded with a sort of census of Syrians throughout the colony and called to account for the measures taken. Accordingly, on June 25, 1900, the Tivaouane deputy administrator sent the Governor General the following correspondence:

> "In response to your June 24 telegram, N°. S 257, concerning Syrian hawkers, I hereby send you a list of those still to be found in Tivaouane. I have ordered them to report every morning to the police commissioner's office, who will check their health and report to me".

However, the commissioner noted that Syrians would change their names and residences very often. Therefore, the obligation to carry their cards and to have them stamped was seriously inconvenient for them. Therefore, he announced that he was rigorously keen to ensure they were all complying with the law, so as to monitor their movements outside cities.

When analyzing the measures taken against Syrians, one can observe that the information provided by the colony's health and police services fail to acknowledge the underlying economic motives.

Following the First World War and the partitioning of the Ottoman Empire, the League of Nations placed Syria and Lebanon under the mandate of French protectorates, and the citizens of these countries were granted the status of French protégés, protected citizens, thereby ushering them into the network of French colonies. The way they were organized and their rapid integration into the trade network, which had long been controlled by French trading houses and entrepreneurs in the colonies, made them formidable competitors. The crisis in the oil-seed sector, which accounted for 90% of Senegal's exports and 60% of the AOF's, was worsened by international speculation and the financial trading of foreign corporations such as Unilever. This situation reinforced the colonialists' feelings of abandonment, and increased the stigma attached to immigration and to how Lebanese-Syrians were perceived, as conveyed by the chambers of commerce, the Colonial Union and local politicians such as Galandou Diouf. The bankruptcies of successive French-owned trading houses were reduced to racial differences. That since Lebanese-Syrians lived in conditions roughly similar to the natives', they were very serious competitors. Indeed, the essay by J. Paillard (1935) – while not objective – partly explains the reasons for the split between the two communities: the Frenchman had to periodically return to France to care for his health, shaken as it was by his stays in torrid countries; he generally had to live in well-built, therefore expensive, houses; he had a numerous number of native domestics that relieved him of the hard work that neither his rank nor the climate would have allowed him to do; he had to send his children to France to receive the education they could not benefit from on the spot; he was bound to specific clothing requirements and to traveling first class in trains or ships. In short, he needed a lot of money to live up to these standards. Now, the crisis was ruining instead of enriching him. On the other hand, the Syrian lived on a shoestring, slept in shacks or straw huts, readily withstood the climate, sent his children to the local school, and traveled by van, truck or in the hold of a ship. The crisis had no effect on him. The buildings and businesses that used to belong to the whites before they were driven out by poverty were bought by the Levantines. The statistics produced were intended to demonstrate the colony was being invaded by Lebanese-Syrians, which exacerbated unemployment and the feeling that the colony of Senegal was being taken over by "métèques" (mongrels). A detailed census of their presence in Dakar was established, indicating the streets and houses they occupied (Paillard, 1935).

Paillard continues:

> "It was essential that such statistics be drawn up. It was there that the French – who wanted to expatriate themselves and were unable to do so – would find the reason for their failures. Ten times more foreigners and Lebanese-Syrians than natives. Five times more Lebanese-Syrians than French. However, as there were practically three men (brothers, brothers-in-law, cousins, friends, etc.) tending each Syrian store, the merchants' community in Dakar comprised practically thirty times more foreigners and Levantines than natives. Fifteen times more foreigners and Levantines than French nationals".

As a conclusion, the stigmatization of Lebanese-Syrians had less to do with the figures produced than with the recommendations made by the Chambers of Commerce. Indeed, they proposed the following solutions:

that everyone – foreigners, nationals, natives or French – should be required to have proper and sound accounting;

that trade be allowed only during working hours. In other words, it should be forbidden at night and on holidays, when the fraud control services cannot exercise control; that foreigners, be they protected or white nationals, be subject to the same hygiene rules in tropical countries as the French. This would force Lebanese-Syrians to live under commercial conditions – or with cost prices – similar to the French. That bankrupts and convicts of all kinds be automatically and relentlessly expelled.

All these methods, aimed at excluding a social class, is very interesting because it highlights the way in which hygienic measures are inserted into the complex terrain of the economy in general. Actually, it had been admitted, since the 1900 yellow fever epidemic, that the mosquitoes responsible for the

disease were most active at night; the European community feared this epidemic more than any other, and was therefore constrained to leave the clandestine trade field to the Lebanese-Syrians, who were allegedly indulging in fraud by multiplying the peanut trading-points with the use of trucks. The intention of the Chambers of Commerce was to ensure that the Lebanese-Syrians were under the same coercive hygiene rules applicable to Europeans in order to reduce the former's economic activity, hence their competitiveness.

Urban planning regulations and public health in colonial cities

The administration was faced with the difficulty of repressing the natives and was convinced they constituted the vessels of viruses and the root of all contagious diseases. So, the colonial administration gradually began implementing a segregation policy by declaring neighborhoods with local populations off limits to Europeans and those of Moroccan and Syrian descents. Although demanded by the medical profession, this practice proved challenging for economic, political and legal reasons. Nevertheless, through urban planning regulations and expropriation measures, the natives were gradually isolated in neighborhoods far from the areas reserved for Europeans.

