

THE BODY, THE BUILDING, AND THE GARDEN



Reconfiguration of the Kampung
by Health Institutions in the
Netherlands East Indies

NANDA NUGRAHA



ididi od. Pakis. I^e Stadium. De atapnok.
verwyderd.

Cover • 'Desinfection in Peisidi. First Stage. The *atap* cover is removed.'
Indonesia, Central Java, Magelang, Pakis
Photograph by G.M. Versteeg. (*Source:*
Collectie Wereldmuseum. RV-A101-1-15)

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This publication is part of the École Polytechnique Fédérale de Lausanne's Architecture cursus for the Master of Architecture diploma, the *Énoncé Théorique*. The research was supervised by HITAM at EPFL.

The research presented shall move onto the Spring 2025 semester for the Projet de Master (PDM) under the guidance of RIOT at EPFL.

Special thanks to the HITAM team for their constant support, enthusiasm, trust and patience in their supervision, and for their insights that are always sharp and meaningful.

Thanks to my parents for their unwavering support, trust and their endless patience.

Special thanks to my friends, whose minds sparks mine and intertwine with mine.



The Body, the Building, and the Garden:
Reconfiguration of the Kampung by Health Institutions
in the Netherlands East Indies
2025, A. Nanda Nugraha

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To my grandparents and their struggle against oppressions,

GLOSSARY

Dessa/Desa: an administrative unit comprising multiple kampungs, can also mean a kampung in a narrow sense.

Doekoen/dukun: a traditional healer residing in kampungs

Jamu: a herbal medicine

Kampong/kampung: during the colonial period, it referred to a native village

Mantri: an assistant to a doctor.

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ABSTRACT

This thesis, *The Body, The Building, and The Garden*, investigates the intersections of public health, architecture, and governance in the Dutch East Indies, exploring how colonial hygiene discourse was weaponised to exert biopolitical control over native populations. Focusing on the *kampung*, the term used during the colonial period to refer to native villages or dwellings, as a focal point of intervention, the study examines how Dutch colonial authorities transformed these spaces into laboratories for experimentation, combining medical advancements with architectural reforms to optimise labour productivity and sustain hierarchies of power. By reframing and moulding the *kampung* in the name of hygiene, colonial agents refracted extracted knowledge back onto the colonised population, establishing mechanisms of control disguised as welfare.

Drawing on written and visual records produced by health institutions and related colonial agents, the thesis uncovers the trans-scalar dynamics at play, spanning from the microscopic scale of pathogens to global networks of knowledge sharing and resource extraction. Substantial visual and textual accounts representing the material and social fabric of the *kampung* were created to support hygiene campaigns. This study deconstructs these documents to reveal how they contributed to the formation of a colonial epistemology, exposing the agenda of control and exploitation masked by a rhetoric of progress. Employing a materialist analysis informed by Michel Foucault's concept of biopolitics and Ann Laura Stoler's insights on epistemic anxieties, the thesis examines the power structures underlying colonial interventions.

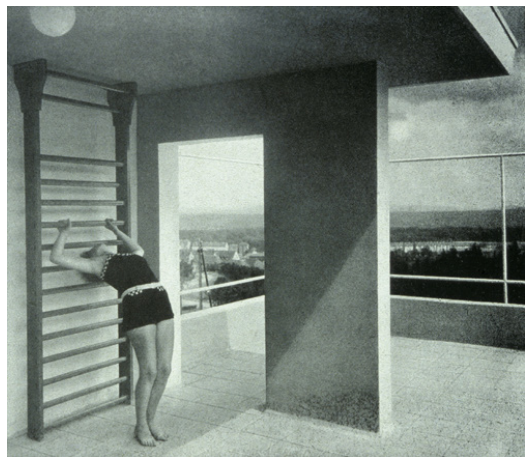
Titled *The Body, The Building, and The Garden*, the thesis organises its graphical and textual material into three sections, each addressing a distinct scale of operation rather than following a chronological sequence. This structure illustrates the trans-scalar entanglement of the *kampung*, linking the smallest biological threats to the global mechanisms of colonial exploitation. By examining records from Dutch colonial health institutions and global non-state actors, the study reconstructs the memory of the *kampung* while unravelling the power underpinning data collection efforts that facilitated its transformation. This methodology identifies key agents, moments, and processes contributing to the reconfiguration of the *kampung* under colonial rule.

0.

PROLOGUE:
WEAPONISING HYGIENE



1



2

Figure 1 • 'How Should We Live? The Dwelling' Poster for the exhibition organised by the Deutsche Werkbund at the Weissenhofsiedlung, Stuttgart, Germany, 1927.

Figure 2 • A woman exercising on the terrace of Richard Döcker house in the Werkbundsiedlung, Stuttgart, c.1926, from Richard Döcker's book *Terrassen Typ*, 1929.

An Introduction to Hygiene

Hygiene, as defined by Webster's International Dictionary (1954), is 'the science of the preservation of health; sanitary science; a system of principles or rules designed for the promotion of health.' Similarly, the International Encyclopaedia of Hygiene describes hygiene as a branch of medical science focused on the preservation of health, encompassing all measures aimed at maintaining health, except those involving purely medical or surgical interventions. Meanwhile, health is defined in Webster's as 'a state of being hale, sound, or whole in body, mind, or soul; well-being, particularly the state of being free from physical disease or pain.'¹ Superficially, these definitions seem to reflect the goals that Dutch colonial administrators claimed to pursue in their colonies: optimising the bodily health of colonised populations after a long period of physical and economic exploitation. However, these efforts often perpetuated exploitation under the guise of improvement, leaving only the extractive dynamics intact.

This tension began in 1901 when the Dutch monarchy issued a royal decree addressing the state's moral obligation toward its colonies, which was subsequently adopted as official policy by the colonial government. This decree marked a rupture from the overtly exploitative practices that had long

1 John Lee Hydrick, *Intensive Rural Hygiene Work and Public Health Education of the Public Health Service of Netherlands India* (Batavia: Dienst der Volksgezondheid, 1937). 11.

defined colonial governance, especially the relentless resource extraction and exploitation of Indigenous labour.² The transition from the *Kultuurstelsel*—a forced labour system on state-owned plantations to the so-called liberal era in the 1860s did little to alleviate the suffering of colonised populations.³ The plantations shifted into the hands of private actors, but the exploitation deepened, and living conditions for Indigenous people, particularly in the *kampung*, worsened. The Dutch monarchy's decree, cloaked in the language of moral responsibility, became yet another mechanism for preserving the colonial status quo, ensuring that the structures of economic and social oppression endured despite the veneer of reform.

While fierce debates happened among colonial men regarding the way the colony should be administered in the second half of the 19th century, Europe was marked by scientific discoveries regarding the germ theory of disease drawing from Louis Pasteur's findings. French hygienists advocated the intertwining of microbial knowledge with disciplines that are involved with the built fabric, such as engineers and public authorities in Paris.⁴ Emile Chamberland, the close collaborator of Louis Pasteur, was actively advocating in the political sphere for public health measures and legislation that reflected the scientific advancements of the time. He proposed bills related to public hygiene, underlining the importance of scientific knowledge in shaping health policies.⁵

The idea later permeated the sphere of European architectural discourse at the turn of the century, linking the body and the building while building upon the Vitruvian canon that linked the body to its environment.⁶ Colomina notes that 'microbes were both the literal and metaphorical basis of a new architecture and urbanism'. In fact, architects engaged in hygienic discourse by beginning to incorporate principles from the laboratory into their design of dwellings. This shift promoted features that pushed for architect's idea of cleanliness to mitigate the spread of disease, such as surfaces that are easy to clean, the incorporation of ventilation systems, and spaces that allow for

2 Matthias Van Rossum, "The Carceral Colony: Colonial Exploitation, Coercion, and Control in the Dutch East Indies, 1810s–1940s," *International Review of Social History* 63, no. S26 (August 2018): 65–88, <https://doi.org/10.1017/S0020859018000226>. 68–69.

3 C. Fasseur, "Purse or Principle: Dutch Colonial Policy in the 1860s and the Decline of the Cultivation System," *Modern Asian Studies* 25, no. 1 (February 1991): 33–52, <https://doi.org/10.1017/S0026749X00015833>. 50.

4 Bruno Latour, *The Pasteurization of France* (Cambridge, Mass: Harvard University Press, 1988). 55–56.

5 Ibid. 57.

6 Beatriz Colomina, *X-Ray Architecture* (Zürich: Lars Müller publishers, 2019). 13.

natural light and air circulation towards the creation of a healthy living and working environment. In Germany, the hygienic discourse culminated with the Die Wohnung exhibition, organised by the Deutsche Werkbund at the Weissenhofsiedlung in Stuttgart in 1927.⁷ This event brought together modernist architects to promote their vision of architectural hygiene. The poster designed by Willi Baumeister critiqued what modernists deemed the 'obsolete' way of living, while Richard Döcker's house brought architectural features from the sanatorium, presenting their vision of new architecture as the key to replacing traditional lifestyles (Figure 1 & Figure 2). Both works advanced the modernist agenda of creating healthier living environments aligned with their ideals of progress and reform.

While architectural historiography has recognised the influence of hygiene discourse over the modernist sanatoriums and dwellings inspired by it in the 20th century, this thesis will focus on how hygiene became a tool of colonial control in the Netherlands East Indies, modern-day Indonesia through institutionalised interventions targeting the *kampung* or native villages. The stakes extended beyond collective well-being or spatial reform; the discourse of hygiene became a tool of colonial control, entangled in the biopolitical management of native populations. The intersection of public health, architecture, and governance was not merely a benevolent project to improve lives but subscribes to optimising productivity and sustaining hierarchies of power.

Central to these colonial interventions was the *kampung*. The *Encyclopedia of the Netherlands Indies* defined the *kampung* as a term used across much of the Indies by Europeans to refer to 'native villages, whether located within larger towns or as independent settlements.'⁸ The entry for *kampung* cross-references the term *desa*. In its general sense, *desa* refers to the native village community as a whole, encompassing not only the *kampung* but also its surrounding hamlets, neighbourhoods, arable fields, forests, and wastelands within its territory. However, in a narrower sense, the *desa* can also mean the *kampung* itself. Thus, while the *kampung* is a specific part of the *desa*, the broader definition of the *desa* includes multiple components of the native village ecosystem, such as its agricultural land, fishponds, and natural resources.⁹ Once the *desa* been defined, we can finally understand of the

7 Beatriz Colomina, *X-Ray Architecture* (Zürich: Lars Müller publishers, 2019). 100-101.

8 J Paulus, ed., *Encyclopedie van Nederlandsch-Indië: Tweede Druk Met Medewerking van Verschillende Geleerden, Ambtenaren En Officieren*, 2nd ed., vol. 1, 7 vols. (Leiden: Brill, 1917). 264.

9 Ibid. 589-583

definition of the *kampung/desa* as defined by the health department.

The “ *desa* ” is the centre of the life in Java in rural areas. It is, as it were, a great family with a highly developed communal sense and feeling of solidarity, which is most clearly exemplified by the mutual help extended, as prescribed by the “ *adat* ” (traditional usage), in building a house, in the watch service, in harvest festivals, etc.¹⁰

Within this framework, the *kampung* became a focal point for colonial hygiene interventions. The precepts of hygiene in this colonial context offered a duality: They promised Pastorian progress through science while masking deeper exploitative dynamics. The *kampung* shifted into the crosshairs of colonial administrators, becoming a space for interventions. These spaces were transformed into laboratories of biopolitical experimentation. Through regulations, public health campaigns, and architectural redesign, the *kampung* was recast as both a source of disease and an object of governance.

10 John Lee Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*, Series of League of Nations Publications, III. Health 1937. III. 15 (Geneva: League of Nations, 1937). 71.

0.

MAPPING BODIES

Bodies as Site for Epistemic Anxieties

Society is not made up just of men, for everywhere microbes intervene and act.¹¹

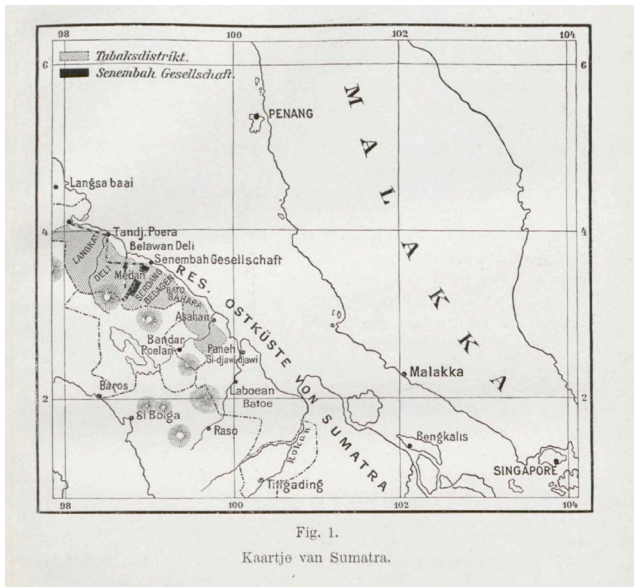
—Bruno Latour
The Pasteurisation of France (1993)

Latour notes that the lesson Pasteurians and hygienists convey is that achieving stable economic and social relations requires the elimination of microbes. To achieve this, their representatives must be omnipresent, ensuring that microbes no longer disrupt relationships.¹² This vision aligns with the colonial administration's approach in the Dutch East Indies, where germ theory reframed the *kampung* as a disease-ridden space requiring intervention. Initially focused on optimising labour at sites of plantations, where medical efforts targeted worker productivity, the colonial focus expanded to the *kampung*.

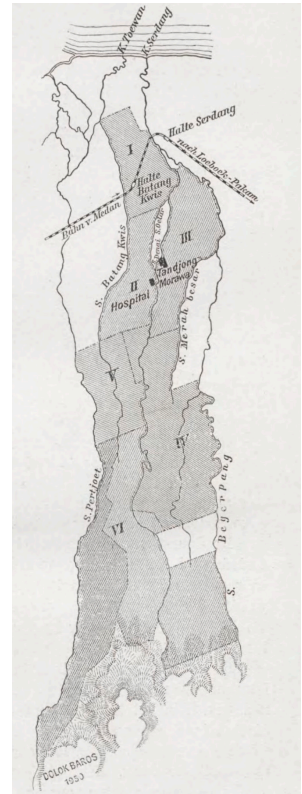
His reminder that society is shaped not only by humans but also by non-human actors like microbes is significant for understanding how colonial anxieties about pathogens informed governance in the Netherlands East Indies. Colonial debates revealed anxieties that drove the reframing of the *kampung*, transforming it into a site of intervention and control. Hygiene campaigns aligned with colonial objectives of managing native bodies and sustaining power structures. Ultimately, these efforts fundamentally altered the *kampung*'s social fabric and material conditions, embedding it within broader colonial strategies of domination and extraction. these discussions fundamentally transformed the social fabric and material conditions of the *kampung*

11 Latour, *The Pasteurization of France*. 35.

12 Ibid. 39.



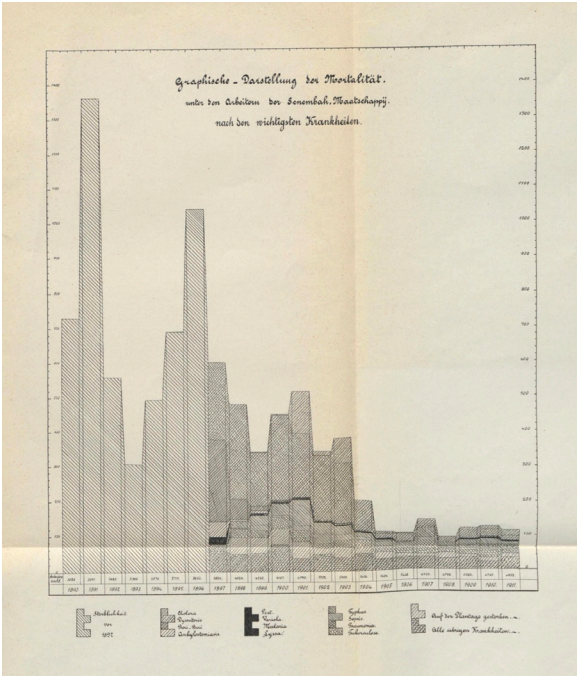
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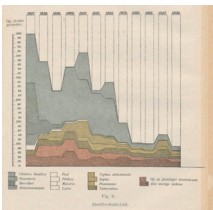
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Figure 3 • Map of North Sumatra showing the tobacco plantations and the location the 'Senembah-Maatschappij, 1910. (Source: *De Gezondheidstostand van de Arbeiders, Verbonden Aan de Senembah-Maatschappij Op Sumatra, Gedurende de Jaren 1897 Tot 1907*. 9.)

Figure 4 • Map of the area of the Senembah Company and its division per enterprises, 1910. (*Source: De Gezondheidstestand van de Arbeiders, Verbonden Aan de Senembah-Maatschappij Op Sumatra, Gedurende de Jaren 1897 Tot 1907.* 9.)



5



6

Figure 5 • Graphical representation of mortality among the workers of the Senembah Company from 1897 to 1907. (Source: *Tropenhygiene Und Ihre Probleme, Unter Besonderer Berücksichtigung Der Pathologie von Deli-Sumatra Und Der Gesundheitsverhältnisse Unter Den Arbeitern Des Senembah Maatschappij*, 1913)

Figure 6 • The same graphical representation of mortality among the workers of the Senembah Company 1897. 1910. (Source: *De Gezondheidstostand van de Arbeiders, Verbonden Aan de Senembah-Maatschappij Op Sumatra, Gedurende de Jaren 1897 Tot 1907*. 1897)

Overzicht over de maandelijksche sterfte onder de arbeiders der Senembah-Maatschappij in de jaren 1897 tot 1907.

