

# Health and Structural Violence in Colonial Indochina

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## Introduction

Historical research on the Indochinese experience of French colonialism has detailed the multiple ways in which the French employment of violence against the local population was a prominent feature of colonial social life. Whether it took the form of the blow delivered to the journalist Tam Lang while working as a rickshaw driver (see Tam Lang 1996: 62), the beatings and murders of Vietnamese by alcohol monopoly officials described by Gerard Sasges (see Sasges 2006), the institutionalized violence of prisons described by Peter Zinoman (see Zinoman 2001), or ultimately the use of military force to conquer and subdue all of Indochina, violence ramified deeply throughout the colonial encounter. While those dimensions of violence were indeed prominent and important to acknowledge, definitionally they all fall into the category of what the World Health Organization's Violence Protection Alliance describes as either interpersonal violence or collective violence. The distinguishing feature of both forms of violence is that is conducted by a definable social actor(s) against another and the causal link between act and injury is clear and immediately verifiable. <sup>(1)</sup>

This article's purpose is to examine whether another form of violence, structural violence, can be linked to negative health outcomes in the Indochinese

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population during the 1930s. Records collected by the French colonial administration, particularly those sections devoted to public health, demonstrate that the health of the Indochinese population during the 1930s was very poor. In addition to periodic epidemics that took the lives of many, notably the 1937-1938 cholera epidemic, the Indochinese population suffered from a wide array of preventable infectious diseases, had comparatively high case fatality rates for a number of diseases, and also suffered from high infant mortality rates. The questions these disparities raise are whether, or to what extent, they can be attributed to structural violence. Conclusively proving the historical existence of structural violence in health outcomes in Indochina is difficult due to the limitations in the data collected by the French administration. The first significant limitation is the comparative lack of data on the health situation of the European population which precludes a comprehensive comparison of the health of the two populations. The second is the uneven nature of the data collected on the Indochinese population. Certain areas of Indochina, such as the cities of Saigon and especially Hanoi, had relatively thorough data collected on them, while the situation in many rural areas, particularly in Cambodia and Laos, is almost unknown. As a result, underreporting is a constant concern with official statistics about the Indochinese population's health status. Nevertheless, it is my contention that enough data is available to make some modest claims regarding the existence of structural violence and its relationship to health.

The approach I will take in this article will draw primarily on data available in the colonial administration's statistical gazetteer, the *Annuaire Statistique de l'Indochine*, though this will be complemented with data from other official and published sources as well. <sup>(2)</sup> What I will seek to demonstrate by analyzing this data is first that significant disparities existed between the European and Indochinese populations with regard to access to health care and second that on three different points, the comparative case fatality rates from particular infectious diseases, infant mortality rates, and the 1937 - 1938 cholera epidemic, one can fairly argue that structural violence played a role in the demonstrably more negative health outcomes experienced by the Indochinese population. The

analysis presented in this article does not claim to be comprehensive nor without several shortcomings that will be mentioned below, but as I will argue in the conclusion, it does demonstrate that structural violence was a factor when considering certain health outcomes in colonial Indochina.

## **Health and Structural Violence**

In his 1969 article “Violence, Peace and Peace Research” (Galtung 1969), the political scientist Johan Galtung developed the argument that while interpersonal violence is a significant component in the human repertoire of violence, and is easily identifiable due to its direct and usually intentional nature, another form of violence exists that is indirect, less obviously visible, yet still deleterious for its victims Galtung termed this type of violence structural violence. The central point for understanding structural violence in Galtung’s formulation relates back to his overall definition of violence. For Galtung, violence “is present when human beings are influenced so that their actual somatic and mental realizations are below their potential realizations” (Galtung 1969: 168). All humans are born with potential, but the full realization of this potential is not guaranteed, and in fact violence often prevents individuals from realizing their potential. As he noted, violence is “the cause of the difference between the potential and the actual, between what could have been and what is” (Galtung 1969: 168). As with other forms of violence, structural violence entails the preventing of individuals from achieving their full potential, though instead of carrying it out through direct blows or the like, it is carried out through such methods as the unequal distribution of food, resources, literacy, education, health care, political power, or other avoidable disparities (Galtung 1969: 169). The key word in this formulation is avoidable: structural violence occurs when particular choices are made that result in the limitation of people’s potential, specifically when other choices could be made that would create the circumstances in which they could achieve that potential. To cite his own cogent example, “When one million husbands keep one million wives in ignorance there is structural violence” (Galtung 1969: 171).

The mechanism for structural violence can be found in any constraints on human potential due to economic or political structures and in all cases, the final outcome for structural violence is what he described as “unequal life chances” (Galtung 1969: 171). The emphasis on the creation of unequal life chances is a useful starting point for delineating the relationship between structural violence and health, and in order to prove the existence of structural violence, several criteria must be met. First, examinations for the existence of structural violence in relation to health must start from a comparative perspective. Instead of assuming that the key indicators of health are uniform across a population, a key factor that can indicate the possible existence of structural violence related to health is variation in health indicators within the population. Thus, for example, differences in infant mortality rates, average life span, survival rates from similar diseases, or other health-related phenomena that exist between groups within a population can all be potential indicators of structural violence. Second, just as in natural selection when the active agent producing differences in mortality and reproductive success is nature, structural violence and health requires a definable agent that is creating the differences in health. The most obvious agent for this, and which will be the focus in this article, is a government, though other institutions, such as the family or multinational corporations, can also perform this role. Finally, the confirmation of the existence of structural violence requires the analytical identification of the particular actions performed by the agent that produce differential health outcomes for the different groups within a population. In this article, the action that I will focus on as the primary cause of health-related structural violence is the unequal distribution of resources in society. When using the term resources, I define it in a broad manner that encompasses not only such obvious material resources as vaccines, uncontaminated food and water, or effective medical treatment, but also literacy and access to accurate and effective biological and/or medical knowledge. Paul Farmer invokes a similar idea in which he comments that, “Structural violence is visited upon all those whose social status denies them access to the fruits of scientific and social advances” (Farmer 1996: 23). Whatever the resource is, the important point to

note is that it is through the unequal apportioning of resources within a population, and therefore the unequal access to those resources, some groups within the population enjoy better health, while others suffer from poorer health. Phrased another way, some will have better life chances, others poorer life chances. In such a circumstance, I would therefore argue that structural violence exists.