The implementation of measures to fight epidemics, particularly yellow fever, left its mark on the urban landscape of colonial cities, both in terms of architecture and topography. Indeed, the presence of particular plant species caïlcédrats (febrifuges), considered to be antipyretic, demarcated the borders of colonial urban centers. In Côte d'Ivoire, yellow fever led to people abandoning the capital Bassam and moving to Bingerville – considered more sanitary (Wondji, 1972). In Senegal, instead, it led to the residential segregation of natives in almost all colonial cities. Yellow fever resulted in the creation of the neighborhood of Randoulène in Thiès, just like the 1914 plague led to the creation of Medina as a segregated area in Dakar.

This epidemic episode highlighted a shortcoming in the epidemic management system. As a matter of fact, mayors of communes avoided taking unpopular measures and blamed the AOF's Governor General for decisions related to public hygiene.

The 1914 crisis taught the central administration a couple of lessons. In 1924, the latter therefore decided to separate Dakar from the rest of the colony of Senegal administratively. This reform had the twofold advantage of protecting the federation's capital from epidemics and of safeguarding the AOF's economy from the quarantine measures that were constantly imposed to tackle multiple epidemics. Indeed, by protecting Dakar, the new airport and the only military port on the Atlantic coast, from which all commercial transactions were conducted with the rest of the world, was preserved. In order to meet international standards for yellow fever, a number of criteria had to be met by the colony, in particular a stegomyen index below 1%. As part of this reform, a special yellow fever control service was created for the district of Dakar and its outskirts. From 1927 onwards, the fruits of this policy were reaped. Yellow fever disappeared from the capital's medical statistics. The disease no longer broke out in the urban centers, but reappeared in the countryside, without endangering the capital, which was protected by vaccination. The fight against yellow fever left its mark on Senegal's urban landscape with buildings with mesh netting and the creation of reserved residential areas.

The bodies of natives as an object of study

To ensure an effective containment of African endemics, doctors launched large-scale campaigns to trace vectors and sterilize virus reservoirs. Native bodies were sometimes used as testing grounds for vaccines and medicines. The campaigns against yellow fever and sleeping sickness are a case in point. The first mass campaign against yellow fever consisted of mapping the population's serology in order to determine the geographic distribution of yellow fever in West Africa.

The experiment consisted of taking blood samples from a number of natives and injecting the resultant serum into Macaques monkeys, which were simultaneously injected with the monkey amaril virus. If the monkeys survived, it could be concluded that the serum was protective and that the individuals who provided it had previously been infected with yellow fever. If young children who had never left the area had protective serum, the conclusion was that the area was a cluster of amaril endemicity. If

only adults provided protective serum, it could be concluded that there had been a previous amaril epidemic, but that yellow fever was not entrenched there. This campaign's results definitively shattered the notion that the natives were resistant to yellow fever. They were therefore considered as dangerous virus reservoirs that needed to be monitored and sterilized through vaccination.

The fight against yellow fever in Senegal took various forms depending on the evolution of medical ideas about the disease. After several unsuccessful attempts to eradicate it, vaccination was chosen as the solution. The research undertaken to develop the yellow fever vaccine was long and punctuated by scientific errors and controversies before the vaccine was finally developed at the Pasteur Institute in Dakar. However, the implementation of the vaccine was even more challenging due to the occurrence of post-vaccination accidents, as well as to the distrust of the vaccine by both the indigenous populations and Europeans. Between 1939 and 1952, a total of 38,667,549 simple or mixed vaccinations were performed for just under 17,500,000 inhabitants (ANS, 1H170, 1953). Between 1937 and 1942, statistics show "62 deaths from severe jaundice and 30,000 prolonged jaundice" (Pasteur Institute of Dakar Archives, IPD [ed.], 1944).

In the context of the campaign against sleeping sickness, Guillaume Lachenal (2014) shed light on the political and sociological mechanisms of constructing the health crisis as an event; and he gives us a glimpse of how the colonial administration massively administered Pentamidine to more than 13 million individuals as a prevention and treatment system against the pathology. The use of this drug, which began in the 1940s, continued until the 1970s, before both its ineffectiveness and danger were at last acknowledged.

© asnom.org Lumbar puncture for trypanosoma brucei by Doctor Jamot's team circa 1926

Conclusion

Historical research on medicine and health in West Africa provides new insights into perceptions of health in the past. The analysis of elite discourse has shed light on colonial ideologies and on cultural perception of disease by different social groups. In conjunction with the study of health services, we

have explored the nature of the relationships between different actors and the challenges they faced in enforcing health regulations. This examination reveals a remarkable diversity of opinion between – and even within – groups, particularly among medical elites. It explores the traces left by health policies on bodies and in space – through surveillance, repression and the exclusion of the sick and at-risk groups – while revealing that, underneath medical decisions, ideological, economic and sociological mechanisms were being implemented.

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