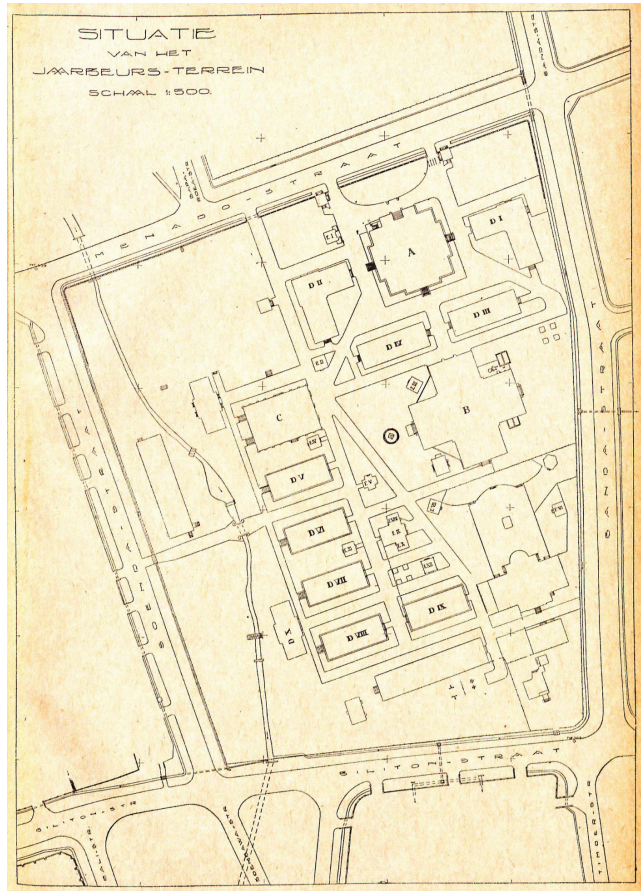
Jaar.	Jan.	Febr.	Maart.	April.	Mei.	Juni.	Juli.	Aug.	Sept.	Oct.	Nov.	Dec.	Totaal.
1897	Chinezen 35	32	20	9	17	10	15	12	9	8	10	11	135
	Javanen 3	1	2	2	1	5	5	1	1	1	4	3	35
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 39	34	23	12	22	11	22	17	11	11	14	15	182
1898	Chinezen 15	5	12	12	10	16	14	12	10	8	5	4	124
	Javanen 2	2	2	1	1	1	1	1	1	1	1	1	25
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 18	8	15	14	13	17	15	13	11	9	6	5	161
1899	Chinezen 5	7	6	14	7	10	9	7	4	4	4	5	82
	Javanen 9	4	2	2	2	2	2	2	1	1	1	1	32
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 11	12	8	18	17	10	12	11	8	6	6	7	126
1900	Chinezen 7	7	10	8	19	12	7	15	18	7	5	9	125
	Javanen 2	2	2	2	2	2	2	2	2	2	2	2	29
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 11	14	12	18	24	14	17	20	20	9	7	12	166
1901	Chinezen 12	15	10	15	13	21	11	7	4	7	5	10	128
	Javanen 13	13	13	13	13	13	13	13	13	13	13	13	156
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 26	29	23	28	26	34	24	20	20	19	19	24	396
1902	Chinezen 6	4	12	21	17	14	16	5	10	1	1	6	113
	Javanen 2	2	2	2	2	2	2	2	2	2	2	2	25
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 9	7	15	24	20	17	19	8	12	4	4	9	150
1903	Chinezen 14	14	14	17	14	15	9	11	10	4	1	1	114
	Javanen 1	1	1	1	1	1	1	1	1	1	1	1	12
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 16	16	19	18	16	16	11	12	12	6	3	3	138
1904	Chinezen 18	17	21	28	40	21	11	12	15	12	7	7	250
	Javanen 3	4	3	3	3	3	3	3	3	3	3	3	36
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 22	22	25	32	44	25	15	18	21	18	11	11	398
1905	Chinezen 2	3	12	12	12	4	5	3	2	2	2	4	55
	Javanen 1	1	1	1	1	1	1	1	1	1	1	1	12
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 4	5	15	15	6	6	3	3	3	3	3	6	85
1906	Chinezen 4	3	5	4	4	4	4	4	4	4	4	4	50
	Javanen 1	1	1	1	1	1	1	1	1	1	1	1	12
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 6	5	7	6	6	6	6	6	6	6	6	6	74
1907	Chinezen 3	7	9	9	9	9	9	9	9	9	9	9	108
	Javanen 1	1	1	1	1	1	1	1	1	1	1	1	12
	Europea. 1	1	1	1	1	1	1	1	1	1	1	1	12
	Totaal 5	9	11	11	11	11	11	11	11	11	11	11	132
Totaal 11 jaren	Chinezen 103	96	104	123	128	113	103	86	28	60	30	63	1130
	Javanen 11	11	11	11	11	11	11	11	11	11	11	11	132
	Europea. 11	11	11	11	11	11	11	11	11	11	11	11	132
	Totaal 125	118	126	145	150	135	125	108	50	82	52	85	1394
In de eerste 6 jaren	139	127	117	142	170	145	129	96	54	75	63	66	1071
In de laatste 5 jaren	11	12	50	39	36	35	23	15	13	15	21	20	207

7

Figure 7 • Overview of the monthly mortality among the workers divided in ethnic groups and gender of the Senembah Company in the years 1897 to 1907. (Source: *De Gezondheidstostand van de Arbeiders, Verbonden Aan de Senembah-Maatschappij Op Sumatra, Gedurende de Jaren 1897 Tot 1907*. 1910.)



8



9

Figure 8 • Hendrik Freerk Tillemma demonstrating how to pour Hygeia mineral water, 1924-1932 (*Tillemma Collection, NMVW RV-A440-z-6*)

Figure 9 • The plan for the First Exhibition on Hygiene, held in Bandung repurposing the spaced originally used for the annual fair. (Source: *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. 1927. 161)



10



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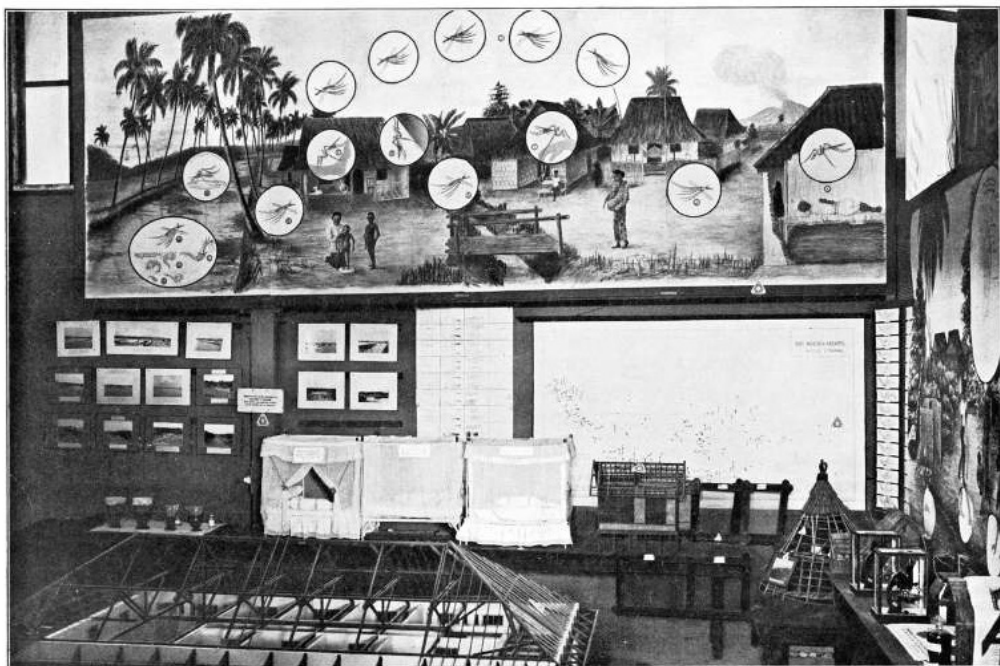
12



Figure 10 • 'If in Europe the soup is placed on the table for you, it is brought forward without the hands being contaminated.' (Source: *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. 1927. 38)

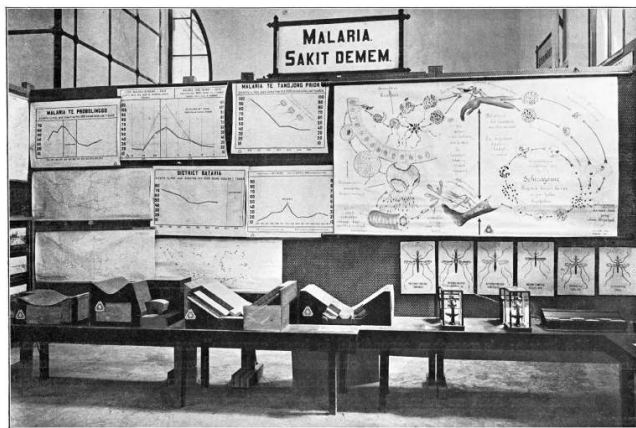
Figure 11 • 'But here in the Indies, one often sees that the soup is served while the servant immediately permits himself a thumb bath.' (Source: *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. 1927. 39)

Figure 12 • Food-and-beverage section with Leopold Kirschner's illustrations at the back and models of hygienic food production facilities. (Source: *Verslag Der Eerste Hygiëne Tentoonstelling in Nederlandsch-Indië*. 1927. 84).



13

Figure 13 • Display about malaria superposed to a kampung, assembled by the Public Health Service. (Source: *Verslag Der Eerste Hygiëne Tentoonstelling in Nederlandsch-Indië*. 1927. 20).



14



15

Figure 14 • Malaria display by the Public Health Service featuring mortality statistics and illustrations of the disease's causes, from pathogen growth to mosquito transmission. (Source: *Verslag Der Eerste Hygiëne Tentoonstelling in Nederlandsch-Indië*. 1927. 24)

Figure 15 • Display about hookworm disease, showing medical officers coming to a village to educate the natives. (Source: *Verslag Der Eerste Hygiëne Tentoonstelling in Nederlandsch-Indië*. 1927.30)

From Acclimatisation to Germ Theory: A Shift in Colonial Governance

Tropical climate-related diseases have consistently posed significant concerns for the colonial administration in the Dutch East Indies. Studies in the history of medicine that explore colonial topics reveal various efforts by the colonial authorities to comprehend the origins of illnesses, initially through the acclimatisation theory and later transitioning to germ theory.¹³ Initially, settlers concentrated their observations on how the tropical climate affected European settlers through the acclimatisation theory, founded along racial lines; it was believed that Europeans were biologically ill-suited to settle on tropical lands.¹⁴ The French and the British subscribed to that theory. However, in justifying their imperial expansion, the Dutch believed that white men had inherent biological flexibility to settle in a tropical environment if they exercised great caution in their lifestyle, morality, diet and environment.¹⁵

In the context of the Netherlands East Indies, the shift of medical rationality is aligned with the colonial objective of maximising labour extraction. This alignment is evident in records published by Dr. W. Schüffner, a physician employed by the Senembah-Maatschappij plantation located in North Sumatra. (Figure 3 & Figure 4) At its peak, the plantation relied on the labour of 7,000 imported Javanese and Chinese workers.¹⁶ Among these records is a chart titled ‘Graphical representation of mortality among the workers of the Deli Railway Company by the most important diseases’ showing his focus on studying tropical diseases and their impact on the worker’s productivity. (Figure 5 & Figure 6)

Before 1897, there was very little knowledge of the cause of death of the exploited workforce, but disease registration began thereafter (Figure 5). Although this evidence offers minimal attention to the kampung, it showcases that the development of medical knowledge operates in tandem with interest in crafting native bodies for labour-intensive practices. Workers were categorised along racial and gender lines—Javanese, Chinese and women—

13 The theory of acclimatisation became obsolete as Louis Pasteur influenced Western medicine with his germ theory, gradually replacing the racist notion of acclimatisation since the 1870s.

14 Hans Pols, “Notes from Batavia, the Europeans’ Graveyard: The Nineteenth-Century Debate on Acclimatization in the Dutch East Indies,” *Journal of the History of Medicine and Applied Sciences* 67, no. 1 (2012): 120–148. 121.

15 Ibid. 124.

16 Wilhelm Schüffner, *Tropenhygiene Und Ihre Probleme, Unter Besonderer Berücksichtigung Der Pathologie von Deli-Sumatra Und Der Gesundheitsverhältnisse Unter Den Arbeitern Des Senembah Maatschappij* (Amsterdam, 1913). 7.

highlighting the colonial focus on controlling bodies for economic gain. (Figure 7) While briefly mentioning the *kampung*, Schüffner dismissed it as 'unagreeable,' and instead focused on improving plantation hygiene to maintain a workforce healthy enough for labour. For example, Schüffner implemented measures to modify the dietary habits of workers.¹⁷

While initial colonial medical efforts focused on optimising native lives in extractive settings such as the plantation, the hygienic discourse only broadened with the advent of germ theory.

Expanding Medical Governance: Hendrik Freerk Tillema

Hendrik Freerk Tillema's article, published 13 years after Dr Schüffner's research, emphasises the need to address the health of the native population beyond the boundaries of the plantations, framing it as a pressing political matter. Tillema, a senior pharmacist and vocal social reformer, is known for his alarmist and provocative discourse aimed at mobilising reform. (Figure 8) In a 1926 article published in the colonial weekly *De Koloniaal Weekblad*, Tillema expressed his concerns in a notably urgent tone. The title alone, *On the Population Problem in Indonesia and the Expansion of the Public Health Service*, conveys his Malthusian anxiety.¹⁸ His argument stresses the imperative to address the health needs of the native population, linking it to global demands for resources produced in the tropics. He warns:

The earth[']s population will continue to increase for the time being by ± 15 to 20'000'000 people per year [and] this population has increasing needs, including food, soap, luxuries, etc. Some of the substances are only supplied by the tropics. [...] Coffee, tea, cocoa, and rubber grow there. [...] The population of the earth will increasingly demand the substances that the tropics supply to be able to exist, to feed itself, to clean itself, to move around: fat, rubber, coffee, tea for man, fodder for cattle.'¹⁹

17 Ibid. 13.

18 Thomas Robert Malthus (1766–1834) was a British economist and demographer who argued in *An Essay on the 'Principle of Population'* (1798) that population growth would outpace food production, leading to resource scarcity, famine, and societal collapse.

19 Hendrik Freerk Tillema, "Het Bevolkingsvraagstuk in Indonesie en de uitbreiding van den DVG," January 7, 1926. 2.

Tillema's framing reveals his view of health reform as essential not only for the welfare of the native population but also for sustaining the global economy, which relies heavily on tropical resources. His discourse underscores the interconnectedness of colonial governance, public health, and the global market, highlighting the urgency of reform in the colonial context.

The timing of his publication in 1926 reflects the prevailing zeitgeist of the period. Europe was experiencing significant economic, political, and cultural developments that drove rapid population growth and, correspondingly, an increasing demand for resources. Tillema's anxiety, however, is not rooted in the well-being of the European population, but he focuses on the declining health of the native population in Indonesia, which he views as a critical threat to this global system.

He argues that this issue cannot be resolved through private initiatives, such as those undertaken by plantation owners, but requires the intervention of an omnipotent state. Tillema calls for a significant expansion of the Health Service Department, framing it as an extension of colonial governance. This governance, he asserts, should prioritise not merely a large population but one that is 'strong of mind and body.'²⁰ His rhetoric reveals a vision of health reform not as an act of altruism but as a strategic necessity to sustain the colonial system and meet the escalating demands of a rapidly modernising world.

Framing the Bodies

The First Hygiene Exhibition in the Dutch East Indies, held in Bandung in 1927 (*Eerste Hygiëne Tentoonstelling in Nederlands Indië te Bandoeng*), exemplified the colonial administration's effort to consolidate health and governance, using scientific positivism to associate the native population and their built environment—the *kampung*—with disease. The exhibition served as a public health announcement and a powerful architectural and spatial narrative (Figure 9). It framed the *kampung*, a critical element of the indigenous urban fabric, as a problematic space requiring transformation to align with colonial ideals of hygiene and order. It presents the argument that diseases could be domesticated by implementing interventions aimed at reshaping the social and material fabric of the *kampung*.

20 Hendrik Freerk Tillema, "Het Bevolkingsvraagstuk in Indonesie en de uitbreiding van den DVG," January 7, 1926. 11.

Language played a key role in this narrative. By using both Dutch and Malay in the exhibition, the colonial administration sought to project its definition of the *kampung* not only to the governing elite but also to the native population. In doing so, it imposed a hegemonic view that defined the *kampung* as a space of disease, thereby justifying colonial intervention.²¹

An exhibition booth featured what appears to be sewer and drainage system models designed to prevent stagnant water, further emphasising the lack of public infrastructure in the *kampung* (Figure 14). Similarly, another visual addressed the spread of hookworm disease in similar environments with some models of latrines displayed in front of the posters (Figure 15). Combined with charts and models, these images deliberately juxtaposed the *kampung*'s physical environment with explanations of disease transmission, framing it as a breeding ground for diseases. Data appearing in charts put forward the scientific methodology, allowing administrators to support the narrative to frame the *kampung* as the centre of colonial problems. The displayed architectural models foreshadow further interventions that are to be conducted in the *kampung*.

Other visual elements from the exhibition, such as posters and diagrams, further framed the indigenous bodies in the *kampung*. For example, one poster depicted a *kampung* setting with bamboo houses alongside a diagram illustrating the ecology of malaria, portraying its inhabitants as vulnerable to disease due to unsanitary conditions (Figure 13). In front of this display, a table showcased beds equipped with mosquito netting, presenting a preventive solution. This layout pattern was recurrent throughout the exhibition: the posters highlighted the perceived problems associated with the *kampung*, while adjacent models offered solutions to these issues.