In the remainder of this article, the operational definition of structural violence related to health that I will use can be stated as: *differential mortality and morbidity associated with particular groups within a population in which those differences are the outcome of the actions of identifiable agents within that population, particularly the unequal distribution of resources that have the ability to protect and improve health*. My goal in formulating the definition as such is to provide a standard for identifying when structural violence has occurred, but also when it has *not* occurred. This latter point is critical because any definition of structural violence related to health must also be able to account for differences in health that are not the result of structural violence. Indeed, variations in health indicators between groups within a population do not necessarily imply the existence of structural violence. To give an example from Vietnam, in 1885 a cholera epidemic swept across northern Vietnam, then known as Tonkin, that killed thousands of Vietnamese as well as 1,850 French soldiers who were garrisoned there. At this stage Tonkin had only been under French control for some three years and basically had no public health system. Moreover, although the French might have had a more accurate understanding of cholera based upon germ theory, the bacillus that causes cholera was identified by Robert Koch in 1884, neither the Vietnamese nor the French had particularly effective measures of controlling the disease, nor did they have effective treatments for it. Therefore, although more Vietnamese died of cholera in the epidemic, I would not argue that the larger number of victims was related to structural violence because there was no appreciably unequal distribution of resources that could have kept more Vietnamese alive. In a sense, both French and Vietnamese residents were equally vulnerable to the disease, thus there was no structural

violence. However, by the time of the 1937 - 1938 cholera epidemic, in which no Europeans died yet over 20,000 Vietnamese contracted cholera and of them approximately 15,000 died, structural violence can be argued as a critical factor because European residents, notably in such urban areas as Hanoi and Haiphong, were the recipients of more favorable access to clean water, vaccinations, a functioning public health infrastructure, and effective medical care. Thus, the significant morbidity and mortality from cholera in the Vietnamese population was indisputably linked to structural violence. In the following sections, my goal is thus to demonstrate that health-related resources were unequally distributed and then link that with the more negative health outcomes experienced by the Indochinese population. The background questions that will inform all of the following sections are, therefore, to what extent were these situations avoidable? And, could the status quo have been improved with a different apportioning of resources?

### **Population and the Medical Assistance Budget**

In order to understand the health situation of the Indochinese during the 1930s, it is first necessary to explain the broader institutional context of health care in colonial Indochina. To begin with, it is important to note that prior to the arrival of the French in Indochina, the governments in the region had very little in terms of a public health apparatus nor was there anything to speak of in terms of a system of hospitals or clinics to provide health care to the population. For example, the Vietnamese government had six ministries, but there was no ministry of health. The government had made certain efforts in the direction of public health, such as the Vietnamese government's creation of facilities, known as *đưỡng tế*, that provided care for lepers, as well as the encouragement of the practice of variolization in order to control the spread of smallpox, but for the most part, facilities were minimal, though, as will be discussed below, everyday Indochinese did have access to several different types of health specialists.

The French conquest of Indochina occurred in stages. In the early 1860s the French won control over a large area in southern Vietnam that they named

Cochinchina and which would later have Saigon as its capital and main commercial hub. In 1863 Cambodia came under French control and in the 1880s the French gained control over central and northern Vietnam, which were administratively known as Annam and Tonkin respectively, and which had the imperial capital of Hue as the capital of Annam and Hanoi as the capital of Tonkin. Finally, Laos became part of French Indochina in 1893. Throughout this period, Hanoi served as the capital of all Indochina, which after 1893 included these “five countries” (5 *pays*) of Indochina. It is important to note, however, that there was an important administrative difference between Indochina’s regions. Cochinchina was technically a French colony, which meant that French laws applied there. Annam, Cambodia, Laos, and Tonkin were “protectorates,” which meant that although the French had the final authority in those regions, local law prevailed throughout, with the exception of Hanoi which was also under the French legal system. Nevertheless, all five regions were under the authority of the Governor General of Indochina, the highest ranking administrative position for all Indochina.

The French colonial venture in Vietnam was multifaceted, but one goal from its inception was “the protection of public health” (*la protection de la santé publique*). To this end, the French created a multilevel public health apparatus. The highest level of this system, which encompassed all of Indochina, was the Medical Assistance (*l’Assistance médicale*). This organization was based in Hanoi and had the largest budget for health in Indochina. The next level in the health system was the “Local Health Directorate” (*Direction local de la Santé*), which was the unit at the level of the 5 distinct regions of Indochina, thus Annam, Cambodia, Cochinchina, Laos, and Tonkin all had their own directorates and individual directors. Finally, provinces and cities had their own local public health apparatuses as well. This system was fairly well integrated and provided effective channels of communication between the different levels.

