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# **The 5th International Conference of The History of Medicine in Southeast Asia**

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## **The late provision of medical care to coolies in Indochinese rubber tree plantations: the Michelin model health unit set up in 1925–1939.**

Eric Panthou

Key words : history of medicine, tropical medicine, malaria, prophylaxis, preventive medicine, colonialism, rubber plantations, French Indochina, Vietnam, social history, Michelin, hospitals, coolies, plantation workers, rubber industry, taylorism.

### **Introduction**

Setting up of healthcare system for Indochina's plantation workers only emerged as a priority to local colonial authorities in the mid-1920s, lagging years behind British Malaya and the Dutch East Indies. Basic healthcare had become not just an economic issue but also a social issue jeopardizing the future of the huge rubber tree plantations that had recently been opened by major French financial backers and industrial groups that had lost over half their workforce due to death, disease, repatriation or evasion in the space of just two years.

This communication deals with healthcare with a focus on the allegedly “unique in the private sector” healthcare service first provided by Michelin in 1929 to cover over 6,000 native workers in its two plantations. This example is original because the Michelin plantations have often been decried as the toughest, while the company was the symbol of paternalism in metropolitan France.

The analysis developed here draws heavily on an extensive and very well illustrated report drafted by Doctor Maurice Warnecke, a malaria expert, born in 1898, who was first assigned to the Department of medical assistance for Indochina in 1922 before joining Michelin in 1929 as head of the health department. His report looked to demonstrate the

economic value of introducing an in-plantation healthcare scheme. The report never got publicly released — almost certainly because Michelin, at that time, was at loggerheads with other planters.

We start out by learning that both planters and the authorities failed to heed repeated warnings from the medical community until 1928. Up to this time, blame for the failure of sanitary measures was essentially laid on the native workers, with the local administration second in line. Planter's investment in healthcare came very late on — and not before a spate of worker deaths that, even today, remains a symbol of colonial violence.

We move on to look at what Michelin achieved after 1929, notably through the construction of an exemplary model hospital. We see how the investment effort helped galvanize the company's reputation, and we investigate if these investment, which was primarily oriented towards improving workers' physical condition rather psychological condition, was profitable.

## **I- A belated recognition of the appalling sanitary condition of the workforce**

### ***A- Disregarded warnings***

The industrial and financial majors running rubber production in Indochina turned their eyes to the red-earth in Cochinchina as early as the 1910s, with a view to setting up huge capitalistically-engineered plantations within this area of dense forest ideal for rubber tree growth but harmful to workers' health. The growing workforce was given fixed-term contracts, and most came from the poor overpopulated regions of Tonkin.

Michitake Aso recently demonstrated that despite the medical community's efforts from 1919 on to alert planters and local authorities on the need to take measures against malaria, almost nothing was done until 1925 when a medical entomology laboratory on malaria was opened. The planters systematically refused to comply with the rare legal provisions on health and waved away comments from the competent government departments. No money was actually allocated by the authorities to this field.

The situation got worse when tens of thousands of workers were transported in from Tonkin in under four years, starting in 1924. Planters essentially made efforts to issue quinine, which has been legislated for since 1922, and to educate coolies on how to

preserve their own health. Once faced with the failure of this policy, the planters threw all responsibility on the natives themselves.

### ***B- The coolie is the culprit***

The behaviour of Michelin's top-echelon management is symptomatic of this mindset. The plantation doctor considers that the coolies' physical condition on arrival is appalling "because most of the time the people of Tonkin enlist only when at their wit's end and after suffering from malnutrition and a complete lack of hygiene". These indentured workers are depicted as "often depraved, trying to escape justice [...], washed up, skirting around the medical examination, wholly inapt for work". The doctor also complains about the alleged "primitive lifestyle of Annam people when it comes to hygiene and their attitude to disease".

Natives are not only laid to blame, they are also supposed to learn, which starts through punishment. The doctor recommends that those who take off their bandage, forget to wash or be treated should be disciplined. For those suspected of feigning weakness or illness, the director of the Michelin plantation in Dầu Tiếng orders a fine amounting to the daily wage. Ipecacuanha was administered to workers suffering from bellyache to force them to vomit and deter them from complaining. Being provided with a mosquito net, which was essential to avoid bites, was not considered a right but a reward.

Coolies that refused to swallow their quinine pills had to take them dissolved in water, which has an incredibly bad taste. The *white man* was supposed to be a model. The European assistant have to take his own tablets in front of recently arrived workers. A large poster in the refectory of Michelin's hospital (**see picture 1**) portrays a huge Bibendum, the world-recognized symbol of the company, benevolently taking a coolie's shoulder and advising him to take his dose of quinine. Paternalism at its best, and undertones threatening violence!

Racial prejudice served as a justification for the colonial system to impose tough working conditions and strict discipline in a much-monitored environment.