The exhibition used a wide range of visual and interactive media to convey its message, including posters, drawings, architectural models, life-sized mannequins, maps, and charts (Figure 12 to Figure 15). Architectural models, in particular, provided a tactile and spatial dimension that offered a sense of reality. By presenting an idealised version of *kampung* life or hygiene improvements, these representations conveyed a sense of authority and practicality, reinforcing colonial narratives about the necessity of colonial interventions. These artefacts are documented in a catalogue published that same year, which provides a detailed inventory of the exhibited items and a

21 Although the official language of the Dutch East Indies was Dutch, Malay was used as it was a language commonly used for trading activities across Southeast Asia over centuries, including the Indonesian archipelago. Thus this became *lingua franca* spoken between different native ethnic groups.

list of contributors, including prominent figures and companies ranging from Nestlé, the German pharmaceutical company Bayer and Quinine company involved in the colonial project of medical knowledge dissemination, framing the *kampung* as a source of pathogens. The honorary committee that helped to organise the event includes physicians, scientists, and academics like Schüffner and lobbies consisting of hygienist advocates such as Tillema and organisations representing plantation owners and agricultural associations.²² This highlights the economic interests of commercial actors in enhancing the health of the native workforce.

The location of Bandung was particularly significant, as the city's growth was rooted in its plantation economy during the 19th-century liberal period, capitalising on its highland climate, which was ideal for cultivating tea, coffee, and quinine.²³ As the city expanded, it absorbed many rural *kampung*, transforming them into urban *kampung*. Their poor sanitation and high population density posed significant public health risks.²⁴ As the city expanded, it also became a beacon of colonial symbol and political ideology, expressed through its form and structure, functions and activities, as noted by Johannes Widodo, an architecture and urban historian.²⁵ Known as the 'Parijs van Java,'²⁶ Bandung was celebrated for its European-inspired urban development and stood as the example of modern Dutch colonial town planning, urban design, and architecture in the tropics. Planned in the 1930s as a potential capital of the Dutch East Indies, it became a model for other colonial cities in Indonesia and an exemplar of the Garden City concept in the tropics.²⁷ One of the architecture representing its ideological importance is the 'Kologdam Building,' an exhibition hall whose construction started in 1919 by the architect Wolff Schoemaker and completed in 1920 to host the *Jaarbeurs de Bandoeng* or the annual trade fair where the first hygiene exhibition took place.

Schoemaker's building appears in the exhibition plan as the *Hoofdgebouw*

22 Vereniging tot Bevordering der Hygiëne in Nederlandsch-Indië., *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. (Bandoeng, 1927). 9-11.

23 Freek Colombijn and Joost Coté, "Cars, Conduits, and Kampongs: The Modernization of the Indonesian City, 1920-1960," in *Cars, Conduits, and Kampongs* (Brill, 2014), <https://brill.com/display/title/26707>. 195.

The liberal period refers to the late 19th century in the Dutch East Indies, when economic policies promoted private investment and plantation agriculture, resulting in significant economic growth and large-scale land alienation in rural areas.

24 Colombijn and Coté, "Cars, Conduits, and Kampongs." 196.

25 Johannes Widodo, "Conflicts, Contestations, and Dominations of the City - The Story of Colonization - Decolonization of Bandung (Indonesia)," 2021. 1.

26 Ibid. 7.

27 Ibid. 8.

(Main Building)—marked as ‘A’—and the *Groote Hal* (Great Hall), marked as ‘B’, served as central exhibition spaces at the First Hygiene Exhibition (Figure 9). The Main Building featured exhibits on urban planning, plantation housing hygiene—including research by Dr Schüffner discussed earlier—and sanitation, alongside regional contributions from cities such as Bandung, Batavia, and Surabaya. It also displayed advancements in food production, medical instruments, pharmaceutical products, and tropical disease prevention, emphasising public health and modern infrastructure. In contrast, the Great Hall focused on engineering, insulation materials, and industrial innovations while also highlighting healthcare initiatives like hospital exhibits, child nutrition, and plantation hygiene. Contributions from organisations such as the Salvation Army and the sugar industry were also showcased. Together, these spaces reflected the diverse interests of stakeholders operating at the intersection of health, industry, and colonial governance in the Netherlands East Indies.

One notable contribution to the catalogue came from Dr. L. Kirschner, a bacteriologist at the Pasteur Institute in Bandung, whose poem *Before and Now, Lament of a Bacillus* illustrates the underlying the exhibition’s praise of the disciplinary functions of scientific discourse. The poem anthropomorphises bacteria, portraying them as once-powerful agents of destruction now defeated by the institutionalised knowledge shaped by Pasteur and similar pioneers—such as Antonie Leeuwenhoek, who advanced the field of microscopy; Robert Koch, father of microbiology; Paul Ehrlich, the inventor of gram staining to see bacteria better under microscopes—finding its way into the East Indies. The poem below, found in the catalogue for the exhibition, offers the possibility of this discourse being used to discipline populations. The verse reflects the colonial belief in the supremacy of Western science and its ability to control nature:

Spreading disease and destruction
We considered the highest duty;
Our aim was always to destroy humanity.
In the water, in the food,
Carried by mosquitoes and flies,
We threaten with death and disease
Even the child in the cradle!
[...]
IT USED to be like this,.....

but soon disaster Came to visit!
 Like a lion stalking its prey,
 Deeply hidden in a corner,
 Sat the man no bacterium can think of,
 without a curse,
 Sat the man who would defeat us,
 Sat Antony van Leeuwenhoek!²⁸

The catalogue also includes a visual comparison that juxtaposes two drawings.²⁹ One shows a European man properly serving soup in a hygienic manner, while the other depicts a *djongos* (a native male servant) serving soup barefoot, with his thumb dipped into the bowl. (Figure 10 & Figure 11) Within the same frame of the image is a ‘microscopic plate’ illustrating bacteria found under the *djongos*’ fingernails. This is contrasted with a comparative image of a European waiter presenting a bowl of soup in a proper and ‘hygienic’ manner. Depictions like this cemented the colonial association of natives with unsanitary practices and disease in the hygienist narrative. They also highlight the *djongos*’ proximity to the Dutch elite and cultivated in them the anxieties on native bodies as carriers of diseases. As Robin Honggare, an architect and researcher, *notes*, the *djongos* became a central figure in colonial hygiene campaigns, as their cooperation was seen as essential for maintaining the health of their Dutch employers. One of the posters featuring this native figure can be found in the food and beverage section (Figure 12).³⁰

Ultimately, early interests in pathogens among native populations were geographically restricted to sites of commodity extraction, focusing on optimising the health of native bodies so they could provide the required labour output. In other words, more than exclusive sites of extraction, plantations were also conceived as construction sites whose hypothetical output was a new and hygienised body.

Moreover, these new medical advancements conferred to the hands

28 Vereeniging tot Bevordering der Hygiëne in Nederlandsch-Indië., *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. 40-41.

29 Ibid. 38-39.

30 Robin Hartanto Honggare, “Disease on Display: The First Hygiene Exhibition in the Netherlands Indies Revisited,” *Southeast of Now: Directions in Contemporary and Modern Art in Asia* 5, no. 1-2 (2021): 97-116, <https://doi.org/10.1353/sen.2021.0003>. 110.

of the colonial administration's confidence in domesticating disease and, by extension, the native population. This led to a new approach to governance that was based on medical scientific reasoning, starting from the understanding of the microorganism. Historian Hans Pols notes that medical theories have been closely connected to shifts in colonial governance.³¹ Therefore, the governance model linked to the germ theory provides a rationale to control life through the filter of scientific hygienic means aimed at enhancing productivity.

This rupture marked a turning point in colonial governance. The *kampung*, previously marginal to the administration, was reframed as a source of disease through medical discourse, thus transforming it into a problematised space fuelled by the anxiety of Dutch settlers. The understanding of disease at the microscopic level allowed the colonial administration to extend its governance to ever narrower aspects of the bodies and beyond extractive environments, linking disease control to broader societal management. This new style of governance provided the colonial state with the tools to sustain and justify its imperial activities.

31 Pols, "Notes from Batavia, the Europeans' Graveyard." 121.

Surveillance and Sanitation

Before moving forward, it is essential to ground this chapter with the theoretical framework of Ann Laura Stoler and Michel Foucault, examining how their insights intersect the colonial state's obsession with data collection and how data is instrumentalised to legitimise governance. Stoler's concept of epistemic anxieties provides a critical lens for understanding the colonial administration's relentless effort to gather, categorise, and validate colonial knowledge. She argues that these anxieties are not merely shortcomings of the colonial system but vital to its functioning; the response to this unease is the need to gather, organise, and interpret knowledge, generating a cycle of uncertainty and validation, which is key to sustaining the legitimacy of the colonial order.³²

Foucault's examination of statistics complements Stoler's reading by demonstrating how modern governance depends on technical knowledge to exert power over populations. He highlights that the word 'statistics' originates from the governance of the state, encompassing data on population size, mortality, birth rates, and categorisations of wealth and resources. For Foucault, this transition signifies a shift in governance: from enforcing laws to managing life itself through systematic knowledge production. In this context,

32 Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, NJ: Princeton University Press, 2009). 42-43.

data becomes not only a reflection of reality but a foundation for reasoning, decision-making, and control.³³

Bringing Stoler and Foucault into dialogue allows us to see how epistemic anxieties and the collection of data as basis of colonial epistemology reinforce each other. Stoler's argument that epistemic anxieties drive the need for documentation aligns with Foucault's claim that governance relies on statistics to define and control populations. In this light, colonial governance appears as a project ridden with contradictions: its legitimacy depends on the production of comprehensive knowledge, yet this very process reveals its inherent fragility, as incomplete or inaccurate data undermines its authority.

In the present context, this anxiety is manifested in an article written by Tillema, previously discussed, who points out the incomplete and often inaccurate depiction of the reality on the field in the statistics of his own administration. His account depicts the fierce debate on finding the most 'truthful information' by naming a few officials:

Many people in the country and colonies use statistics to evaluate political systems or solve economic issues, blindly believing these figures as truths, echoing Thiers's sentiment: 'Statistics clarify what we don't know.' Van Kesteren warns that the population data in the Indies is misleading, particularly noting that E. de Waal highlighted a 26% correction needed for Java's 1860 population estimate. Despite a lack of precise growth data.³⁴

His frustration with the inaccuracies and corrections in demographic data illustrates the colonial administration's struggle to achieve a coherent epistemological framework. This friction, as Stoler suggests, catalyses the production of ever more extensive documentation.³⁵ Simultaneously, Foucault reveals that such data is deeply embedded in the state's agenda, serving as a tool for population management and resource allocation.³⁶ Thus, the previously discussed colonial exhibition on hygiene unfolds as a pathetic fanfare, boldly

33 Michel Foucault, "Security, Territory, Population: Lectures at the College de France, 1977-78," *Choice Reviews Online* 45, no. 04 (December 1, 2007): 45-1971-45-1971. 354.

34 Tillema, "Het Bevolkingsvraagstuk in Indonesie en de uitbreiding van den DVG." 10.

35 Stoler, *Along the Archival Grain*. 12.

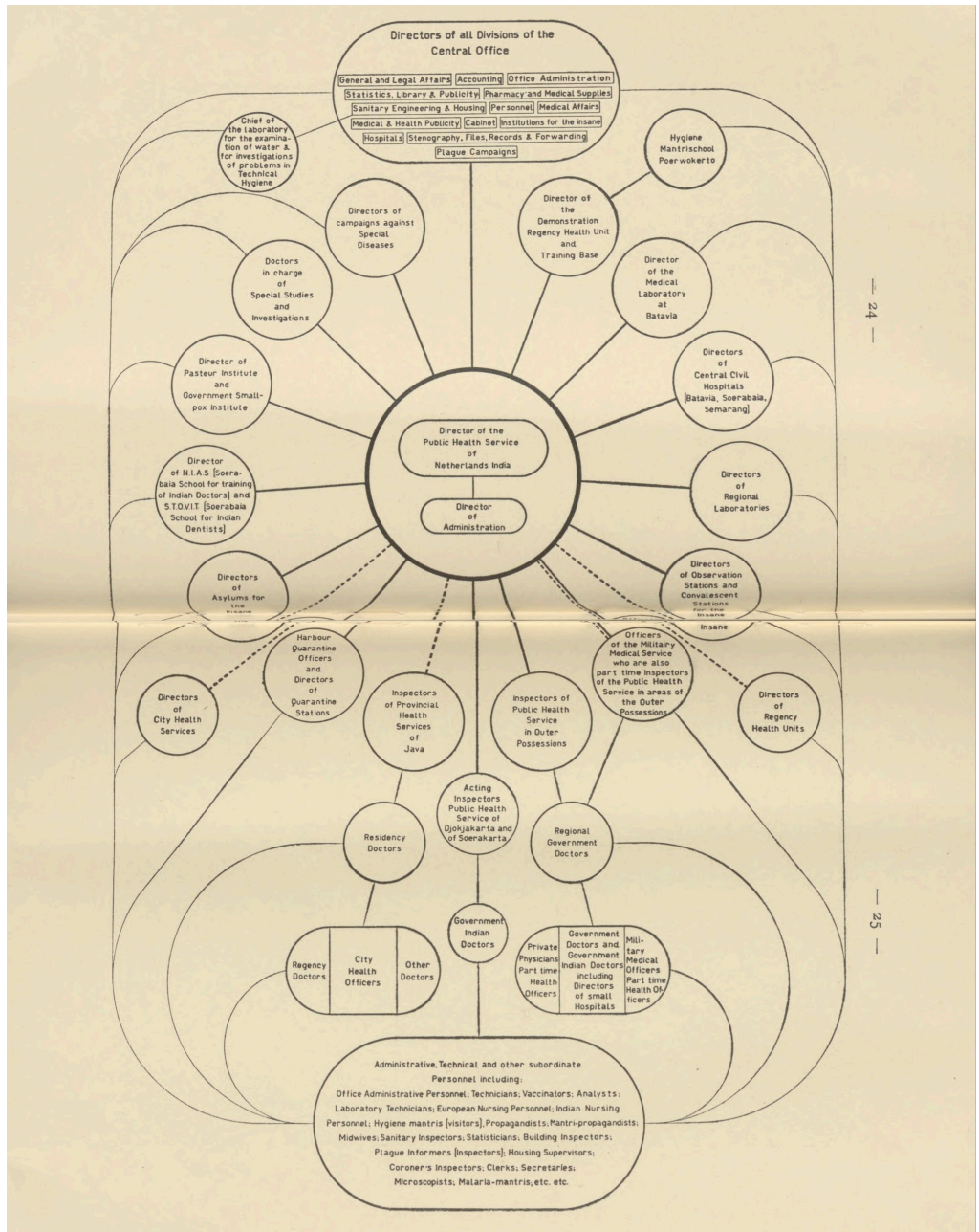
36 Foucault, "Security, Territory, Population." 354.



16

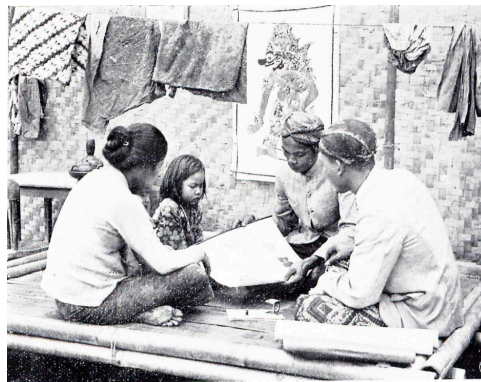
Figure 16 • A physician seat amidst an exhibition display showcasing architectural models, charts, maps and diagrams, part of the First Hygiene Exhibition in Bandung, highlighting public health and urban reform initiatives, 1927. (Source: KITLV 65901)

Figure 17 • The organisational chart of the Public Health Service of the Netherlands East Indies, detailing the hierarchical structure and divisions overseeing sanitation, disease control, healthcare institutions, and administrative functions within the colonial health system. (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*. 1944. 24-25.)





18



19

Figure 18 • The *mantri*, enters local homes to assess construction and living conditions, while promoting hygiene propaganda. (Source: *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 15.)

Figure 19 • The *mantri* gives each house a specific number and records it on a map that he has sketched. (Source: *Intensive Rural Hygiene Work*. 1944. 46.)

Figure 20 • Health Service Department general survey form used by a *mantri* detailing household and environmental conditions, including sanitation, water quality, drainage, and potential health risks, used for assessing public health infrastructure and risks in local communities. (Source: *Intensive Rural Hygiene Work*. 1944. 50.)