By the time that the 1930s arrived, the Medical Assistance ran a wide variety of health facilities, known as “sanitary formations” (*formations sanitaires*). Their types and numbers in Indochina in 1930 and 1940 are as follows:

**Figure 1.1: Formations Sanitaires 1930**

Formations Sanitaires, 1930

	Cochinchina	Annam	Tonkin	Cambodia	Laos	Total
Principal Hospitals	3	1	3	1	1	9
Specialized Institutes	3	3	1	1	0	8
Provincial Hospitals	20	17	29	13	13	92
Polycliniques, Municipal Dispensaries	4	0	1	1	0	6
Rural Infirmiries	179	80	91	37	55	442
Maternités isolées	29	1	12	1	0	43
Asylums	0	0	12	3	0	15
Mental Asylums	1	0	1	0	0	2
Leprosariums	1	5	6	1	2	15
Maritime Lazarets	1	0	1	0	0	2
Isolation Hospitals	1	3	1	1	1	7
Total	242	110	158	59	72	641

(ASI 1922-1929: 77)

The facilities run by the Medical Assistance were available to all Indochinese and evidence from the *Annuaire Statistique de l'Indochine* demonstrates that, over time, the number of facilities grew and more and more Indochinese made use of these facilities. In the early years of the French colonial presence these facilities were staffed with French specialists, particularly with regard to doctors, but in later years more Indochinese, though especially Vietnamese, were trained in medical specialties and they took up work in Medical Assistance facilities. By the 1930s, the Indochinese in fact significantly outnumbered the French in the Medical Assistance. It is important to note, however, that the Medical Assistance facilities were for all intents and purposes *not* used by the French in Indochina, except perhaps in exceptional circumstances. The French had their own, high quality medical facilities they could use. The premier hospital of colonial Indochina was De Lanessan Hospital in Hanoi, though Saigon's Grall Hospital was also a top level facility. With the exception of some Vietnamese government officials and soldiers, these hospitals, which arguably provided the best care in

**Figure 1.2: Formations Sanitaires 1940**

Formations Sanitaires, 1940

	Cochinchina	Annam	Tonkin	Cambodia	Laos	Total
Hospitals	5	1	17	1	6	30
Medical Centers	36	23	17	13	8	97
Infirmaries	26	121	17	5	0	169
Dispensaries	24	1	120	0	53	198
Maternités isolées	33	19	9	0	0	61
Maternité Attached to Formations Sanitaires	79	23	39	12	6	159
Maternal and Childbirth Dispensaries	0	0	117	1	0	118
Specialized Establishments						
Hospitals:						
Contagious Diseases	1	0	1	0	0	2
Venereal Diseases	1	0	0	0	0	1
Cancer	1	0	1	0	0	2
Dispensaries:						
Venereal Diseases	0	0	2	1	0	3
Ophthalmology	0	1	1	1	0	3
Tuberculosis	0	1	0	0	0	1
Leprosariums:						
Existing Leprosariums	0	4	0	1	2	7
Leper Villages	0	0	5	0	2	7
Asylums:						
Mentally Ill	1	0	1	1	0	3
Elderly	0	0	0	1	0	1
Orphans	0	0	0	1	0	1
Lazarets:						
Maritimes	1	0	1	0	0	2
Terrrestrial	0	0	1	0	0	1
<b>Total</b>	<b>208</b>	<b>194</b>	<b>349</b>	<b>38</b>	<b>77</b>	<b>866</b>

(ASI 1939-40: 43)

Indochina, were closed to the Indochinese. The major urban areas also had French doctors in private practice whose services French residents could pay to use, though the costs of many of these doctors was beyond the reach of most Indochinese.

In order to provide the context to make an argument regarding structural violence in colonial Indochina, the best starting point is to attempt to determine the European and non-European populations of Indochina. It should be noted from the outset that these numbers are at best approximations of the total population given the chronic problems of underreporting that census officials faced, but they nevertheless are useful to understand the broader outlines of the system. In the period under discussion (1930 - 1940), three censuses are available to estimate the population: 1926, 1931, and 1936. The growth rates between 1926 and 1931, and then 1931 and 1936, were dissimilar (0.00912 and 0.01429 respectively), thus the pre-1931 and post-1936 figures were calculated according to those growth rates. <sup>(3)</sup>

**Figure 2: Indigenous Population of Indochina**

1930	21254678
1931	21452000
1932	21758549
1933	22069479
1934	22384852
1935	22704731
1936	23029182
1937	23358269
1938	23692058
1939	24030618
1940	24374015

Determining the European population of Indochina was somewhat more complicated because French officials included Japanese and Filipinos in the European population. Various undesignated “foreigners” were also included in this population. Another complication was the military presence in Indochina,

which was included in the European population. These tended to number some ten to twelve thousand people annually and they had their own medical facilities, the number of which is not included in the *Annuaire Statistique* figures. Finally, the only years for which data are available for Europeans are 1931, 1932, 1933, and 1936. As is evident in the following table, however, the European numbers were relatively stable.

**Figure 3: European Population in Indochina**

	Total European Population	Military Population	Foreigners	Non-Military or Others
1931	42000			
1932	46918	10849	1256	36069
1933	45942	11320	1121	34622
1936	43000			

The first point that is clear is the surprisingly small European presence in Indochina. Indeed, it is remarkable that some 40,000 Europeans could exercise control over a population of between 21 and 24 million Indochinese (On that point, however, the importance of direct, interpersonal violence becomes clear). Looked at comparatively, then the total percentage of the population of Indochina that the Europeans constituted is as follows:

**Figure 4: Percentage of Europeans in Total Population of Indochina**

1931	0.20%
1932	0.22%
1933	0.21%
1936	0.19%

Of course, the percentage of the population the French constituted was even smaller.