### ***C- The administration's fault***

Planters reproached the authorities for the lack of adequate hospital infrastructure in the territory. Above all, they were scathing on how labor law reform enacted by Governor-

General Alexandre Varenne in October 1927 targeted the plantations. This law strengthened the power of planters on indentured workers but also contributed to an improvement in the coolies' health through specific obligations imposed on planters: pre-recruitment checkups, food rations to be provided for free, healthcare, housing and sanitation. There was indeed urgent need to do something, as the numerous deaths among workers threatened to halt not just production but also the influx of workers — that was how bad the company's image had become.

### ***D- A true hecatomb***

Surveys led by the labour inspectorate and the Pasteur Institute arrived at much the same conclusion. About 90% of coolies of the red-earth heartland suffered from malaria and almost all had to be hospitalized once a month. The number of coolies either sick, dead or on the run reached almost half the entire workforce in some of the biggest plantations, which obviously also translated into a significant loss of earnings.

In Indochinese plantations as a whole, the death rate evolved as follows: 5.4% in 1927, 2.83% in 1929 and 1.72% in 1932. These average rates mask the diversity of on-the-ground situations. Data from 11 of the 20 biggest plantations (those counting over 700 workers) show that the death rate fluctuated between 12% and 47% in 1926 and 1927! The head of Bù Đốp, where 47% of coolies died in 1927, managed to justify this figure by a “need to make sacrifices at the start of the plantation”!

Phú Riêng, the Michelin site in the Red earth, was among these huge deadly plantations: 17 % of workers died in 1927 and another 15% the following year — all young men. The inexistent sanitary measures and relentless work required of the coolies go a large way to explaining these two-digit figures: malaria hit workers that were already on their knees.

Deaths alone don't sum up the losses. Close to a third of the workforce was unfit for work, and up to 20% of those tied up by a contract would be on the run, as was the case with Phú Riêng in 1927. Self-mutilation and suicides were also prominent.

Michelin's other plantation in Dầu Tiếng is often taken as symbol of colonial violence : according to figures released in 1965 by Diệp Liên Anh book's and repeated by various historians, 11 376 persons, a quarter of the workforce should have died there between 1924 and 1951. These statistics were made up, the actual death rate never exceeded 3 %. Colonial brutality nevertheless was a reality...

Alarmed by a productivity that was way under forecasts, Michelin realized in 1928 that it had to act. As Doctor Warnecke, who was recruited shortly after, said: “It is no longer possible to replace a worn-down coolie like a “spare part”. There is no never-ending flow of workforce”. He insisted on the vital need to improve both the physical and mental health of the coolies to ultimately make them more efficient. Michelin heard the first recommendation, not the second...

### ***E- Sanitation works came late***

The delay in starting sanitation work proves the lack of awareness of malaria-related risks. While the Pasteur Institute demonstrated as early as 1918 that sanitation and keeping housing areas away from mosquito-breeding sites were the single most important preventive actions, most planters – Michelin included – simply ignored these factors when setting up their concessions, yet the outlays involved would have been relatively insignificant: even in plantations where drainage works were substantial (Snoul and Mimot for example), the costs amounted to barely 0.6% of total expenditure.

At Michelin in Phú Riềng, the Pasteur Institute noted at the end of 1928 that the distribution of quinine was under-resourced and badly supervised, and that no anti-malaria initiative had been taken in the first two years. Work to drain the swamp and install drains did not start until November 1929. In other major concessions, similar work did not start until deep into the 1930s. While the 1927 regulation enabled the authorities to force planters to undertake such works, there is no evidence whatsoever of any such intervention.

## **II- Michelin’s achievements and the consequent benefits**

From early 1929 on, Michelin’s management back in Clermont-Ferrand decided to create a « unique private sanitary facility in Indochina ».

The turning point was the recruitment of Doctor Warnecke and the forthright diagnosis he made on the sanitary and moral condition of workers. He was well aware that the improvement of the coolie’s health could not be achieved only through prophylaxis or the setup of a healthcare infrastructure. There was also a need for better food, housing and

hygiene ; education, leisure activities and spiritual life had to be encouraged ; special care should be given to women and children while the workload should be more proportionate to each one's might.

That the director of the antimalaria department of the colony came to Phú Riêng for his first on-ground experiments demonstrates how influential Michelin was. His recommendations were duly followed and proved very useful. A few weeks later, the Institute receives a 20000 piastres donation from Michelin, that was representing 10% of its annual budget. The company became the sole one in Indochina to hire an expert in antimalaria engineering, and it is the first to build covered drains, much more effective. She is the first to replace the usual quinine pills with sweeter, candy-like tablets that were more easily accepted.

The attention paid to Michelin by the authorities is emblematic of the overall support brought to major plantations to the detriment of natives elsewhere.

It is only with the Varenne regulation that the first specific sanitary obligations imposed upon planters came into force. Ratios of nurses and infirmary beds were set according to the number of coolies ; above a certain threshold, the presence of a doctor was required.