Public Health Service
Regency Health Unit of:

M.H.P. No 51

General Survey				
District	Subdistrict	Village	Date	19
House No	Tenant	Occupation	Owner	
I House	II Yard	III Stalls for Domestic Animals	IV Latrine	V Water
House used as: _____ dwelling _____ shop	Yard used as: _____ garden Depth of subsoilwater ± Meter General Situation _____ sloping _____ level _____ high _____ low Soil: _____ sand _____ clay _____ marl _____ lime _____ loam General Condition _____ good _____ fair _____ bad Position: _____ stands alone _____ one of a row _____ part of a barrack _____ storied Walls: _____ bamboo _____ brick _____ riverstones _____ clay _____ boards _____ palm-leaves Frame: _____ bamboo _____ wood Roof covering: _____ tiles _____ palm-leaves _____ palm-fibre _____ tin _____ corrugated iron _____ boards _____ bamboo Floor: _____ tiles _____ stones _____ earth Lighting: _____ good _____ medium _____ insufficient _____ dark Ventilation _____ good _____ fair _____ bad	Horse stall: _____ good _____ fair _____ bad Made of: _____ bamboo _____ wood _____ stones Floor made of: _____ stones _____ boards _____ earth _____ cement Cattle shed _____ good _____ fair _____ bad Made of: _____ bamboo _____ wood _____ stones Floor made of: _____ cement _____ boards _____ earth _____ stones Pigsty: _____ good _____ fair _____ bad Made of: _____ bamboo _____ wood Floor made of: _____ cement _____ boards _____ earth _____ stones Poultry coop: _____ good _____ fair _____ bad Disposal of manure Stalls Sheds & Coops	No latrine Pollution of _____ the yard _____ the river _____ pollution of drains _____ other Latrine completed Date latrine completed Distance of the latrine from the House _____ meters Well _____ meters Latrine used for: _____ one house _____ more than one house If latrine used for more than one house, house Nos. Kind of latrine Pit _____ Bored _____ W.C. _____ Bucket _____ Surface latrine _____ Other type Latrine-pit Depth _____ meter Latrine Pit: _____ large _____ small _____ round _____ square Lining of the pit: _____ no lining _____ bamboo _____ brick _____ river stones Floor of the Latrine: _____ cement _____ brick _____ riverstones _____ boards _____ bamboo Superstructure: _____ bamboo _____ brick _____ boards Condition of latrine: _____ good _____ fair _____ bad Flies: _____ not flyproof _____ flyproof Use of latrine: _____ good _____ fair _____ not used Contents: _____ small amount _____ half full _____ full	Drinking Water _____ piped water _____ spring _____ well _____ river _____ pond _____ rainwater Piped Water _____ public _____ private _____ capped spring _____ open spring _____ treated river water Well: _____ Public If well is for more than one house house Nos. _____ Well: _____ private Distance of well from latrine _____ meter Depth of well _____ meter _____ dug well _____ drilled well _____ closed well _____ open well _____ walled above with Well lined with _____ bamboo _____ stones _____ no lining
	Plants: _____ cassava _____ maize _____ banana Drainage _____ subsoil _____ surface-closed _____ surface-open _____ stone-lining _____ cement-lining Condition of Drainage _____ good _____ fair _____ bad Refuse: _____ pit _____ burned _____ thrown in river Garbage: _____ garbage can _____ no disposal Mosquitos breeding in: _____ open drains _____ fish pond _____ pools _____ river _____ coconut-shells Fly-breeding in: _____ faeces _____ manure _____ refuse			

Data concerning Family																				
NR	Name	Age	Age	Female	Population Group	Religion	Occupation	Education	Time resident in this		Date of Immunization against					Malaria		Worm-Treatment	Hemo-globin	Notes
									House	Village	Year	Place	Year	Place	Year	Place	Year			

Data concerning deceased members of the family								Abortions of living members of Family		Health-Score	
NR	Name	Relationship	Cause of Death	Male	Female	Age at death				Max-imum	This house
							NR of births _____ NR of abortions _____ NR of premature births of living infants _____ at months _____ NR of premature still born infants _____ at months _____ NR of family now pregnant _____	Latrine _____ Drinking Water _____ House _____ General cleanliness of house and yard _____ No flies _____ No mosquitoes _____ Total _____	100		

46



Figure 5. — Hygiene centre at Menganti.

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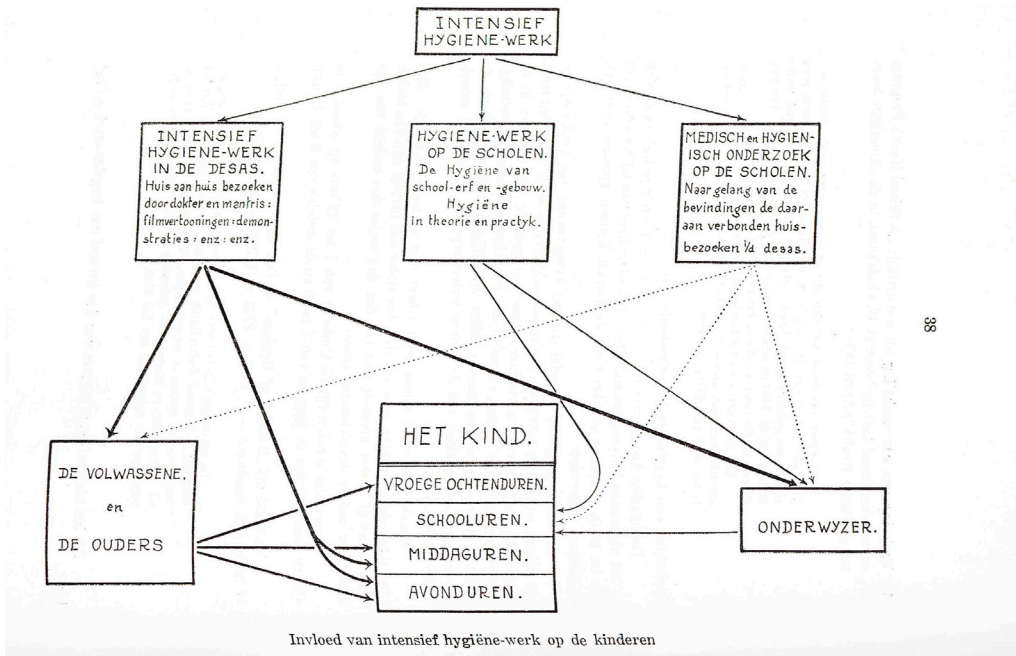


Figure 6. — The weighing of infants at a hygiene centre.

23

Figure 22 • 'Hygiene centre at Menganti', Central Java. (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*. 1937. 206.)

Figure 23 • 'The weighing of infants at a hygiene centre.' The babies are first registered by the *mantri* than weighed by the midwife. (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*. 1937. 206.)



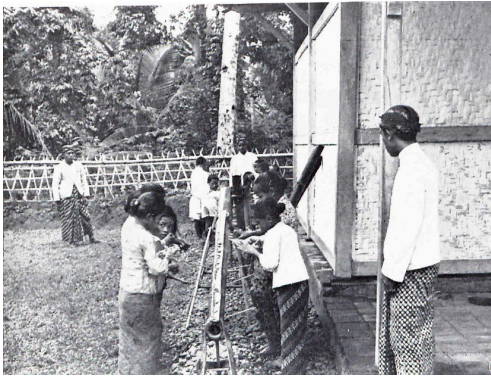
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Figure 24 • Diagram of intensive hygiene work showing interventions targeting parents, teachers, and children across daily routines to promote hygiene discipline.
(Source: *Intensief Hygiëne Werk En Medisch-Hygiënische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 38.)



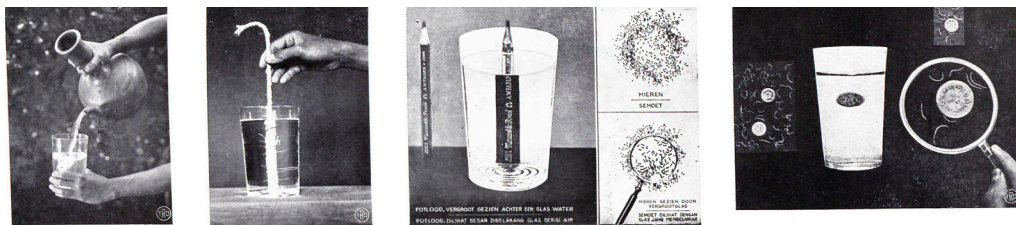
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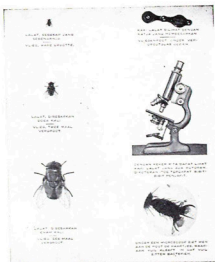
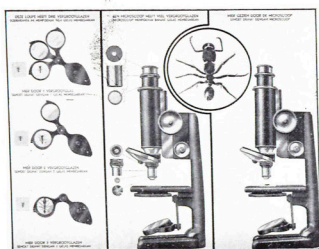
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Figure 25 • ‘Teachers must learn the technique of hand washing to then teach to school children’ (Source: *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*, 1936. 35.)

Figure 26 • ‘A large bamboo with a few holes along the sides is filled with water. Some children can wash their hands at the same time.’ (Source: *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*, 1936. 35.)



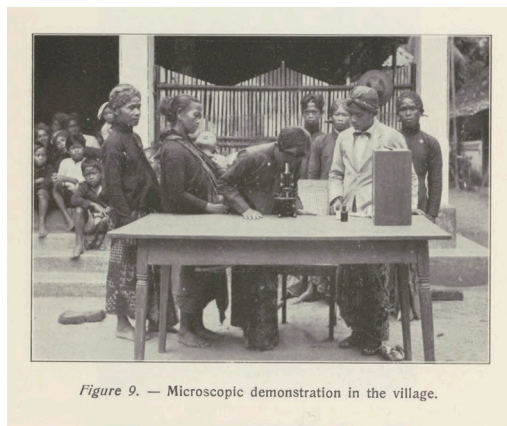
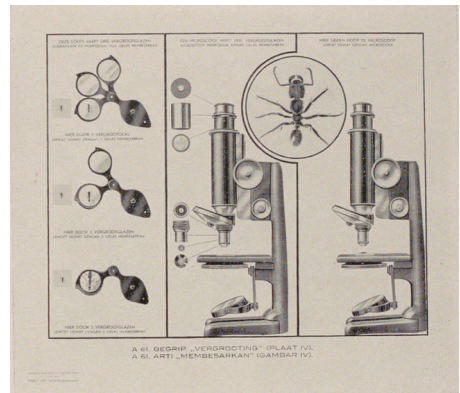
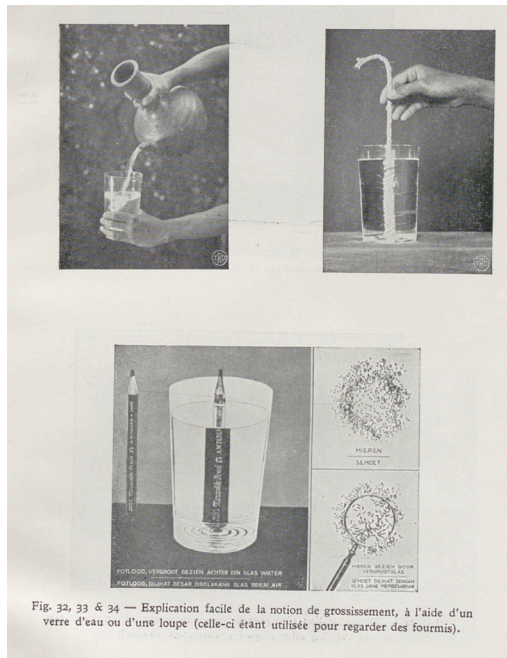
Aan de hand van demonstratie-platen en vergrootglazen met korrels rijst of andere kleine voorwerpen wordt het begrip „vergroting” en „vergroting door middel van een microscoop” uitgelegd



27

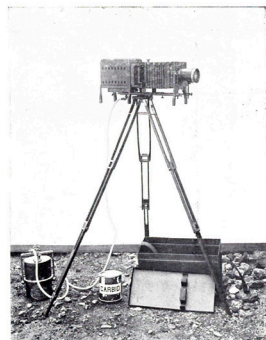
Figure 27 • Examples of plates used in hygiene propaganda, illustrating the principle of how a microscope functions. (Source: *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 7.)

On the right are the same figures but found in another publication. (Source: *Intensive rural hygiene work and public health education of the Public Health Service of Netherlands India*. 1937)

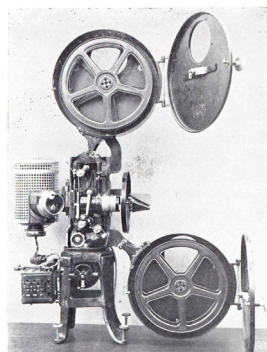




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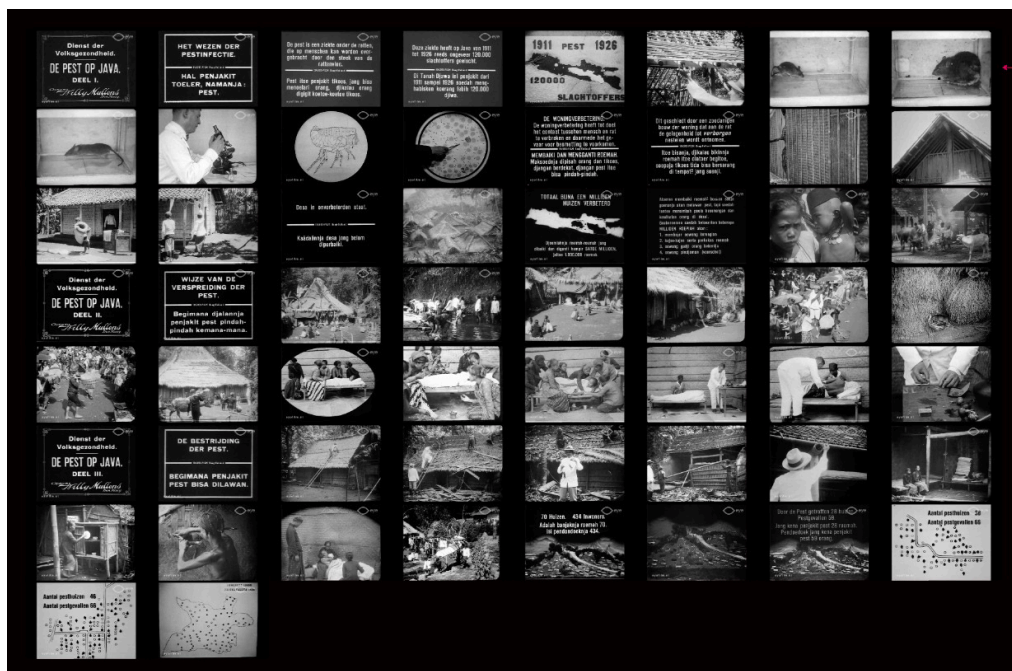


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Figure 28 • 'Film projection device for use in the villages.' (Source: *Intensief Hygiene Werk En Medisch-Hygiënische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 7.)

Figure 29 • 'Acetylene gas apparatus for projecting lantern slides in the villages.' (Source: *Intensief Hygiene Werk En Medisch-Hygiënische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 7.)

Figure 30 • 'Evening lecture with light images in the kampung by Medical Hygienic Propaganda, Department of Public Health Service' 1929. (Source: *Collectie Tropenmuseum*. TM-ALB-0116-10.)



31

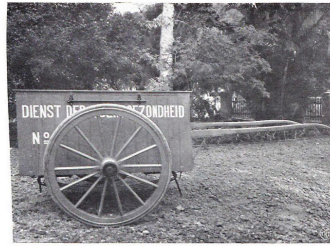


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Figure 31 • *De Pest op Java Deel I – III*. Netherlands, Haghe Film. Directed by Willy Mullens. 1927. (Source: *Eye Filmmuseum*. FLM52319)

Figure 32 • A still of *De Pest op Java Deel III* Showing a dramatisation of a splenic puncture on a diseased body performed by a European medical official instead of a *mantri*. Netherlands, Haghe Film. Directed by Willy Mullens. 1927. (Source: *Eye Filmmuseum*. FLM52319)



Uit de ervaring is gebleken dat voor het vervoer van films, projectietoestellen, enz. naar en in desa's een kleine vierwielige handkar beter voldoet dan een auto of een tweewielige handkar



33

Figure 33 • 'Experience has shown that for transporting films, projection equipment, etc., to and within villages a small four-wheeled handcart is more suitable than a car or a two-wheeled handcart' (Source: *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 1936. 9.)

Figure 34 • 'Pest control in Malang. Vaccinated women, approximately' ca. 1915. Indonesia, East Java, Malang. (Source: *Collectie Wereldmuseum*. RV-A92-36.)



34



35

Figure 35 • 'Pest control in Malang. Vaccination in the dessa.', approximately ca. 1915. Indonesia, East Java, Malang. (Source: Collectie Wereldmuseum. RV-A92-26.)



36

Figure 36 • A demonstration slide that is shown to locals featuring a mosquito netting. (Source: *Intensief hygiëne werk en medisch-hygiënische propaganda van den Dienst der Volksgezondheid in Nederlandsch-Indië*, 1936. 4-5.)



37



38

Figure 37 • 'School bus with children receiving information from the Public Health Service in the film workshop.'1925-1940. (Source: *Collectie Wereldmuseum*. TM-1001411)

Figure 38 • 'A military cordon closes off the plague area in Java in connection with pest control.' (Source: *Collectie Wereldmuseum*. TM-10006678)

exposing the raw insecurities of the imperial order (Figure 16).

The eyes of authority

One of the ways for colonial administrators to appease the anxiety was the creation of the Health Service Department, which served as an extension of the colonial authority cemented in 1925 and operated as a bureaucratic machine of document production. The transformation from the previous organisation—Burgerlijke Geneeskundige Dienst—draws a lot from the contributions of Dr. J.L. Hydrick. In fact, his arrival marked a transformative moment in the administrative initiatives that addressed escalating public health concerns.³⁷ During his over 15 years of stay in the former Dutch colony, he advocated for public health education and improved hygiene practices. In his first year in Java, Hydrick surveyed the situation and drafted a proposal to address the ‘population problem.’³⁸ Despite being initially met with anti-American sentiments by Dutch officials, a year later, in 1925, his proposal became entirely funded by the government.³⁹ It began with the prevention of hookworm (1925-1930) and quickly branched into a division for educating the public about health from 1931 onwards.⁴⁰

One of Hydrick’s key contributions to hygienic campaigns against endemic diseases was the establishment of the hygiene *mantri* and the *mantri* propagandist (Figure 18 & 19). These native personnel—male or female—occupying the lowest hierarchy of the department, inarguably played the most important role in the department, as they embodied a dual function: serving as the eyes and the hands of the department and, by extension, of the colonial state. This was especially important, where 95.5% of Java’s population lived out of reach of the city’s municipalities—4.5% of Java’s population lived in cities with more than 50,000 inhabitants.⁴¹

To achieve the success of preventive activities, Hydrick stresses that the *mantris* were instructed to gain access to native dwellings, making them the access point, or sensor, to an otherwise obscure and unpredictable

37 Han Mesters, “J.L. Hydrick in the Netherlands Indies: An American View of Dutch Public Health Policy,” in *Health Care in Java*, ed. Peter Boomgaard (BRILL, 1996), 51–62, https://doi.org/10.1163/9789004643123_005. 54.

38 See Tillema, “Het Bevolkingsvraagstuk in Indonesie en de uitbreiding van den DVG.”

39 Han Mesters, “J.L. Hydrick in the Netherlands Indies: An American View of Dutch Public Health Policy,” . 55.

40 Ibid, 51.

41 John Lee Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*, Series of League of Nations Publications, III. Health 1937. III. 15 (Geneva: League of Nations, 1937). 13.

domain (Figure 18).⁴² Acting as such, the *mantri* gives each house a unique serial number and marks it on a sketched map of the kampung (Figure 19). During the house visit, he uses a standardised form to document the condition of the house and its surrounding context (Figure 20). It records details about the district, village, date, house number, and occupants.⁴³ Instead of drawing the plan of the house, which takes time to do, the house is drawn through standardised descriptors; key sections focus on the house structure (materials, lighting, ventilation), yard usage (gardening, drainage), domestic animal facilities, sanitation (latrines, waste disposal), and water sources (type, condition, and sanitation). As *mantris* are required to live in the village in which they carry out the extensive fieldwork, they are required to meet once a week at the local office to submit their reports and to receive new assignments from the *mantri* supervisor, who is a European doctor. During this, the *mantri* also shares the difficulties he has encountered in his work.