With these figures in mind, the next question that needs to be addressed is the level at which the colonial administration funded the Medical Assistance. Calculating these figures is again difficult. To begin with, as is the case with

other figures in the *Annuaire Statistique*, the total credits accorded the Medical Assistance when calculated by adding up the numbers for each year provided in the *Annuaire* between 1930 and 1940 are slightly different from those provided in the 1939 - 1940 volume that ostensibly provides a complete accounting of Medical Assistance credits from 1913 to 1941 (*ASI* 1939-1940: 266). In addition, the budgets of other medical facilities from which the Vietnamese benefited, such as the Radium Institute in Hanoi that after its establishment in 1931 provided cancer diagnosis and treatment to the Indochinese, or the Pasteur Institutes, that provided rabies treatments, bacteriological analyses, and vaccines, were listed separately from the Medical Assistance budgets. In my calculations I have included these institutions budgets, while acknowledging that both the Europeans and Indochinese benefited from their operations. Also, until 1936 the small French colony of Kouang-Tcheou-Wan was included in the Medical Assistance, though given its small population, its overall impact on the statistics is minimal. In my calculations I have subtracted their Local Directorate budget, which annually was less than 0.5% of the total Assistance budget, from the total. It is unclear, however, how much the colony received from the General Budget of Indochina, though again it was likely insignificant. Finally, as will be discussed below, it is clear that in 1930 and 1931 De Lanessan Hospital and Grall Hospital received significant financial support from the Medical Assistance budget, and as noted above, these facilities were largely closed to most Indochinese. Given these qualifications, the numbers listed below should therefore be regarded as provisional, and while inexact, I would argue that they are adequate for illuminating some of the differences in health care available to Europeans and Indochinese.

The first comparative measure of health care coverage can be determined by examining the per capita Medical Assistance credits in the Indochina budget. The results were:

**Figure 5: Annual Budget for Medical Assistance in Indochina (in piasters)**

1930	7533000
1931	10127000
1932	9355490
1933	8905115
1934	7616786
1935	7516786
1936	10482386
1937	11452400
1938	11833400
1939	12005400
1940	13032400

**Figure 6: Per Capita Budget Credits for Indochinese from the Medical Assistance (in piasters)**

1930	0.35
1931	0.47
1932	0.43
1933	0.4
1934	0.34
1935	0.33
1936	0.46
1937	0.49
1938	0.5
1939	0.5
1940	0.53

As is evident, the annual per capita amounts provided to each individual was small. Although the trend in the 1930s was largely upwards, it still only averaged 0.44 piasters per year. It is also important to note that these figures represented an average for all five countries and people who lived in close proximity to Medical Assistance facilities were more likely to benefit from them. Indeed, for many rural residents, the benefits of the Medical Assistance were negligible or nonexistent, simply due to the fact that they lacked access to the facilities.

The next question to address is to what extent were health-related

resources provided to the French and/or European population. On this point it is again difficult to give a comprehensive and precise measure, largely because data of such a nature was not something that was recorded in the *Annuaire Statistique*, but some initial conclusions can be drawn. One of the most obvious advantages French functionaries and military personnel enjoyed was access to the best medical care in Indochina at De Lanessan Hospital and Grall Hospital. Europeans declared indigent could also receive free health care there. One surprising indication of the importance the colonial administration placed on these hospitals was evident in the budgetary figures for 1930 and 1931. As noted above, during those two years the budgets from these two hospitals was included within the Medical Assistance budget, and apart from access allowed to some Vietnamese officials and military personnel, these hospitals were off limits to the Vietnamese. Nevertheless, the percentage of the total budget they occupied was significant.

**Figure 7: Percentage of Total Indochina Medical Assistance Budget Devoted to de Lanessan Hospital and Grall Hospital (1930 and 1931)(in piasters)**

	de Lanessan Hospital	Grall Hospital	Percentage of Budget
1930	356000	294000	8.58%
1931	390000	334000	7.12%

It is impossible to determine whether the percentages remained that high through the rest of the 1930s, and chances are that they did decline or remained relatively constant as the Medical Assistance budget increased over the decade. When compared to the population of Europeans in 1931, the hospital budgets alone give a per capita expenditure of 17.24 piasters/person, but that is undoubtedly too high. However, even if one factored in 100,000 Vietnamese officials and soldiers who had access to those facilities, which is undoubtedly a generous estimate, it still works out to 5.1 piasters/person. Thus, looking at only 1931, the Europeans and their collaborators on a per capita basis had access to a minimum 10.9 times the health related resources than the Indochinese. These

figures also do not reflect other advantages that many Europeans in civil or military service enjoyed, notably the ability to take lengthy paid sick leaves in the case that they became seriously ill. Indeed, one point which bedeviled the French military command in Indochina was the diminution of a military's effective fighting force due to soldiers spending lengthy periods in hospitals to recuperate from venereal diseases. Such extended health benefits were enjoyed by some in the Indochinese civil service, but for the vast majority of the population such benefits did not exist.