The Michelin hospital, which opened in July 1929, has been time and again named as a model because of his size (**see picture 2**), its equipment and organization, but also because it remained for years the only one in Indochinese plantations. Four such facilities existed in Indochina in the latter in 1937, compared to close to 300 in Malaysia !

The hospital in Dầu Tiếng had 240 beds at first and was staffed with 20 native nurses. Means and competences were centralized at the hospital to avoid the mistakes and late diagnosis which were previously common in the emergency units set up within the villages and were partially accountable for the numerous deaths.

Coolies were sorted out at their arrival on the plantation according to their working capacity and sick people at the hospital according to their disease. Hygiene had to be perfect and different units were created to deal with the various functions. Patients were followed up with very detailed medical cards. The facility also included a maternity ward, an efficient laboratory and other units.

The efforts undertaken after 1929 contributed to slightly improve the situation. While 10.2 % of Dầu Tiếng's workers were sick in November 1928, this figure had been lowered to 3.3% twelve months later. In Phú Riêng, the death rate declined from 17 % in 1927 to 3.3

% in 1929, below the average rate for the colony, mostly thanks to advances in the fight against malaria. Unfit workers amounted to barely 5 % at the end of 1928 (and 3 % in May 1930) compared to 17% a year earlier.

While a day at the Michelin hospital cost 1.84 piastres, that is three times more than at a public facility, the company managed to keep its health expenditures below previous levels thanks to the decrease in hospitalizations. Most of all, this was a profitable investment as the number of coolies fit to work dramatically increased. The same kind of return on investment could be witnessed with the Michelin medical care offered to workers in France.

600,000 piastres, staff costs included, were spent by Michelin between 1926 and 1930 for its healthcare scheme, 200,000 were devoted to the hospital. To serve as a comparison, we know that the thirty five Michelin's Europeans employees costing 350,000 piastres to the company in 1928.

In Phú Riềng, in 1938, medical costs amounted to 4.6% of total expenditures, with 14,480 piastres. This was quite insignificant compared to an overall profit of 8.4 million.

The significant sums spent on healthcare and the very well organized system were at first commended by the authorities, such as the Department of Health Service, which considered in January 1930 that the hospital was « unique », « remarkable » and could be taken as model everywhere in Indochina and in the neighboring colonies.

Yet, even putting significant means in doesn't solve every problem. As a matter of fact, less than one month after Michelin had won praise from the government, almost all coolies rebelled in Phú Riềng !

The lack of reactivity from the nurses and the inadequate follow-up of patients was highlighted in various reports, including internal ones, and contributed to the worsening of preexisting pathologies. This situation arose from the pressure imposed upon nurses, which reflected the contradicting interests of the company : keep workers healthy but at the same time punish the « cheaters » and have as many coolies as possible at work.

A 1937 report bemoaned Michelin's disregard for the rule compelling plantations with more than 1,000 workers to have an on-site doctor at any given time. The administration reminds the law but it does not oblige Michelin to apply it.

In 1937 again, the Governor General of Cochinchina acknowledged the company's achievements, such as this « wonderful » but « deserted » hospital. However, he most of



all mentions the « absolutely deplorable planter's mentality » on Michelin's premises. He criticizes the sordid aspects of workers' housing and how the coolies were treated as prisoners regularly insulted and sometimes beaten.

## **Conclusion**

Although Michelin committed as early as in 1926 to implement social measures similar to those set up for its employees in France, nothing was done until 1929. Other planters acted in the same way. The impact on the workers' health and fitness for work was however undervalued. The growing difficulty in renewing the workforce, the Varenne regulation of late 1927 and the soon-to-come economic crisis forced the planters to act. Yet, there has never been any penalty even when they balked at taking initiatives. Reacting more swiftly than his competitors, Michelin then invested significant amounts into a healthcare system, which proved profitable. Health-related costs actually dramatically decreased and the coolies' physical condition improved. Michelin's workers got better medical care than others but were mishandled and got the worst housing. Only their fitness for work mattered so as to increase the production. Thanks to the better health of the coolies and to taylorization, productivity increased and so did the workers' workload, making Michelin's plantations some of the most profitable worldwide.

As a result, living and working conditions in the plantations have been portrayed up to now in a very negative way. This is especially true for Michelin's, which have often been described as the harshest and most inhuman plantations, while they were probably those with the highest level of commitment to a healthier environment.

In conclusion, I would like to express my warmest appreciation to the Scientific Committee of the Conference for accepting my paper. Special thanks are also due to professor Laurence Monnais for presenting my work to you today and to my brother for translating it into English.

## Illustrations

**Picture 1** : Michelin's Hospital : Dầu Tiếng, near 1930. In. Docteur Warnecke, *Une expérience sanitaire sur les plantations Michelin*, juillet 1931. Mise à jour Mai 1932. Michelin's archives. Thanks to Christophe Bonneuil for the copy.



**Picture 2** : Michelin's Hospital : Dầu Tiếng, near 1930. Source : Archives nationales d'outre Mer. Aix-en-Provence.