A separate section captures family biological data, including names, relationships, occupations, education, religion, and health details like immunisations, malaria, and worm treatments. It also records deceased family members' information (cause of death, age, gender) and reproductive data, such as births and pregnancies. A health score evaluates sanitation, water quality, cleanliness, and mosquito control, with a maximum score of 100 (Figure 21).⁴⁴ The physical features of the dwelling are thus simplified to a series of standardised descriptors so it can be further systematised in the department's records. The house's role shifts from a domestic space to a regulated object integrated into the colonial governance system. Through the *mantri's* interventions—assigning serial numbers, mapping locations, and documenting structural and social details—the house becomes a source of data, reduced to quantifiable metrics like sanitation, water quality, and health conditions. This process transforms the house into a tool for compliance and, consequently, control, with its health score embedding it into a bureaucratic system that enforces colonial norms and public health standards. No longer just a home, the house supports the state's broader goals of monitoring and controlling the kampung population.

The hygiene centre in the kampung, other than solely being a treatment centre for the sick, serves as another data collection point for the department.

42 John Lee Hydrick, *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*, 1936. 15.

43 John Lee Hydrick, *Intensive Rural Hygiene Work In the Netherlands East Indies*, Booklets of the Netherlands Information Bureau, No.7 (New York: The Netherlands Information Bureau, 1944). 50.

44 Ibid. 41.

A simple, clean house is rented to house a facility where mothers bring healthy babies for regular weighing, measuring, and examinations by health officials (Figure 22 and Figure 23).⁴⁵

The system that was developed by the administration demonstrates the limit of surveillance, as suggested by Foucault. His panopticon requires a fixed architectural observational device, allowing for centralised observation. In contrast, the colonial health system in Java disperses control through decentralised agents—such as the *mantris*, transforming homes into nodes of governance. These data points make them legible and governable at a distance. This mechanism bypasses the need for constant physical observation, instead relying on standardisation, categorisation, and systematisation as tools of governance. Moreover, the reduction of the physical features of a house into data demonstrates that colonial control operated not through the visibility of the administrator but rather through a systematic production of knowledge.

The hands of the authority

The *mantri*'s most critical role in supporting the state hygienist agenda was not just collecting biological data but also teaching the population to adopt 'healthy habits of life.'⁴⁶ Their participation in the hygienic project of social engineering entailed persuading people to alter the way that their bodies interact with the built environment of the kampung. During his or her initial house visits, the *mantri* engaged with families in their domestic spaces to generate interest in hygiene, using tools supporting hygiene propaganda like models, photographs, and other visual aids and sometimes demonstrations (Figure 27).

These materials played a significant role in the campaign. Specialised devices, such as film and slide projectors, were designed and transported via carts and cars to facilitate the dissemination of hygiene propaganda (Figure 29 & Figure 30). Public lectures and film screenings were organised for the entire kampung (Figure 28), with the films often portraying the inhabitants' own living environments. Drawing on Ann Stoler's theory of colonial knowledge production, one of the *mantri*'s key roles was to gather detailed data on the kampung and then present it back to its residents.

This is further illustrated by the film directed by Willy Mullens (Figure 31), a pioneer of Dutch cinema who garnered affection from the throne. The

45 Hydrick, *Intensief Hygiene Werk En Medisch-Hygienische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 30.

46 Ibid. 21.

Dutch government commissioned him to create the film, which required nine months spent in the colony for production. This three-part educational film focuses on the plague in the Dutch East Indies (1911–1926) and integrates dramatised scenes of the *kampung*, animations, and data to explain transmission, prevention, and treatment.

Additionally, stereoscopic image projections consist of two side-by-side images taken from slightly different angles to simulate binocular vision (Figure 34 & Figure 35). When viewed through a stereoscope or similar device, they create the illusion of a three-dimensional image. Children are sometimes transported from the *kampung* to screening studios or hygiene museums, where the institutionalised knowledge of hygiene is transferred to the younger generation (Figure 37). The approach of collecting visual materials of the *kampung* that is presented back to them explains the sudden abundance of visual records of the *kampung*'s fabric during preventive campaigns. Hydrick emphasised that the local population was deeply connected to their environment, and demonstrations were most effective when they reflected familiar scenes.⁴⁷ As a result, photographs and other visual materials were often tailored to specific locations to ensure their relevance and impact.

The behaviour of the *mantri* is also standardised: it is recommended that he crouches to be at eye level of the family as it encourages them to engage more freely in conversation. Yet he is expected to fully adapt to the habits and customs of the villages they worked in. He should communicate in straightforward language, use basic expressions, and steer clear of complex or technical terms; he must also keep his visit brief.⁴⁸ In addition, new hygiene devices were introduced at home, such as mosquito nettings at the expense of the inhabitants (Figure 36).

The propaganda was also done beyond domesticity.⁴⁹ Children were a big target for hygienic propaganda as they represented a critical site for shaping future generations and instilling colonial ideals of hygiene, discipline, and modernity. By influencing their daily routines—morning habits, school activities, and home life—colonial authorities sought to normalise health practices and social order early on, ensuring these behaviours became ingrained and extended to their families and communities (Figure 24). For instance, at school, they had dedicated school hours where hygiene was taught. First,

47 John Lee Hydrick, *MEDISCHE PROPAGANDA DOOR DEN DIENST DER VOLKSGEZONDHEID IN NEDERLANDSCH-INDIE* (Wetevreden: Dienst der Volksgezondheid, 1927). 18.

48 Hydrick, *Intensief Hygiene Werk En Medisch-Hygenische Propaganda van Den Dienst Der Volksgezondheid In Nederlandsch Indie*. 16.

49 Ibid. 34.

it is taught by the *mantri* and doctors to the teachers, who in turn teach it to its pupils. (Figure 25 & Figure 26) This approach also leveraged children as intermediaries to disseminate hygiene practices within their households, reinforcing the colonial agenda of biopolitical control over native populations.

Beyond serving as a tool of propaganda, the *mantri* is the extension of the eyes of the department in a case of an epidemic; if he observes an epidemic, he has to report to the regional branch of the department where the authority can fully extend the orders to isolate a whole sub-district (Figure 38). In the case of an epidemic or a suspected death due to a suspected contagion, the diseased body cannot be buried without first undergoing a splenic puncture by a health official or receiving burial approval from the 'Information Service.' (Figure 31)

The Health Service Department in the Netherlands East Indies reflected data collection over the *kampung* in a Foucauldian sense through institutionalised medical governance. By instrumentalising hygiene *mantris* to gather data, deliver education, and enforce health norms, the department turned the *kampung* into a space of surveillance and intervention, where every aspect of life—housing, family structure, sanitation, and even death—was documented and regulated.

The *mantri*, as both a data collector and a social engineer, personified hygiene's dual function: to surveil and to domesticate the locals and microbes by teaching them how to live in the *kampung* to curb the proliferation of diseases. Through standardised forms, visual aids, and public campaigns, the *kampung* was reframed as a site of disease requiring external intervention. These measures reflected not just colonial efforts to improve health but also their deep anxieties about controlling the native population and legitimising their governance.

Ultimately, this chapter underscores that public health initiatives in the *kampung* were not only made care, not the opposite, but precisely coincided with ideas of power and control. By reducing native lives to records, scores, and hygiene metrics, the colonial state sought to domesticate both disease and the population, reinforcing the hierarchical structures of the empire. Stoler's concept of epistemic anxieties highlights how the colonial state's unease with the unknown drove its relentless efforts to gather data from the bottom, and Foucault explains the utility of the collected data.

The colonial obsession with representation—whether through films, photos, or statistics—is inseparable from its mechanisms of control. These representations did not merely reflect reality but actively shaped it, turning the kampung into a site of governance and intervention. The act of documenting, categorising, and standardising the kampung's built environment and its inhabitants demonstrates how knowledge production was wielded as a tool of domination. This relationship between representation and control reveals the dual purpose of colonial health initiatives: to project order while consolidating authority over native populations.

2.

THE KAMPUNG AS A LABORATORY

The Kampung Question

It is not that the solution of the housing question simultaneously solves the social question, but that only by the solution of the social question, that is, by the abolition of the capitalist mode of production, is the solution of the housing question made possible.⁵⁰

—Friedrich Engels
The Housing Question (1872)

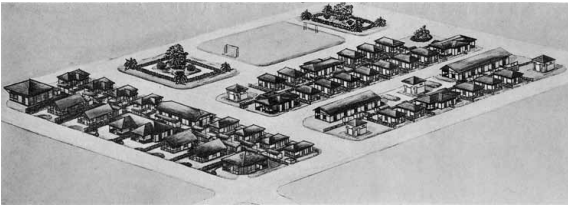
As discussed in the previous chapter, uncertainty was both a source of fear and a driving force behind colonial operations. Uncertainty regarding what to do with the kampung was subject to fierce debate among colonial administrators. This uncertainty is referred to as the *kampongvraagstuk* or the ‘kampung question’. This question prompted two parallel reactions: one concerning neglected kampungs aggregating informally around major cities, which represent concentrations of human and financial capital, and the other, lesser-known and the focus of this chapter, relating to rural kampung.

This line of questioning resonates with Friedrich Engels’ formulation of the *Wohnungsfrage* or the ‘Housing Question’ published in 1872, as both involve debates over how to manage or ‘solve’ housing conditions for a specific class or group within a socio-economic system. Engels argues that the lack of adequate questions for the working class is not an isolated issue but a symptom of the broader inequalities and exploitation inherent in the capitalist system. Addressing housing alone through reforms—such as building more houses or

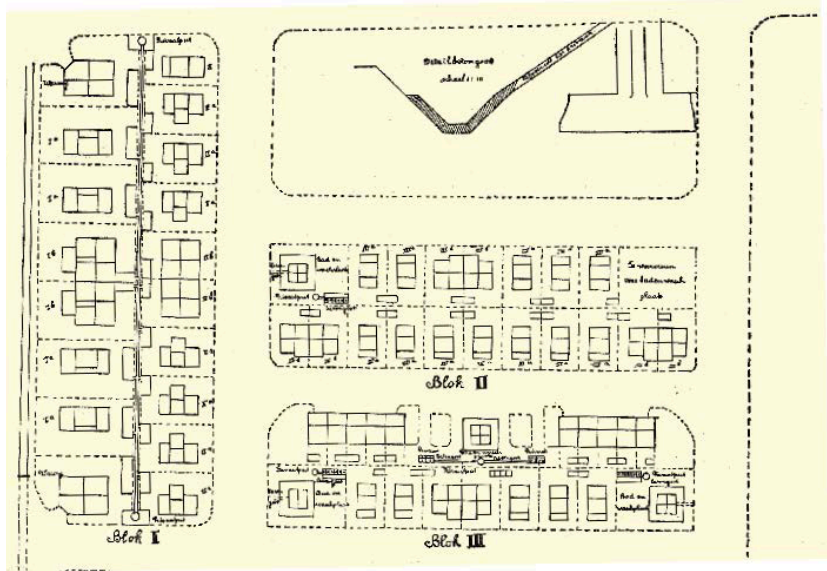
50 Friedrich Engels, *The Housing Question*, 2nd ed. (London: Union Books, 2012). 52.

improving slums—does not tackle the root cause of the problem: the capitalist mode of production, which generates wealth for the bourgeoisie by exploiting workers

Drawing from Engels, the *kampongvraagstuk* reflects a broader capitalist imperative to manage and control labour while ensuring productivity. Thus, the seemingly philanthropic act of improving the living conditions in the kampung only serves as a masquerade for ruling institutions to avoid systemic changes that could threaten their power. Presenting acts of charity as moral victories sidesteps questions of justice. It functions as a pacifier to sustain the illusion of progress while ensuring that the underlying structures of exploitation remain intact. This dynamic was illustrated in the ‘kampung improvement programmes.’



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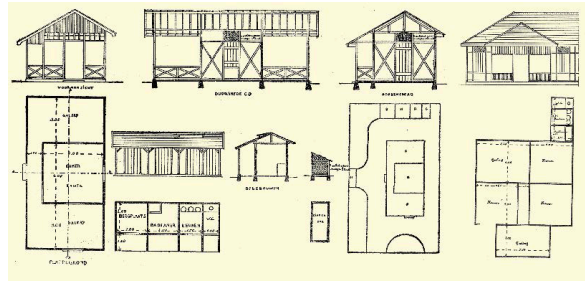


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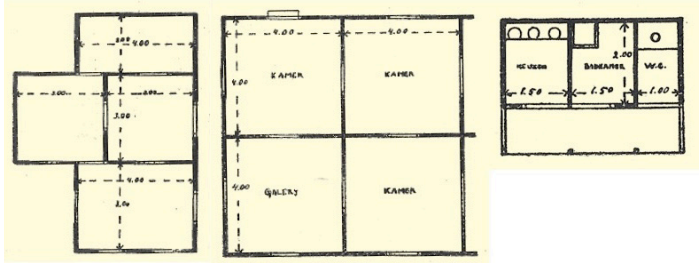
Figure 39 • 'Batavia: overview of Kampung Taman Sari 1913' (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)

Figure 40 • 'Batavia: Kampung Taman Sari plan, 1913'. The kampung is divided into three main blocks, and the complex of housing contains seven housing types. (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)

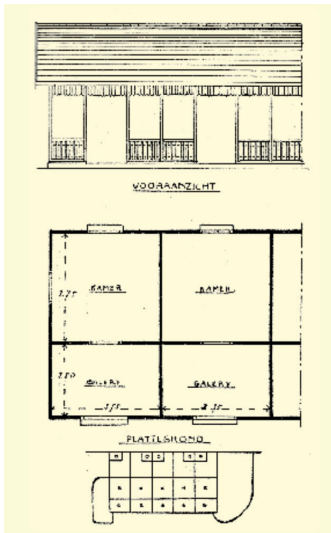
Figure 41 • 'Batavia: house types 1a and 1b (north side block I) in Kampung Taman Sari 1913'. (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)



41

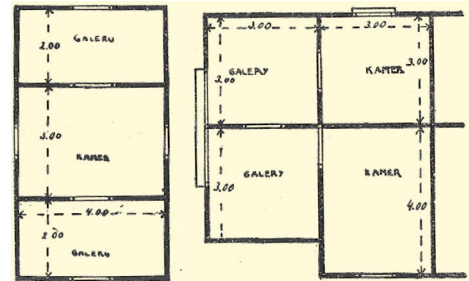


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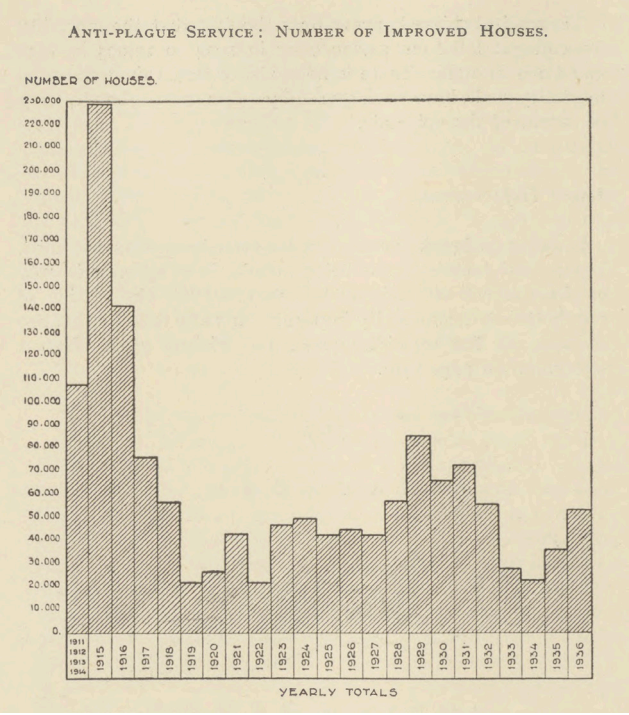
Figure 42 • 'Batavia: floor plans of house types 2a and 2b (south side block I) in Kampung Taman Sari, 1913' (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)



43

Figure 43 • 'Batavia: floor plans of house types 3a and 3b (blocks II and III) in Kampung Taman Sari, 1913' (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)

Figure 44 • 'Batavia: petakwoning (blok III) in kampung Taman Sari, 1913' (Source: Roosmalen 'Ontwerpen aan de stad'. 2008.)