### **Measuring the Availability of Health Care**

Calculating the per capita amounts that the Medical Assistance budget provided is one way of measuring the health resources devoted to the Indochinese. Two other measures are to consider the ratios of health facilities and health-related personnel to the population. With regard to the European population, a fully accurate measure of these ratios cannot be made due to a lack of data. However, given the concentration of the European population in the major cities, as well as the availability of hospitals and medical personnel in Indochina, such a measure would not be very revealing as access to medical care was not an issue for most of the European population. With regard to the Indochinese population, however, these ratios reveal a great deal. Starting with the ratio of health care facilities to the population, which are usually calculated as the number of facilities per 1000 people, the ratios are as follows:

**Figure 8: Health Care Facilities/1000 Indochinese**

1930	0.03
1931	0.03
1932	0.031
1933	0.03
1936	0.038
1940	0.036

The figures between 1930 and 1940 show a general improvement, but the average

for all of Indochina also masks disparities. For example, a comparison of the three regions of Vietnam reveal the following:

**Figure 9: Health Care Facilities/1000 Vietnamese**

	Cochinchina	Annam	Tonkin
1930	0.055	0.016	0.018
1940	0.043	0.033	0.038

Interestingly, the French colony of Cochinchina had the best ratio of all three regions. As is clear in all regions, however, the number of health facilities per 1000 people was very small.

It is important to note that the residents of all of the regions of Indochina had access to a variety of traditional healing methods, such as the Vietnamese use of a variety of herbal medicines, thus the total number of “health care” facilities was somewhat greater. Yet, their total number was not great enough to significantly alter the above results. Perhaps what is most revealing, however, is to make some very rough calculations of the same ratio for the European population. Using only the two hospitals, De Lanessan and Grall, as the only health care facilities to which Europeans had access, which is admittedly a significant underestimation, the following ratios prevailed:

**Figure 10: Health Care Facilities/1000 Europeans (2 Facilities)**

1931	0.048
1932	0.043
1933	0.044
1936	0.047

It is reasonable, however, to recalculate this figure taking into account the benefits Europeans received from Indochina’s four Pasteur Institutes (located in Saigon, Hanoi, Nha Trang and Da Lat), especially for their bacteriological laboratories and vaccination programs, and Hanoi’s Institute of Radium. Adding

in these six facilities, the ratios are as follows:

**Figure 11: Health Care Facilities/1000 Europeans (6 Facilities)**

1931	0.14
1932	0.13
1933	0.13
1936	0.14

As is quite clear, even after including only two hospitals in the calculation, the Europeans still had significantly higher ratios. These figures also do not include European access to European medical specialists in private practice, for which *Annuaire Statistique* statistics indicate there were usually around 40 in private practice per year (see below), nor the military health facilities, thus one can fairly conclude that the ratios were even more disparate than those presented above.

Another method for ascertaining the differences that existed between the European and Indochinese populations is to compare the ratio of people to health workers. This is another point wherein it is difficult to get a fully accurate measure for a variety of reasons. For example, the *Annuaire* does not provide an accounting of the number of indigenous Indochinese healers or others that residents turned to for their medical needs, nor does it provide a method for determining to what extent the European population relied upon Indochinese health workers, such as doctors, nurses, or other hospital personnel, when addressing their medical needs. It is also impossible to ascertain the impact of the military medical personnel as some were in some years employed in the Medical Assistance, so their relative availability to the Vietnamese and Europeans is unknown. All the same, the latter's numbers were not that great (less than 50 annually), thus even in the best case scenario, their impact was limited. Given that there is no way to accurately account for these questions, the following calculations were made assuming that Europeans only consulted other non-military European medical personnel, which would give them an artificially low ratio of people to health workers, and that the Indochinese had access to all European and Indochinese health workers, which would give them an artificially

high ratio (MA indicates Medical Assistance personnel, NMA indicates health workers working outside of the Medical Assistance program, in other words people in private practice).

**Figure 12: Number of Medical Personnel in Indochina**

	MA: European	MA: Indochinese	NMA: European	NMA: Indochinese	NMA: Total	Total
1930	252	2295				2547
1931	282	2332	39	50		2703
1932	278	2371	41	65		2755
1933	274	2320	45	130		2769
1936	268	2352	38	273		2931
1940	222	2431			390	3043

When compared to the respective populations, the following ratios prevail:

**Figure 13: Number of Health Workers/1000 Europeans and Indochinese**

	European	Indochinese
1930		0.12
1931	7.643	0.126
1932	6.799	0.127
1933	6.944	0.126
1936	7.116	0.127
1940		0.125

The difference between the two populations is remarkable. For the four years for which there is comparative data, the European population had on average 56.3 times more health workers/1000 people. Even if 10,000 more health workers were added to the Indochinese data, the resulting average ratio for those four years would still only be 0.58 health workers/1000 Indochinese, which still gives the European population 12.3 times more health workers. To get a sense of how low the Indochinese figures are, however, according to the United Nations Millennium Goals, countries require a minimum of 2.5 health workers/1000 people in order to have the minimum number of health workers needed to

maintain the health of a nation's citizens. The Indochinese were obviously far below that standard.

### **Infectious Disease and Differential Health Outcomes**

Although limited and imperfect in nature, analysis of the data provided in the *Annuaire Statistique* demonstrates that significant health-related disparities existed between the European and Indochinese populations in colonial Indochina. With regard to three measures, the availability of per capita health-related financial resources, health facilities, and health workers, the European population enjoyed definite advantages. The next question these disparities raise, however, is to what extent they were related to differences in actual health outcomes. On this point, comparative data is again limited, but three sets of data do exist that allow for comparison: case fatality rates for particular infectious diseases, infant mortality, and the 1937 - 1938 cholera epidemic. These data demonstrate the differential health outcomes experienced by the European and Indochinese populations.

According to the health regulations implemented by the French colonial regime, local authorities were required to officially declare when cases of particular infectious diseases occurred and when individuals died from those diseases (see below for the list). These data were then compiled for all of Indochina's regions and the annual results published in the *Annuaire Statistique*. As with other official health-related data, these figures had notable shortcomings, especially because they often underreported the number of cases and fatalities among the Indochinese population. Nevertheless, they do provide a useful point of comparison between the populations. In order to get a more comprehensive understanding, the data presented below cover the number of cases and fatalities for these diseases in the years 1930 to 1940.

**Figure 14: Case Fatality Rates for Infectious Diseases, 1930-1940**

European Population				Indochinese Population			
	Declared Cases	Deaths	Rate		Declared Cases	Deaths	Rate
1. Typhoid	496	42	8.5%	1. Typhoid	8114	956	11.8%
2. Smallpox	63	9	14.3%	2. Smallpox	41155	9446	23.0%
3. Diphtheria	611	15	2.5%	3. Diphtheria	853	145	17.0%
4. Cholera	2	0	0.0%	4. Cholera	28083	20964	74.7%
5. Plague	5	3	60.0%	5. Plague	999	841	84.2%
6. Dysentery	1214	21	1.7%	6. Dysentery	154976	1941	1.3%
7. Measles	1073	3	0.3%	7. Measles	17536	558	3.2%
8. Leprosy	8	0	0.0%	8. Leprosy	6348	114	1.8%
9. Meningitis	19	2	10.5%	9. Meningitis	9554	1439	15.1%
10. Typhus	18	3	16.7%	10. Typhus	105	9	8.6%
11. Influenza	89	0	0.0%	11. Influenza	12567	459	3.7%
12. Polio	16	2	12.5%	12. Polio	42	1	2.4%
13. Postpartum Infection	1	0	0.0%	13. Postpartum Infection	397	124	31.2%

An initial examination of the data demonstrates several important points. First, as is evident in the European numbers, the European population was at risk for the same diseases, and they could also be fatal. Indeed, it is important to recognize that despite their health-related advantages, Europeans did die from infectious diseases in Indochina. More significant, however, is the fact that for the Indochinese, contracting certain diseases, notably cholera and plague, was a virtual death sentence. Cholera, a classic disease of poverty, stands out on this point. In the eleven years for which there is data, only two Europeans contracted cholera and none died, while there were over 28,000 *reported* cases among the Indochinese, of which almost 75% died. Importantly, the majority of those cases (20,670) were recorded during the cholera epidemic of 1937 to 1938, during which 76.4% (15,799) of the stricken died.

One problem associated with the *Annuaire Statistique* data is the difference in the size of the sample populations. In order to correct for this, a Z Test analysis was performed to determine which diseases had statistically significant

differences between them. The results were as follows:

**Figure 15: Z Test Analysis of European and Indochinese Case Fatality Rates**

	Z
1. Typhoid	2.227
2. Smallpox	NO
3. Diphtheria	8.762
4. Cholera	2.43
5. Plague	NO
6. Dysentery	NO
7. Measles	5.377
8. Leprosy	NO
9. Meningitis	NO
10. Typhus	NO
11. Influenza	NO
12. Polio	NO
13. Postpartum Infection	NO

Of the thirteen diseases and conditions listed, typhoid, diphtheria, cholera and measles had statistically significant differences in outcomes for the two populations. These numbers can then be used to calculate excess mortality for the Indochinese population.<sup>(4)</sup>

**Figure 16: Excess Mortality in the Indochinese Population**

	Excess Deaths
1. Typhoid	266
3. Diphtheria	124
4. Cholera	20964
7. Measles	505

As the Z Test and the excess mortality figures reveal, substantial differences existed regarding the consequences of contracting these diseases. Many more Indochinese died in the 1930s as a result of their higher case fatality rates. It is

also worth noting that if more accurate data was available for many of these diseases, other statistically significant differences would likely exist as well.

### **Infant Mortality**

Another measure of differential health outcomes for the European and Indochinese populations relates to infant mortality.<sup>(5)</sup> Pregnancy and childbirth were potentially dangerous events in colonial Indochina, for Europeans as well as Indochinese. According to the *Annuaire*, in the period from 1925 to 1931, the infant mortality rate in Hanoi alone was 420/1000 (ASI 1931-1932: 57). During the 1930s the Medical Assistance had placed a priority on protecting and improving child and maternal health, a commitment evident in the increase of pregnancy and birth-related medical facilities. For example, in 1930, there were 43 independent maternities (*maternités isolées*), of which 29 were located in Cochinchina, yet by 1940, the total number of these types of facilities had increased to 338 (79 of which were again in Cochinchina), an almost eightfold increase. Despite the increase in the number of facilities, infant mortality rates remained very high and, similar to the consequences of infectious diseases above, their impact was greater for the Indochinese population.

As with the previous cases, comprehensive data is not available. The infant mortality rates can be calculated for the European population based upon data in the *Annuaire Statistique*, though here it is important to note that in the *Annuaire*, children born of two European parents or one European parent with another parent of different origin were included in the European category. Regarding the Indochinese population, comprehensive data was not compiled throughout most of Indochina. The most comprehensive data available is for Hanoi in the 1930s, with one year of data from the Saigon and Cho Lon region in Cochinchina. But, given the fact that the overall health of the Hanoi population was better than probably most if not all of Indochina, the Hanoi figures can reasonably be regarded as the best case scenario for Indochina. The infant mortality rates for other regions were probably higher, something that the Saigon/Cho Lon case below appears to indicate.

**Figure 17: Infant Mortality in Colonial Indochina (per 1000 Births)**

	Indochinese			Excess Mortality/ 1000 Births
	European	Hanoi	Saigon/ Cho Lon	
1930	101	370		269
1931	112	350		238
1932	98	400		302
1933	104	380		276
1934	102	330		228
1935	106	290		184
1936	78	230		152
1937		210	287	
1938		190		

Here again the difference between the European and Indochinese populations was remarkable. In the period between 1930 and 1936, an Hanoi-born Indochinese infant was 3.35 times more likely to die during their first year of life when compared to European or also mixed-European infant. It is also worth noting that the Indochinese had significant numbers of still-births, thus the overall outcomes of pregnancies were even more negative.