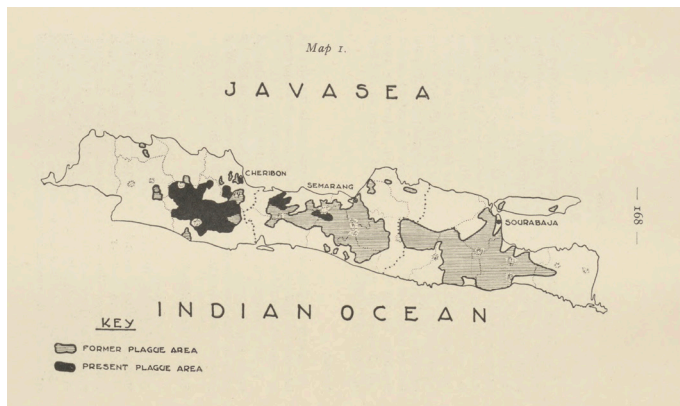
45

Aantal woningen	Aantal pestgevallen	
	Totaal	Per 1000 woningen.
Totaal	30.972	65.9
Van bamboe.	11.791	39.—
Van leem.	19.181	82.4

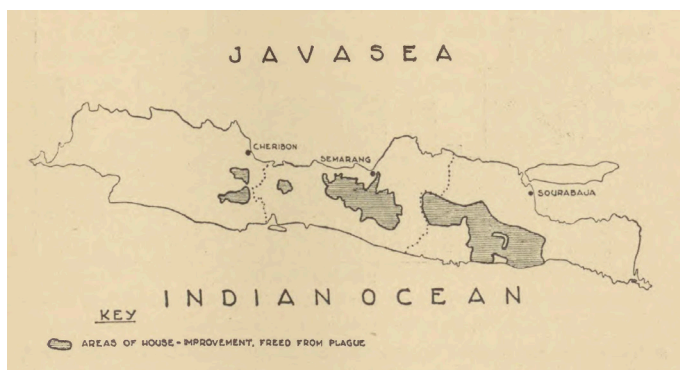
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Figure 45 • 'Anti-plague service: number of improved houses' kampung (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*, 1937)

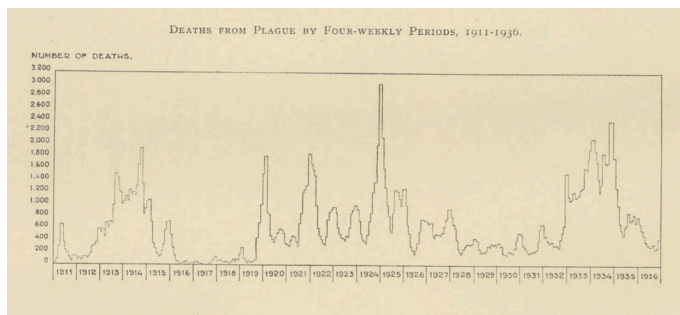
Figure 46 • Table showing the distribution of plague cases by housing type in Java (1919-1924), comparing bamboo and clay houses. (Source: *Mededeelingen Van Den Dienst Der Volksgezondheid in Nederlandsch Indië vol 2*, 1927. 218.)



47



48

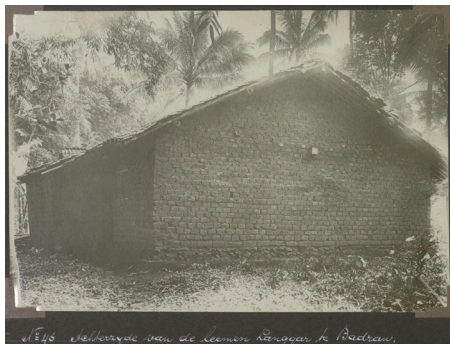


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Figure 47 • In Java, significant plague outbreaks occurred in the hinterlands of seaports (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*, 1937. 168.)

Figure 48 • Areas of improved rural kampung (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*, 1937. 175.)

Figure 49 • The data from the plague campaigns tracked reported cases from 1911 to 1936 (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers*, 1937.)



50



51



52

Figure 50 • 'Back of the loam Langgar in Badran' 1919. Indonesia, Central Java, Temanggung, Badran. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-44)

Figure 51 • 'Side of a slay house in desa Epoh with piles of unbaked stones.' 1919. Indonesia, Central Java, Temanggung, Kranggan. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-43.)

Figure 52 • 'Loam house in desa Epoh. The lower house is the stable and kitchen. In the door GV.' 1919. Indonesia, Central Java, Temanggung, Kranggan. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-42.)



53



54

Figure 53 • 'Kitchen interior of a loam house in Tembarak.' 1919. Indonesia, Central Java, Temanggung, Tembarak. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-33.)

Figure 54 • 'Loam house in Sanggrahan with burglar hole. Sidewall partially plastered with mud.' 1919. Indonesia, Central Java, Klaten Regency, Sanggrahan. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-10.)



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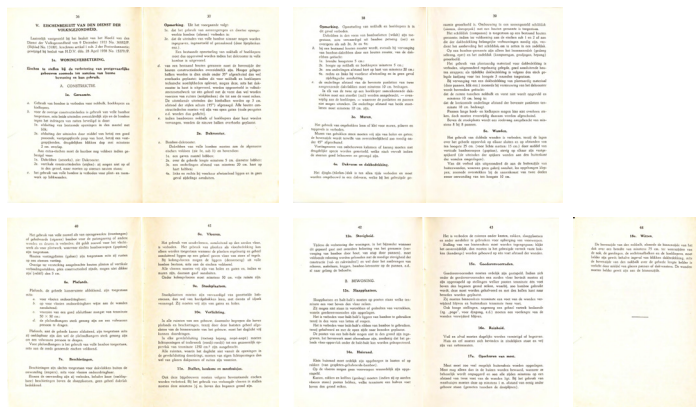
56

Figure 55 • 'Improved clay houses in Kowangan o.d. Temanggoeng. The rafter's bamboo stopped capped with a cement plug.' 1919. Indonesia, Central Java, Temangung. Photograph by G.M. Versteeg. (Source: Collectie Wereldmuseum. RV-A101-1-47.)

Figure 56 • 'Overview of the pondoks in Soko. Very regularly and excellently performed, disinfection fails completely.' 1919. Indonesia, Java. Photograph by G.M. Versteeg. (Source: Collectie Wereldmuseum. RV-A101-1-70.)



57



4e. Vergunningsformulier van het Bouwtoezicht.

Voorzijde.

Ingevolge Besluit van den Resident van
 ddo. No.

No. tahoen:

SOERAT IDINAN.

Assistent-Wedono memberi idin kepada
 seorang bernama beromah di desa
 dokohan
 kradjan
 akan berdirikan
 melebarkan atau merobah
 ROEMAH
 LOEMBOENG
 PAWON
 KANDANG
 LANGGAR
 Pekerjaan ini baroe boleh moelai pada tanggal
 tanggal
 Dipriksa oleh Mantri
 Bouwtoezicht
 pada tanggal
 tanda

 Dipriksa pada tanggal
 Opzichter Bouwtoezicht.
 Lihat di blakang.

Achterzijde vergunningsformulier.

ATOERAN.

Hal berdirikan, melebarkan atau merobah roemah-roemah
 jang di tentokan Assistent-Resident
 dengan soerat kekantjangan tertanggal

1. dilarang memakai bamboe melainkan bamboe wilah di-
 djadikan oesoek, bale-bale memakai bamboe dilarang
 djoega.
2. dilarang memakai atap, alang-alang, kadjang, klakah,
 santek kedjadian pajon.
3. wangoen pajon tjoeima boleh diadakan roepa srotong
 lain-lain roepa kalarangan semoea.
4. molo moesti dipasang miring.
 molo tida boleh dikerpoes.
5. lebarnya oesoek tida boleh lebih dari 5 cm. adapoen
 tingginja oesoek tida boleh koerang dari 5 cm. teritoeng
 dari molo atau blandar.

Siapa poen melanggar katetapan atoeran terseboet diatas
 itoe kena hokoeman denda f 100,— atau di toetoe 6 hari.

Ini Soerat Idin tjoeima berlakoe 6 boelan lamanja, teritoeng
 dari tanggal waktoe memberikannya.

Figure 57 • The 1938 *Rules and Regulations Concerning Pest Control*, 1938. Codified housing ‘improvements,’ enforcing colonial control over Indigenous building practices for plague prevention. (Source: Leiden University Library)

• Top: 12 points, each representing an element of the house to be ‘improved.’

• Bottom: building permit form (*Soerat Idinan*) with regulations (*Atoeran*), detailing approved materials, construction methods, and penalties for non-compliance.



Figure 19. — A house complex prior to improvement.

58



Figure 20. — The same complex after improvement.

59



60

Figure 58 • Traditional house in a kampung prior to pest prevention 'improvements.' (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*. 1937. 213)

Figure 59 • Traditional house in a kampung following pest prevention 'improvements.' (Source: *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*. 1937. 213)

Figure 60 • 'Insufficient *woningverbetering*' 1919. Indonesia, Central Java, Magelang. Photograph by G.M. Versteeg. (Source: Collectie Wereldmuseum. RV-A101-1-133)



61

Figure 61 • 'Disinfestation in Kandangan. Rat nests occur in 3 places (see arrows).'
 1919. Indonesia, Kalimantan Selatan, Hulu Sungai Selatan, Kandangan. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-56.)



62

Figure 62 • 'Back of the loam Langgar in Badran' 1919. Indonesia, Central Java, Temanggung, Badran. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-44)



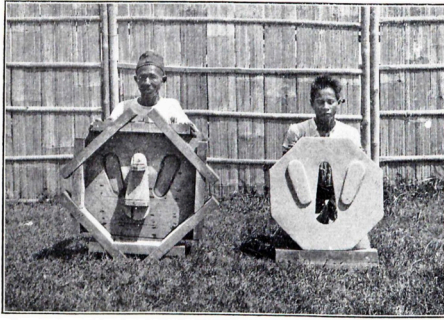
63

Figure 63 • 'Improved Tikelan in desa Binangoen wetan o.d. Kerteg. The pans are not yet completely present and therefore temporary cover with atap?' 1919. Indonesia, Jawa Tengah, Wonosobo, Kerteg. (Source: *Collectie Wereldmuseum*. RV-A101-1-82)



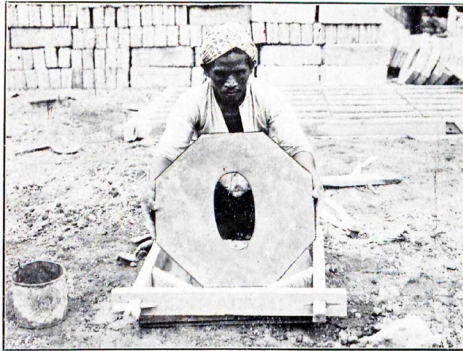
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Figure 64 • 'Pest-proof houses in a newly founded village near Batoc' 1907–1931.
Indonesia, East Java, Malang, Batoc.
Photograph by Unknown. (Source: *Collectie Wereldmuseum*. TM-10024151)



Betonnen latrine dekplaat met voetstenen. Daarnaast de houten mal voor het vervaardigen ervan.

66



Betonnen latrine dekplaat. Meest eenvoudige model

67

Figure 66 • 'Concrete latrine cover with foot supports. Next to it, the wooden mold used to produce it.' (Source: *Het maken van latrines*. 1929)

Figure 67 • 'Concrete latrine cover. Most simple model' (Source: *Het maken van latrines*. 1929)



68



69



70

Figure 68 • 'Disinfestation in Pesidi. First stage. The atep is removed' 1919. Indonesia, Central Java, Magelang, Pakis. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-15)

Figure 69 • 'Disinfestation in Pesidi. Second stage. The atep is detached, the alang-alang layer is exposed' 1919. Indonesia, Central Java, Magelang, Pakis. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-16)

Figure 70 • 'Disinfestation in Pesidi. Third stage. The alang-alang layer, lying below the atep, is removed' 1919. Indonesia, Central Java, Magelang, Pakis. Photograph by G.M. Versteeg. (Source: *Collectie Wereldmuseum*. RV-A101-1-17)

Kampongvraagstuk

Multiple postcolonial scholars have examined the *kampongvraagstuk* and its implications in urban settings, particularly through ‘kampung improvement programmes’. James L. Cobban conceptualises these as a tripartite concept in nature while looking at the municipality in Semarang, it included the abolition of the internal autonomy of the kampung, the extension of the jurisdiction of the city councils into the kampung and infrastructural improvements such as roads, sewers, sanitation, rubbish removal and water supply.⁵¹ Municipalities debated whether to annex the kampung within its boundaries to monitor their native population closer and carry out hygienic programmes., but the complexities of urban integration left the issues surrounding kampung abolition unresolved until the outbreak of the Pacific War.⁵²

More recently, Pauline Roosmalen added a political motivation to the debate. Reviewing records from Rückert, the former director of the Semarang Municipal Works, she uncovers within the colonial order a fear of a potential rebellion if the kampungs keep being neglected. Rückert states in the 1928 *Volksraad* that kampung residents ‘although as yet little inclined to rebellion, were a grateful target for nationalist politicians ‘who have set themselves the goal of winning over that population to overthrow of the authority.’⁵³ In fact, the political climate in 1910 Netherlands East Indies was marked by the ‘popular awakening’⁵⁴ phenomenon as native intellectuals, including civil servants and teachers, formed associations to address colonial oppression.⁵⁵

In response to such fears, the Batavian municipality built ‘Kampung Taman Sari’ (Figure 39). The project illustrates the colonial ambition to reshape the native population through architecture, reflecting European ideals of individualism and privacy. However, these designs clashed with the social

51 James L. Cobban, “Uncontrolled Urban Settlement: The Kampong Question in Semarang (1905—1940),” *Bijdragen Tot de Taal-, Land- En Volkenkunde* 130, no. 4 (1974): 403–27. 404.

52 Ibid. 427.

53 Pauline K.M. Roosmalen, “Ontwerpen aan de stad; Stedenbouw in Nederlands-Indië en Indonesië,” n.d. 101.

A *Volksraad*, or ‘People’s Council’, is an advisory body for debates on colonial policies represented by various groups within the colony, including Dutch officials, European settlers, and a limited number of natives and representatives of other ethnic groups. The advisory body is limited in power as final decisions rested with the Dutch colonial government and the Governor-General.

54 According to Indonesia’s historiography.

55 Roosmalen, “Ontwerpen aan de stad; Stedenbouw in Nederlands-Indië en Indonesië.” 99.

Boedi Oetomo was established in 1908 to address the material and spiritual well-being of people in Java and Madura. Later, when the association disbanded due to internal disagreements, another prominent association, Sarekat Islam, was founded in 1911 focusing on education and healthcare for natives.

and cultural fabric of kampung life, which revolved around communal living and extended family interactions. It is designed with a rectangular layout divided into three blocks, featuring seven ‘types’ of dwelling (Figure 40). Each ‘type’, instead of having a corridor, typically includes a ‘gallery’, which acts as a distribution space to the bedrooms. Additionally, the design included communal toilet blocks and bathing and washing areas, particularly in Blocks II and III, which were oriented perpendicular to Block I (Figure 41 to Figure 44).

The type of housing was clearly intended for families, with most including three bedrooms. Its design, rooted in European architectural ideals, did not align with the cultural and social needs of the intended occupants. The housing types for single-family homes embraced the European notion of individualism and privacy, contrasting communal living practices typical of the social fabric of the kampung, where extended families and community interaction were more common. The operation to provide housing for locals failed to progress beyond Kampung Taman Sari, which was demolished just five years after its completion because the local population did not move in as expected.⁵⁶

Framing materials

The plague in Java became a critical health crisis and a tool for colonial governance in the early 20th century. Colonial authorities framed local construction materials and Indigenous building practices as sources of disease. While municipal administrators debated expanding their jurisdiction to include the surrounding kampung areas, the Health Service Department undertook a broader operation extending far beyond municipal boundaries. These efforts aimed not only to control the spread of disease but also to ‘domesticate’ the Indigenous population, driven by fears of a potential rebellion.

Historically, colonial authorities neglected rural kampungs until the early century, a neglect that persists in scholarly research today. Referring back to Stoler’s theoretical reading, these neglected narratives can be understood as ‘disabled histories’ — archival narratives or accounts that are marginalised, incomplete or inadequately represented.⁵⁷ The term ‘disabled’ reflects how these histories are not fully articulated or recognised within dominant historical discourse. It highlights the broader issue: colonial

56 Roosmalen, “Ontwerpen aan de stad; Stedenbouw in Nederlands-Indië en Indonesië.” 107.

57 Stoler, *Along the Archival Grain*. 20.

archives often privilege certain types of knowledge while sidelining others, leading to a skewed understanding of history that overlooks the complexities and contributions of marginalised groups. Stoler's framework is particularly relevant to the anti-plague campaign, where traditional building knowledge was systematically dismantled, culminating in the codification of building regulations aimed at combating the plague.

From 1911 to 1936, significant transformations were made to approximately 1,5 million Indigenous houses in rural kampungs, as documented in a report by Hydrick published by the League of Nations in 1937 (Figure 48).⁵⁸ These interventions were rooted in fieldwork findings from 1919 to 1924 that noted unsanitary conditions in Indigenous homes linked to a local construction technique and materials. These findings informed the authority that bamboo houses have fewer plague cases (461 cases, 39 per 1000 houses) compared to clay houses (1,581 cases, 82.4 per 1000 houses) (Figure 46). Clay houses, with hollow walls prone to rat infestations, were deemed hotspots for rat infestations: when attempting to reinforce them, they usually collapsed under their own weight, making them unsuitable for pest control (Figure 50 to Figure 55). While bamboo houses were also susceptible to rat nesting, their double-walled design resulted in fewer infestations compared to clay houses. As a result, most of the housing transformation efforts were conducted in central Java and eastern Java (Figure 48).⁵⁹

Reports recorded 13,116 plague deaths across Java, with 351 in West Java, 12,587 in Central Java, 138 in East Java, and 40 in Makassar during this period.⁶⁰ Central Java alone accounts for a significant portion of these fatalities as it spread over a larger territory (Figure 48). Hydrick writes that in Java, significant plague outbreaks emerged in the hinterlands of major seaports, particularly from Surabaya, Semarang and Cirebon.⁶¹ Colonial physician G.M. Versteeg, who had participated in various expeditions across the archipelago, was involved in plague control efforts in Semarang. During

58 Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*, 193. Although published in Geneva, the paper was prepared at the Head Office of the Netherlands Indies Public Health Service in Batavia to prepare for the upcoming Conference of Far-Eastern Countries on Rural Hygiene held in Bandung two months later in Bandung. The international entanglement of the kampung will be further developed in the last chapter, 'The Garden of the World'

59 J. Huizinga, S.L. Brug, and S.H. Olivier, "Mededeelingen van den Dienst der Volksgezondheid in Nederlandsch-Indië" II (1927). 218.