### **The 1937 - 1938 Cholera Epidemic**

One final case that demonstrates the differences regarding the health of the European and Indochinese populations was the 1937 - 1938 cholera epidemic. As was evident above, cholera was present in Indochina from the early years of the colonial encounter. The standard pattern that cholera took was to remain largely dormant for a period of a decade or more, during which the annual number of cases and fatalities was small, but then reemerge in a large-scale epidemic with high morbidity and mortality. Thus, significant epidemics emerged in 1885, 1888, 1910, and especially 1926 - 1927. The latter epidemic, which affected all of Indochina, featured over 30,000 reported deaths. The 1937 epidemic began in September when cholera was brought to the coastal community of Đồ Sơn, located to the south of Hai Phong in Tonkin, aboard a fishing boat that had come from southern China. It lasted for the next thirteen months, and, in a common

pattern of primarily afflicting one main area, basically spared Cochinchina, Cambodia, Laos, and most of Annam, while heavily affecting northern Annam and especially Tonkin. According to figures compiled by the French doctor Genevray, Annam had 4594 cases with 3381 fatalities (73.4% mortality) while Tonkin had 15,432 cases and 11,540 fatalities (74.8% mortality), for a total of 20,027 cases and 14,921 fatalities (74.5% mortality). Some areas, however, were hit especially hard. In Annam, the province of Thanh Hóa had 2935 cases and 2407 fatalities (82% mortality) and in Tonkin, Hà Đông province on Hanoi's southwest border had 2627 cases and 2321 fatalities (88.4% mortality) (Genevray 1939: 1027). Of course, these numbers represent only the reported cases and fatalities.

It is important to note that the colonial health authorities did not sit by idly while the epidemic ravaged the Vietnamese population. To the contrary, the colonial health service launched an aggressive response to limit the epidemic's spread. This included the reported performance of some 9.65 million anti-cholera vaccinations in Tonkin and 2.8 million in Annam (Genevray 1939: 1027). In communities in which cases of cholera were reported, authorities established *cordons sanitaires* that prohibited the movement of people in and out of the communities. Ports were placed under surveillance, movement between provinces and the five countries of Indochina was limited, and in order to cross these boundaries, individuals coming from infected areas were required to produce a valid vaccination card. The quarantining of diseased individuals as well as the disinfection of their homes and belongings was also conducted. It is indisputable that these measures did limit the epidemic's impact.

Nevertheless, in his study of the epidemic, Genevray made a significant comment. As he stated, "It was above all a disease of destitution, that for the most part struck the most disinherited class of the population. With only rare exceptions, there were no great centers of the epidemic, but a very large number of isolated cases and small centers of the epidemic in villages. Water appears to have played no role in its propagation, which was done through interhuman contact" (Genevray 1939: 1039). A review of the Hanoi-based Vietnamese

language press during the epidemic illustrates this point. In the period from late September to late November 1937, when the epidemic reached its peak lethality in the north and was closing in on Hanoi, the Hanoi press regularly reported on people found on the roadsides in various parts of Tonkin either sick with or dead from cholera. As the articles indicated, many of these victims came from the poorest and most vulnerable sections of Tonkin society, such as the laborers, ambulant peddlers, petty market sellers, rickshaw pullers, or especially beggars. Indeed, Hanoi faced two significant problems during the epidemic. The first was that a large number of sick and destitute people from the countryside were coming into the city, in many cases it appears in hopes of getting some form of treatment, but they then collapsed or died on the roadsides. A second problem was that one of the city's poorest areas, known in Vietnamese as Phúc Xá, but referred to by the French as the "Sand Bank" (*Banc de Sable*) given its location on the western bank of the Red River, was a major center for cases and deaths in the city. Phúc Xá presented a secondary problem as its residents were usually employed as menial laborers around the city, thus officials feared that residents would contract the disease in Phúc Xá and then transport it to other parts of the city. These concerns were so great in fact that in mid-October soldiers cordoned off the area and forced some people to submit to cholera vaccinations. An article in the newspaper *Việt Báo* in mid-November, when the threat to Hanoi had basically passed, noted with a perhaps a bit of exaggeration of the situation in Hanoi that "When it is calculated, from the time in which cholera emerged until now, there have been some 438 cases, all of which have been among the poor and destitute: coolies, beggars, and a large number of people from other provinces who have just come to live in Hanoi" (*Việt Báo* November 15 and 16, 1937). As Genevray's comments revealed, it was the most vulnerable sections of Tonkin's population, those with the fewest resources and least access to medical care, that were most heavily affected by the epidemic. And yet, while this epidemic took the lives of almost 15,000 Vietnamese, not a single European life was lost as the epidemic ran its course.

## **Conclusion: Health and Structural Violence in Colonial Indochina**

This article's purpose has been to demonstrate that structural violence played a role in some of the negative health outcomes experienced by the Indochinese population in the 1930s. Despite limitations in the available data that prevent precise calculations, the data nevertheless do allow for a modest comparative glimpse at the differences that existed between the European and Indochinese populations during the 1930s. As was shown, the European population did enjoy a more favorable distribution of health-related resources as measured by per capita health expenditures in the government budget as well as the number of health care facilities and health workers per 1000 members of their population. In making these calculations, I attempted to exercise caution and minimized the use of numbers that would exacerbate the differences between the populations, thus it is my unsupported contention that the differences were in fact greater than stated in this article. To give but one example, when interpreting the outcome of the 1937 - 1938 cholera epidemic, it is impossible to quantify how much the European population of Hanoi benefited from access to on the one hand a clean water supply, but more importantly, the possession of literacy and the understanding of cholera's methods of transmission. During the colonial period, some scholars reckon that perhaps 90% of the Vietnamese population was illiterate.<sup>(6)</sup> Thus most, if not nearly all, of the epidemic's impoverished Vietnamese victims were also likely illiterate, thus the numerous posters put up by the French explaining how to protect oneself from cholera were of limited value, and as many French doctors recognized, one particularly lethal method of transmission within families was through family members coming into contact with a victim's vomit or feces. Many people simply did not know or understand the dangers that the excreta of a cholera victim posed, thus they never protected themselves and died as a result.

The important point to note, however, is that in addition to the disparities in health-related resource distribution, definite differences in health outcomes existed between the two populations. As discussed with the case fatality rates, infant mortality rates, and the 1937 - 1938 cholera epidemic, the outcomes for the

Indochinese population were demonstrably worse. Undoubtedly other differences existed, such as differences in average life span and postpartum survival rates for mothers, but data do not exist to support such claims. The question is therefore raised whether these differences are attributable to structural violence or not. To begin, it should be noted that in some cases, such as with smallpox, plague, dysentery, leprosy, meningitis, typhus, influenza, polio and postpartum infection, although there were differences in case fatality rates, and in the case of dysentery, typhus and polio European case fatalities rates were worse, they were not statistically significant. This is important to note because it points to the need for caution in making blanket assertions that things were always worse for the Indochinese. At an intuitive level that might make sense, but it should always be kept in mind that the European population was in a number of cases also at risk. With the remaining four diseases, typhoid, diphtheria, cholera and measles, the higher case fatality rates were statistically significant. Moreover, one can fairly extrapolate from Hanoi's infant mortality rates that the Indochinese population also experienced a much higher rate of infant mortality. What stands out about these five cases is that they all respond favorably to both prophylaxis and treatment. To come back to the initial definition of structural violence, they are all avoidable if adequate resources are dedicated to combating and treating them. The increased effort and resources devoted to the 1937 - 1938 cholera epidemic likely played a role in preventing another disaster on the scale of the 1926 - 1927 epidemic, and the vigorous public health response launched by the city of Hanoi in the later epidemic undoubtedly saved the lives of numerous Europeans and Vietnamese. Perhaps the best evidence of the avoidability of these outcomes is the noticeable decline in Hanoi's infant mortality in the period from 1930 to 1938. During these years the infant mortality rate declined from 370/1000 to 190/1000, a 51.4% decrease. The reason for this decrease was simple: as evident in the data on health facilities, the colonial administration devoted a significantly greater amount of resources to maternal and child health, and the investment brought tremendous benefits. Nevertheless, despite these investments, the infant mortality rate for the

Indochinese in Hanoi was significantly worse.

To conclude, I would contend that it is reasonable to argue that structural violence did play a role in some of the disparate health outcomes experienced by the European and Indochinese populations during the 1930s. Disparities in access to health resources and health outcomes existed, thus one can fairly argue that structural violence helps to explain the disparities. And as was evident in Hanoi's infant mortality figures, once the colonial regime began devoting greater resources to the health of the Indochinese, the gap between the European and Indochinese populations narrowed. The analyses and conclusions presented here have had to contend with a number of significant limitations in the nature of the available data, but they do demonstrate that more research is merited to further demonstrate the impact of structural violence on the indigenous population of colonial Indochina.

## Notes

- (1) <http://www.who.int/violenceprevention/approach/definition/en/index.html>
- (2) The numeric data presented in this article are primarily drawn from the *Annuaire Statistique de l'Indochine*, a gazetteer published by the government Indochina to record in numerical form various dimensions of the colonial endeavor in Indochina. The *Annuaire* will be marked in the citations as *ASI*. Moreover, given the volume of data analyzed, page number citations are not provided for every section. Nevertheless, all of the data can be checked against the *Annuaire* for the years under discussion.
- (3) These figures are calculated based upon the data available at *ASI* 1939-1940: 261.
- (4) Excess mortality is calculated by multiplying the number of Indochinese reported cases by the European case fatality rate and then subtracting the result from the number of reported Indochinese case fatalities for each disease. Excess mortality reveals how many more people died as a result of the having a higher case fatality rate.
- (5) The infant mortality calculations included here are based upon death occurring within the first year. The *Annuaire* also calculated the number of death during the first month.
- (6) The Vietnamese scholar Ngô Văn Cát claimed that in the early 1930s approximately 95% of the Vietnamese did not know "one character" (Ngô Văn Cát 1980: 12). This is likely an

exaggeration but the rate of illiteracy was very high.

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## **Health and Structural Violence in Colonial Indochina**

〈 Summary 〉

Shaun Kingsley Malarney

This article addresses the question of whether structural violence had a demonstrable impact upon the health outcomes of the indigenous population of colonial Indochina, specifically during the 1930s. The article comparatively examines the situation of the European and Indochinese populations with respect to the per capita availability of financial resources for health care, medical facilities, and health workers. It then comparatively examines the case fatality rates for thirteen different medical conditions, infant mortality, and the 1937-1938 cholera epidemic. The article argues that given the superior access to health care enjoyed by the European population and the demonstrably more negative health outcomes of the Indochinese population, structural violence did play a role in generating those comparatively more negative health outcomes for the Indochinese population.