60 Ibid. 218.

61 Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*.

the 1919 to 1923 campaign, numerous visual materials were collected in kampungs, particularly in Central Java, the outbreak's epicentre, G.M. Versteeg, a physician involved in plague control efforts in Semarang and an archetypal colonial figure who had participated in various expeditions across the archipelago, documented these interventions through photographs, later compiled into a 1919 album titled *Pestbestrijding op Jawa* (Pest Control in Java).⁶²

The proposed solution was to transition to houses made of wood or bamboo with enclosed walls, as these materials were deemed to be more resistant to pests. Yet some houses only received minor interventions; for example, some clay houses were either partially or fully plastered (Figure 54 & Figure 55). Following the intervention, 'Improved' bamboo houses were observed as relatively safer, with only 3 cases per 1,000 houses reported in Magelang. In contrast, clay houses still posed a significant risk, particularly in the Temanggoeng department, where mortality reached 39 cases per 1,000 houses.⁶³ However, contradictory findings in the same report reveal a glimpse of uncertainty and doubt during the plague outbreak of 1924; the housing inspection that was conducted on the 'improved' housing in the municipality of Solo, where the improvement of housing started in 1919 was nearing its end in 1924. During the inspection, it was discovered that 'for the first time in the entire history of plague control in Java that an epidemic is not brought to an end despite housing improvements and inspections, but on the contrary shows severe increases' (Figure 56).⁶⁴

The anti-plague campaign in Java reveals how colonial authorities used health crises as tools to justify governance, targeting Indigenous housing with reforms that disrupted local construction materials. Modernisation was brought about by blaming local building materials and practices for disease. These narratives, shaped within the colonial medical epistemology, appropriated architecture as an object of intervention to further the colonial agenda of social engineering. The field of medicine dictated how homes should be built and lived in, dismantling Indigenous knowledge and sustaining colonial authority under the guise of hygiene. Despite significant interventions, the persistence of plague outbreaks exposed the failures of these efforts and the

62 "NMVW-Collectie-Personen En Instellingen - G. M. (Gerard Martinus) Versteeg," accessed December 24, 2024, <https://collectie.wereldmuseum.nl/default.aspx?lang=en#/query/a9552ff5-541a-459e-8ac6-763d02c0c874>.

63 Huizinga, Brug, and Olivier, "Mededeelingen van den Dienst der Volksgezondheid in Nederlandsch-Indië." 220.

64 Ibid. 218.

fragility of colonial control.

Codifying the kampung

As the colonial state grew more bureaucratic, legal frameworks were introduced to address the bubonic plague outbreaks and legitimise governance by controlling how knowledge was collected, produced and refracted. One such framework, *Regels en Bepalingen Betreffende de Pestbestrijding* (Rules and Regulations Concerning Pest Control), was formalised in 1933 and finalised in 1938 (Figure 57).⁶⁵ The document outlines comprehensive pest control protocols, encompassing the management and ‘improvements’ of buildings deemed prone to pest infestations. It assigns responsibilities to numerous actors, the protocol for designating buildings as ‘plague dangerous’, and the stipulations for their ‘improvement’ or removal.

The Dutch colonial state’s governance ‘style’ aligned with a system aimed at labour optimisation. As theorized by Max Weber bureaucracy is a model of organisational management typical of modern societies and institutions, focused on efficiency. Tasks are assigned as official responsibilities with stable, precise rules to ensure consistency. A clear hierarchy governs oversight, where higher offices supervise lower ones, and appeals follow regulated channels. Key traits include regularity, stability, continuity, hierarchy, and strict control mechanisms.⁶⁶

From a Foucauldian perspective, bureaucracy can be seen as a mechanism through which power is embedded and diffused within institutional practices. Rather than centralising power in a singular entity, it is distributed across agency networks, making it more effective as it becomes less visible and more internalised. As Foucault notes, ‘power is tolerable only on condition that it masks a substantial part of itself. Its success is proportional to its ability to hide its own mechanisms.’⁶⁷ This lack of visibility ensures that power is normalised, making it more effective in regulating behaviour and maintaining order. In the colonial context, this diffusion of power allowed public health regulations to function as tools of control, dismantling Indigenous construction and implementing plague control measures under the guise of hygiene and improvement.

65 H.J. Rosier, *Regels En Bepalingen Bettreffende de Pestbestrijding w.o. Ordonnantie En Besluiten Aangaande de Eischen* (Batavia-C.: F.B. Smits, 1938). 33.

66 Ricardo Costa Agarez, Freddie Floré, and Rika Devos, “The Puzzle of Architecture and Bureaucracy,” *Architectural History* 65 (2022): 1–20, <https://doi.org/10.1017/arh.2022.1>. 4–5.

67 Michel Foucault, *The History of Sexuality. Vol. 1*, vol. 1 (New York: Pantheon Books, 1978). 88.

The administration's anti-plague measures relied on a stratified hierarchy of actors tasked with enforcing its policies. As the top authorities, the European Resident and the *resident-afdeelingshoofd* (The head of the residence division for plague control) oversaw pest declarations, housing inspections, public communication, and compliance enforcement.⁶⁸ Lower-level personnel, including native and European agents implemented these policies and worked directly in affected areas. Native *mantri* informers reported plague cases and performed splenic punctures in afflicted regions, while European informers, inspectors, and *mantri*-supervisors handled housing improvements, inspections, and construction supervision.⁶⁹ This division of labour reflects the intricate bureaucratic stratification underpinning the colonial state's governance model. While optimising kampung life and restructuring indigenous practices, the administration also optimised itself to execute these expansive operations, relying on hierarchical coordination and specialisation.

A key tool in this reordering was the codification of housing regulations inscribed on official documents, which served as a base for the material manipulation of the kampung. The 'improvement programme,' financed by its own inhabitants, dismantled native traditions and imposed colonial control over the material fabric of the kampung. It serves as a tool to overwrite the embodied knowledge contained in the architecture of the kampung and the practice of its builders.⁷⁰ The codification acts as a disruptor of the transmission of indigenous knowledge. The writing precedes the act of building instead of the building as preceding another building. In fact, the last section, titled *Woningverbetering* or 'home improvement,' provides detailed regulations on what constitutes an 'improvement,' emphasising construction techniques, materials, and sanitation practices.⁷¹ The house as a collection of architectural elements is categorised into twelve architectural elements, each providing specific construction guidelines to comply with housing regulations. Bamboo usage in structural components like ridge beams and rafters is heavily restricted unless it is specially treated and capped to deter rat nesting (Figure

68 Rosier, *Regels En Bepalingen Betreffende de Pestbestrijding w.o. Ordonnantie En Besluiten Aangaande de Eischen*. 6.

69 Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers: National Reports of The Netherlands Indies*. 30.

70 While I remain unsatisfied about the term 'native architecture,' it does avoid using the term 'vernacular,' which may suggest a Eurocentric bias. Additionally, Siegfried Giedion's definition of 'anonymous architecture' is unsuitable here as it erases the boundary between architecture created through local knowledge and that constructed by architects working for the Department of Health Service.

71 Rosier, *Regels En Bepalingen Betreffende de Pestbestrijding w.o. Ordonnantie En Besluiten Aangaande de Eischen*. 36-53.

60). Fibrous roofing is not permitted, as the preference leans towards more solid materials such as wood, tiles, or tin as to prevent rat nesting (Figure 58 & Figure 59). While unbaked earth is strictly forbidden, baked bricks are acceptable. The traditional *djoglo* roof shape is always prohibited and must be adapted into a form that fits the building's function (Figure 62). In addition, the top of the roof ridge must be brightly painted (Figure 64).⁷² The use of double walls is also not allowed. Floors are required to be elevated from the ground, maintaining a clearance of 50 cm below. Light-opening grilles must have a minimum surface area of 1250 cm². Finally, the guidelines reference the Vitruvian principle of firmness—though not explicit—stating that the house must be structurally reinforced to support the adaptations. The document not only regulates how houses shall be built but also how native bodies shall inhabit their shell: the bed shall be raised and forbidden to be made of bamboo unless halved, the furniture should have legs that are a foot above the ground, and the goods storage shall be stacked on top of halved bamboos.

Modern architects in continental Europe integrated the principles of sanatoriums and laboratories into residential architecture, advocating for buildings that embodied the ideals of hygiene and the production of a 'healthy body.'⁷³ Concrete became a key material in their hygienic discourse.⁷⁴ However, Dutch architects and engineers in the East Indies used concrete differently. They prescribed it exclusively for communal and infrastructural functions in the *kampung*. Its application was limited to buildings like warehouses, storage facilities, and latrines, reflecting a practical rather than residential focus (Figure 65 to Figure 67). The regulations specify that both the wall footing and flooring must be constructed from concrete and also provide formulations for three types of concrete recognised as rat-proof: Portland cement concrete, *trasbeton* made from pozzolanic ash, and asphalt concrete, which notably lacks any cement. These materials must be poured to a thickness of 10 cm over a sand bed of at least 15 cm thick.

To implement the labour required for the home 'improvement programme,' the colonial regime transformed native labour into a tool for spatial and social control. Labour is enforced coercively, as the regulation stipulates that 'the labour needed for housing is typically supplied by the population itself. [...] if there are insufficient volunteers from the community, forced labour can be mandated.' However, for larger building projects, local

72 Ibid. 38.

73 Colomina, *X-Ray Architecture*. 108.

74 Ibid. 78.

residents may hire external labourers—*coolies*—or construction firms for extensive renovations or demolition, particularly when required construction techniques surpass local expertise.⁷⁵ Sergio Ferro's insights shed light on the deeper implications of this strategy, particularly through the use of concrete. Ferro argues that concrete was instrumental in dispossessing construction workers by requiring specialised knowledge concentrated among technicians, thereby deskilling the local labour force.⁷⁶ Since concrete was not locally produced, Indigenous communities were further deprived of the ability to build with their own materials, erasing traditional knowledge and reinforcing colonial control over construction practices. Since the concrete is not produced locally, the locals would not be able to build their own buildings and are stripped of the agency of cultivating the knowledge from local materials. This strategy of compelling the local community to participate serves the colonial regime well as the colonial knowledge of construction superimposes upon the local knowledge: it is a strategy of dispossession of knowledge.

Furthermore, the pest prevention regulations allowed the colonial state to limit and monitor new indigenous construction, as it introduced the requirement for a building permit if one wished to build or expand their home. This process, formalised through documents like the *Soerat Idinan*, provided the colonial administration with detailed oversight of rural development, enabling them to regulate the size, location, and materials used in construction (Figure 57). By requiring approval from officials such as the Assistant-*Wedono* and inspections by *Opzichter Bouwtoezicht* or building supervisors, the system ensured compliance with sanitary and structural guidelines imposed by the state. The bureaucratisation of construction, even at the village level, reveals how deeply colonial governance permeated everyday life, turning homes into sites of regulation and control.

The enforcement of these regulations relied on coercion and surveillance. Regular inspections by the Housing Inspection Service ensure cooperation from the inhabitants, and penalties for non-compliance might lead to a fine costing 100. – florins or six days in prison if further corrections are not carried out by inhabitants within six months of the issuing of the warning (Figure 57). Additionally, at the level of sub-districts, each *kampung* is required to conduct cleaning and maintenance every 35 days under the supervision of authorities. If the conditions permit, airing all household effects, bedding, food and goods

75 Sergio Ferro, "Concrete as Weapon," trans. Alice Fiuza and Silke Kapp, 2017. 23.

76 Rosier, *Regels En Bepalingen Betreffende de Pestbestrijding w.o. Ordonnantie En Besluiten Aangaande de Eischen*. 28-30.

supplies and all objects that hinder a thorough and easy inspection of any part of the house on the premises from 7 a.m. to 11 a.m.⁷⁷

The codification of native buildings was not the only tool employed to enforce colonial control. Alongside its hygienic objectives, visual documentation played a significant role in solidifying and disseminating the colonial vision of 'modernised' and 'sanitised' living spaces. Visual records served as both evidence of the perceived inadequacies of the traditional kampung architecture and as promotional materials showcasing the success of colonial interventions

A fleeting memory

The abundant visual documentation accompanying the plague campaign represents moments before a new shape and meaning were forcefully imposed on the kampung. The representation of the kampung in the photos, as a traditional construction method, is given a brief moment to express itself. The only records of traditional kampung construction are filtered through sources aimed at systematically transforming and erasing it (Figure 45 to Figure 42).

Starting from the ground, the kampung houses are elevated slightly above street level, with a base perimeter reinforced by stone foundations to prevent rainwater from seeping inside. Encircling the house are tall feather palms, often used for sugar production, and banana trees, creating a natural boundary. The vertical structure begins with upright bamboo poles placed approximately three metres apart, forming the framework of the walls. These walls are woven from bamboo strips, either arranged vertically or horizontally. Where apertures, such as windows, are present, the weaving is tightly done to provide security, whereas areas without windows are woven loosely, likely to encourage ventilation. The overhanging roof marks the house's entrance, often accompanied by benches at the front. Moving up, the roof structure rests on wooden wall plates or *usuk*, supported at the intersection of the walls. Roofs vary in style, with some showcasing traditional forms like the *djoglo* or *tikelan* roof, and are typically covered with fibrous vegetal materials. Windows, where present, often feature latticework made of bamboo to prevent entry while maintaining airflow. The doors are constructed from solid wood, adding durability and privacy. Inside, the floor is of beaten earth. In East Java, walls are commonly made of unbaked earth bricks, sometimes finished with a smooth

77 Rosier, *Regels En Bepalingen Betreffende de Pestbestrijding w.o. Ordonnantie En Besluiten Aangaande de Eischen*. 57

layer of earth or left exposed. The houses are occasionally bordered by wooden fences overgrown with lush vegetation.

However, this agency in self-representation through photographic material is further silenced and given another meaning by the manuscript caption of each photo. These captions can be categorised into three. The first details the careful process of disinfection. The second exemplifies the colonial gaze through judgments on correct and incorrect architectural assemblies. Lastly, it includes photos showing successful implementation of improvements. Both the second and third categories functions made them to be recirculated as propaganda showcasing their newly acquired knowledge through housing transformation experiments conducted in the kampung.

Gayatri Spivak's notion of the subaltern borrowed from Gramsci is particularly relevant here; the subaltern's voice is often mediated through the perspectives of those in power. This mediation can misrepresent the subaltern's experiences and needs, as their voices are filtered through the lens of those who hold authority. As a result, the subaltern's ability to speak authentically is compromised.⁷⁸ During moments when the building could speak, a louder noise of the one holding hegemony of knowledge silences its autonomy. In fact, the photos exemplify the colonial perspective; the handwritten notes beneath the images frequently convey judgments about what is deemed right or wrong in the way that architectural elements are assembled.

In the Netherlands East Indies, scientific discourse functioned as a colonial apparatus of control, operating without little regard for cultural or aesthetic considerations. This contrasts sharply with modern architecture in 1920s continental Europe, which embraced medical infrastructures as a source of aesthetic and ideological inspiration for the new housing. In the Indies, hygiene was reduced to a technical practice, deployed by medical experts to enforce control over native populations through surveillance, and intervention. Architecture in this context was entirely subordinated to medical and technical priorities, sidelining the role of architects in the transformation of kampungs. However, architects played a central role in shaping tropical medical architecture; their influence was largely absent in the broader colonial interventions into native living environments, where technical experts in engineering and medicine dictated the changes.

78 Gayatri Chakravorty Spivak, "Can the Subaltern Speak," *Marxism and the Interpretation of Culture*, 1988. 90-91.

Beyond the Hippocratic Oath

In contrast to the direct, hands-on preventive health campaigns that directly transformed the *kampung*, the role of hospitals in reshaping these spaces was relatively limited. Government hospitals, such as the Centrale Burgerlijke Ziekeninrichting (CBZ), were a new development in the Indies, established alongside the rise of preventive health initiatives by the Health Service Department. These hospitals were designed to provide affordable, or even free, medical care and nursing to lower socio-economic groups, and they were open to all ethnicities. However, only three such hospitals were built, all located in urban centres in Java—Batavia, Surabaya, and Semarang.⁷⁹

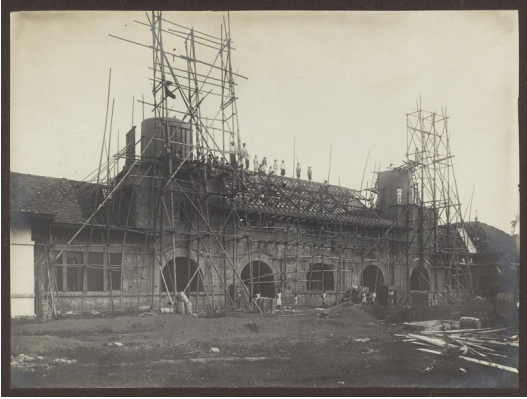
As discussed earlier, the initiatives of the Health Service Department intertwined care with power and control. In this sense, Foucault's reading on Jeremy's Bentham design for the panopticon is particularly relevant here as we are confronted with a central architectural device that materialises a medical institution. The reference to the panopticon here is not taken in its literal sense, meaning a spatial disposition allowing the prison warden to see everywhere at any given moment, but rather its central surveillance function that allows the colonial state to gather biological data in legitimising its governance. These hospitals served as both institutions of health and mechanisms of surveillance,

⁷⁹ Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers : National Reports of The Netherlands Indies*. 39–40.

embodying what Foucault described as ‘spatial unities that make it possible to see constantly and to recognise immediately’⁸⁰ within its limited field of view. However, these hospitals, in the present study, prove their limit on controlling and performing the adjacent duty of maintaining population census as they had a limited view of the hinterland of Java where most of the population resided. These centralised, state-of-the-art facilities were built in cities, where populations were concentrated, allowing the colonial state to monitor individuals and still had a minor impact on the moulding of the kampung. It showcases the limit of a centralised institution and thus shows the limit of the panopticon to materialise the colonial project of exercising data maintenance on the population that further serves the colonial statecraft.

Adjacently, the collection of biological data through medical efforts reduces individuals to a set of categories—gender, age, fertility, religion, and ethnicity tied to the kampung—stripping them of their humanity and portraying them as mere sources for extracting medical knowledge rather than as subjects of their own histories. This is exemplified in the case of Ramelan, who travelled from his kampung to the hospital seeking treatment for his illness, only to have his identity reduced to clinical descriptors within the colonial medical record.

80 Michel Foucault, *Discipline and Punish: The Birth of the Prison*, 2nd Vintage Books ed (New York: Vintage Books, 1995). 200.



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72

Figure 71 • 'Construction of the Central Civil Hospital in Salemba – Batavia', 1921. Charls & van Es & Co. N.V. (Source: KITLV 33513)

Figure 72 • 'The almost completed new construction of the Central Civil Hospital in Salemba – Batavia' 1921. Unknown creator (Source: KITLV 33504)



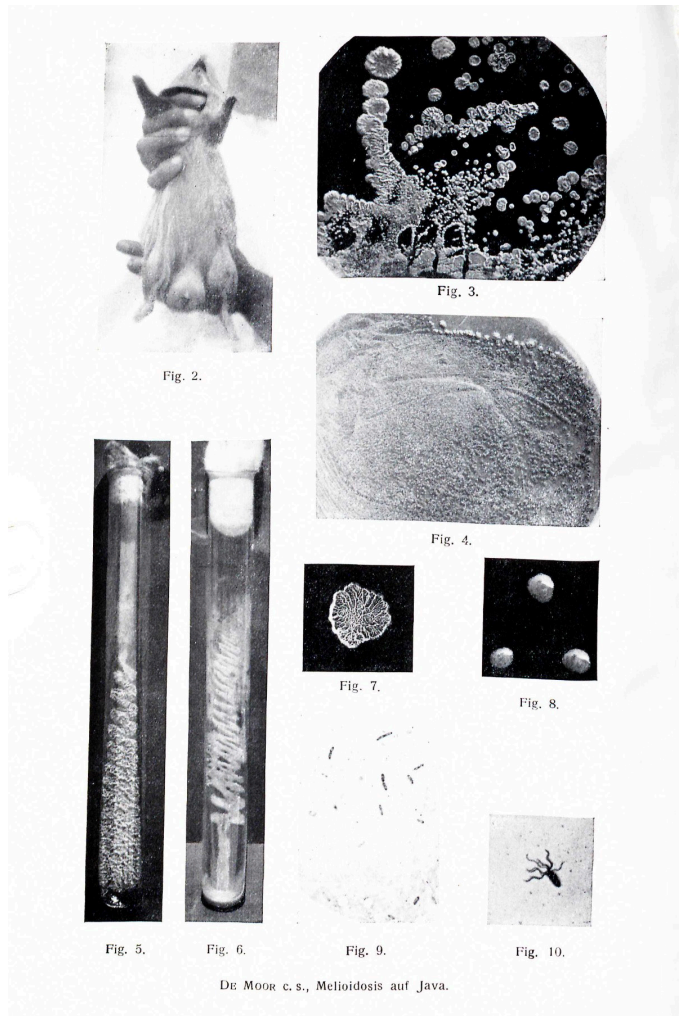
73



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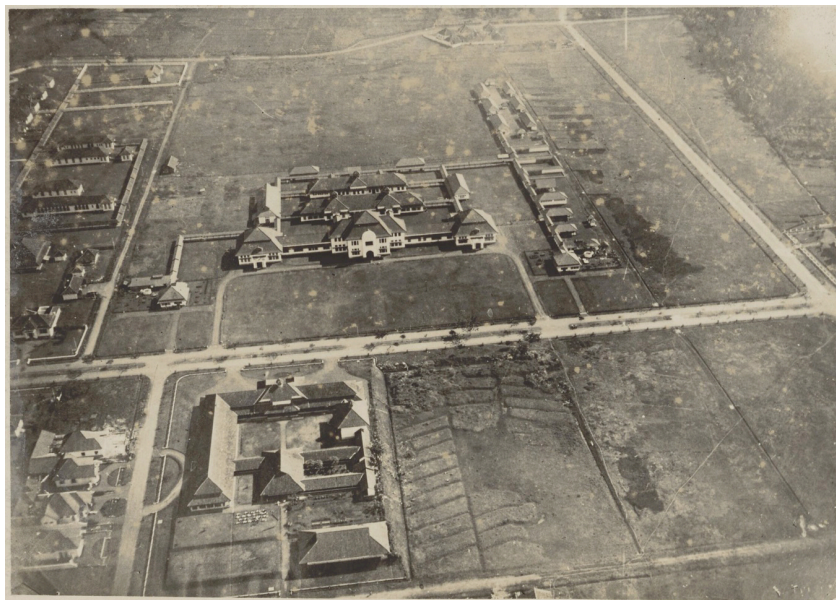
Figure 73 • ‘Scale model of the buildings of the STOVIA (front), the Central Civil Hospital (back), and the Health Laboratory (Eijkman Institute) in Weltevreden (Batavia).’ Circa 1926, Central Jakarta. (Source: *Collectie Wereldmuseum*. TM-60059409)

Figure 74 • ‘The laboratory of the Central Civil Hospital (CBZ) in the lower city of Batavia.’ Circa 1920. Unknown photographer. (Source: *Collectie Wereldmuseum*. TM-ALB-0140-9)



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Figure 77 • Experiments showing a bacterium identical to that found in patient Ramelan. (Source: *Publicaties uit het Geneeskundig Laboratorium van den Dienst der Volksgezondheid voor Nederlandsch Oost-Indië*, 1931)



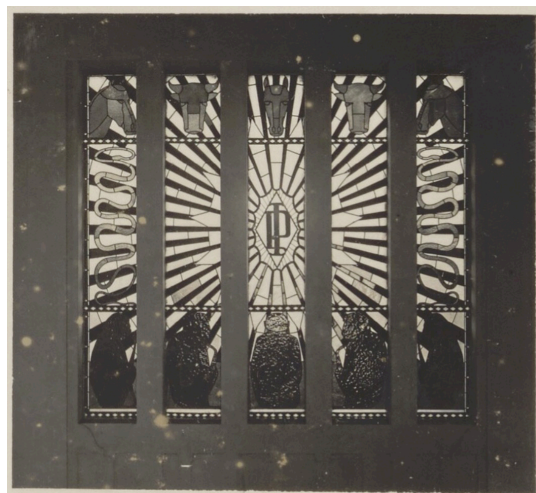
78



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Figure 78 • 'Aerial view of the Pasteur Institute in Bandoeng.' Circa 1920–1930. Indonesia, Bandung, West Java. (Source: *Collectie Wereldmuseum*. TM-ALB-0346-46)

Figure 79 • Standardised diagnostic form used in colonial medical records for leprosy and other diseases. 1934. Central Java. Includes fields for personal identity, clinical descriptors, and diagnostic observations. (Source: *Universiteitsbibliotheek Leiden*, *Collectie Gomperts*. D H 1567-9)



80

Figure 80 • : 'A stained glass window at the Pasteur Institute in Bandoeng, photographed during a visit by the Advisory Council of the Eastern Bureau of the LNHO.' 1930. Bandung, West Java. (Source: *Collectie Wereldmuseum*. TM-ALB-0346-52.)

Central Civil Hospitals

In contrast to the former military hospital, the newly built complex in Salemba was built specifically to cater to the civilian population with the latest state-of-the-art technology.⁸¹ The Central Civil Hospital collected data on diseases, which was later transferred to the Health Service Department. The hospital served a crucial function in the formation of medical knowledge that further informed medical authorities about the kampung as the new hospital aggregated education and research function in parallel to its curative practice.

Among the three other Central Civil Hospitals that were built across Java, the first one being the one located in Batavia, constructed in 1919 by the architect-engineer Hein Von Essen.⁸² The latter was built as a complex that aggregated state-of-the-art medical functional spaces (Figure 71 to Figure 73). It was decided in 1913 to open up a new hospital complex as the space of the Militair Hospitaal in Hospitaalweg could not accommodate an increasing population and a need for accommodating a growing number of students. There was a strong desire for facilities that would allow for broader and more effective medical education. This proposal received approval from the government, and a comprehensive medical building complex was designed by the architect and structural engineer H. von Essen (Figure 73). The new hospital was inaugurated in November 1919. These facilities effectively resolved the challenges faced at Hospital Weg by providing ample space for practical training and allowing subject instructors to have their own classrooms. The main building houses laboratories, museums, and classrooms for subjects including physics, chemistry, botany, zoology, physiology, physiological chemistry, pharmacology, and pharmacy, along with six classrooms assigned to the preparatory department. Above the main entrance is an auditorium designated for official events, such as meetings for examination boards and the Board of Directors. At the rear of this building lies the anatomy wing, which consists of divisions for anatomy and forensic medicine, along with laboratories for bacteriology and hygiene (Figure 74). The anatomy preparation room accommodates over 60 students at a time and boasts facilities that rivalled the best in the field. Clinical education takes place within the hospital's daily operations, with a clinical classroom located on-site to limit the transportation of patients used for teaching. Laboratory work, becoming increasingly central to clinical practice is carried out in specialized rooms, and X-ray examinations

81 Hydriek, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers: National Reports of The Netherlands Indies*. 41.

82 "Indië, geïllustreerd weekblad voor Nederland en koloniën," February 28, 1923. 72-73

are also hosted. Furthermore, there are plans to construct an operating room for surgery and another for obstetrics and gynaecology at the earliest opportunity.⁸³

The laboratory of the Health Service Department was instrumental in interpreting these data and then projecting its findings through scientific publications. This a fragment of Ramelan's life that visited the Central Civil Hospital is uncovered. In July 1929, he was admitted to the skin clinic at the Central Civil Hospital in Batavia—as a man from Bantam, a region west of Batavia.⁸⁴ His story is reduced to clinical descriptors, which paint a portrait of his physical condition.

This individual had spent five years at his residence in Desa Djioelem, Kampung Badak, Tjikande, a village located near a swampy area. Over a period of 1 ½ years, the patient developed a painless, purulent swelling on his left upper arm. Despite being subjected to treatment that included incisions and ointments, the swelling did not heal, and ulcers formed, accompanied by swelling and enlargement of the underlying lymph nodes. (fig.x) Changes in the skin and subcutaneous tissues accompanied these developments. The patient returned home and was treated there in the outpatient clinic with an autovaccine every week for eleven weeks but without success. After that, the patient was nowhere to be found. It turned out that he had died in January 1931, about 3 years after the onset of his illness, following a period of high fever.⁸⁵

Ramelan's visit to the Central Civil Hospital was meticulously documented using a specially designed form made of thick paper folded into a near-square shape (Figure 75 to Figure 76). It was created to record

83 Ibid. 72-73

84 Today Jakarta

85 C.E. de Moor, Soekarnen, and N. van der Walle, "Melioidosis Auf Java," *Publicaties Uit Het Geneeskundig Laboratorium van Den Dienst Der Volksgezondheid*, 1932, 206–36. 221.

diagnostic information for patients suspected of having leprosy. It is likely that similar forms were used for other diseases as well. The data collected would act as a means of monitoring the kampung. For instance, in December 1930, a bacterium identical to that found in patient Ramelan was isolated from a rat carcass at a rubber plantation near his residence. Guinea pigs injected with the rat's organ pulp died within days, showing symptoms resembling plague (Figure 77). Further investigation revealed ten dead rats within Ramelan's house, but no additional rat deaths or unexplained human illnesses occurred in the area. These findings suggested a possible case of melioidosis, a previously unreported disease in the Dutch East Indies.⁸⁶

The documentation of such cases followed a standardised form. The first page collects essential details about an individual's identity, such as their name, place of origin, race, ethnicity, religious beliefs, marital status, income, education, and eating habits. Additionally, it includes a brief questionnaire for medical personnel to assess Ramelan's medical history. Upon unfolding the form, the left side presents a schematic representation of a human body, enabling hospital staff to indicate areas affected by numbness, variations in temperature sensitivity, and pain in specific body parts. Next to this is a section titled 'Photos,' indicating a space for attaching images of the patient's visible symptoms. The back of the form features a blank table for documenting information regarding the patient's housemates and includes a family tree to explore potential hereditary connections to the condition. This form is accompanied by an attached document that acts as a medical reference or educational resource aimed at standardising the terminology used in the diagnosis and description of leprosy-related conditions.

Through the Central Civil Hospital's practices, we see how colonial healthcare systems extended beyond curative functions, embedding themselves into the broader framework of governance and as points of data collection. The meticulous documentation of cases like Ramelan's exemplifies how individuals were reduced to clinical descriptors, their identities fragmented and catalogued to fit the colonial state's administrative and medical agendas. Hospitals reframed individual bodies as sources of knowledge by retracing a specific disease to the kampung, serving as a basis for further intervention

86 C.E. de Moor, Soekarnen, and N. van der Walle, "Melioidosis Auf Java," *Publicaties Uit Het Geneeskundig Laboratorium van Den Dienst Der Volksgezondheid*, 1932, 206–36. 221.

The Pasteur Institute and the rise of preventive medicine

While the hospital was an instrument of data collection and healthcare, the Pasteur Institute was the spearhead of institutionalising global technopolitics. At that time, a state already had the Medical Laboratory in Batavia since 1888, but the welcoming of this institution in 1890 that initially bore the name of Parc Vaccinogène, ‘Vaccinogenic Park’ was for plenty of reasons that will not be discussed here. At its core, the institute aimed to be independent from other imperial competitors in its fight against contagious diseases that wrought havoc on its colonial subject.⁸⁷

The institute played a key role in the social engineering of the kampung, as it developed vaccines that were instrumentalised by the Dutch health services starting from the end of the 19th century in its preventive campaigns in kampungs (Figure 79). The vaccines developed were so successful during the anti-yaws campaign in the 1900s that locals garnered a sense of trust towards the medical authority.⁸⁸ The vaccines were prepared in the institute and used to biologically engineer the colonial state’s human capital, maintaining it in shape to sustain the hierarchy. Only five years later, in 1895, the Institute moved to the highlands of Bandung as it required a greenfield environment to maintain the experiments’ reliability and expand into a bigger complex (Figure 78).

The health infrastructure of the Dutch East Indies, exemplified by the Central Civil Hospitals and institutions like the Pasteur Institute, illustrates a complex duality. Not only were these facilities equipped with state-of-the-art technology designed to perform scientific experiments to provide optimal healthcare for the native population through vaccine production and offering a scientific foundation for health interventions. Simultaneously, they functioned as tools of governance, gathering and categorising data on the native populace to support the colonial agenda.

Ultimately, health institutions, particularly the Central Civil Hospital, functioned as tools of categorisation, as illustrated by the case of Ramelan, whose life was reduced to data within a larger system of healthcare and

87 Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers: National Reports of The Netherlands Indies*. 46.

88 Peter Boomgaard, “The Development of Colonial Health Care in Java; an Exploratory Introduction,” *Bijdragen Tot de Taal-, Land- En Volkenkunde* 149, no. 1 (1993): 77–93. 86.

statistical management. A hospital visit often prompted follow-up fieldwork in the kampung, linking the patient to the suspected source of disease. While hospitals informed the Health Service Department of subsequent interventions, their centralised locations in major cities restricted their reach into the hinterlands, demonstrating the limits of their role as surveillance mechanisms, which gives reason to the expansion of the activities of the department by the creation of preventive activities that acted directly in the kampung.

Nevertheless, hospitals played an indirect yet essential role in shaping kampung interventions. Laboratories within these institutions provided the scientific basis for medical reasoning that justified further actions, while the Pasteur Institute was instrumental in cultivating trust in health authorities during the early 1900s. This trust likely facilitated the Health Service Department's efforts to implement kampung transformations, as discussed in the previous chapter, with minimal resistance.

By intertwining healthcare, data collection, and scientific research, these institutions were more than spaces of treatment; they were integral to the broader colonial project, advancing medical knowledge while reshaping local environments and practices.

3.

THE GARDEN OF THE WORLD

Entanglement in Imperial Internationalism

Colonial archives, often assumed to represent certainty and authority, were, in reality, ‘sites of command—but of countermand as well.’⁸⁹ Despite the wealth of data collected to construct a colonial epistemology for reshaping the kampung, these archives also contain fragmented accounts and dissenting voices from influential colonial administrators. Such contradictions expose the fragility of the colonial project’s claims to rationality, even as it sought to legitimise its interventions through the guise of objective scientific knowledge.

The kampung’s entanglement with global knowledge networks is further illuminated by its role in the inter-imperial exchange of epidemiological expertise. These exchanges were facilitated by institutions like the League of Nations Health Organisation (LNHO) and the Rockefeller Foundation, which integrated the kampung into a larger framework of international health governance. This chapter underscores how the kampung became not just a local entity but a key participant in a global system of biopolitical governance, shaped by the ambitions and contradictions of colonial modernity.

89 Stoler, *Along the Archival Grain*. 50.

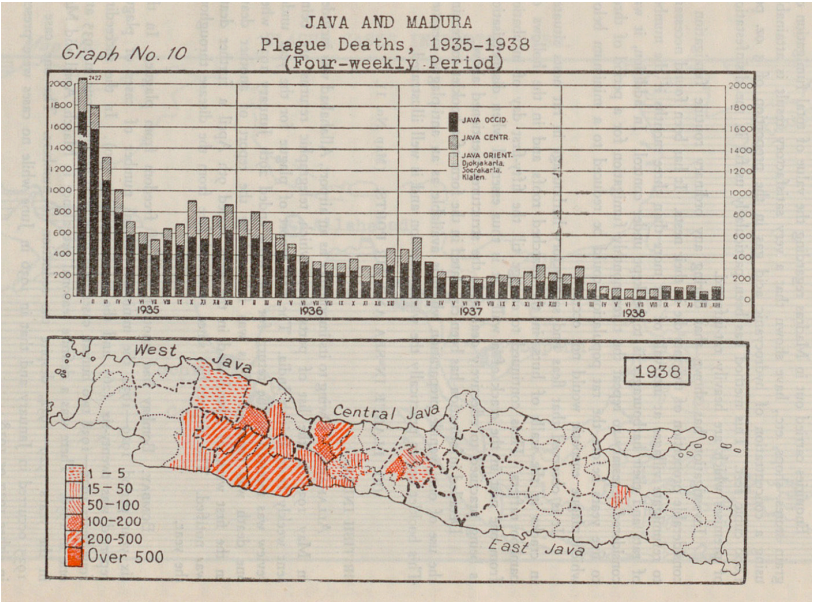


83

Figure 81 • 'Annual Report for 1928' showing the large sum of contribution from the Rockefeller Foundation, Singapore. (*League of Nations Health Organisation Eastern Bureau*, 1929). 24.

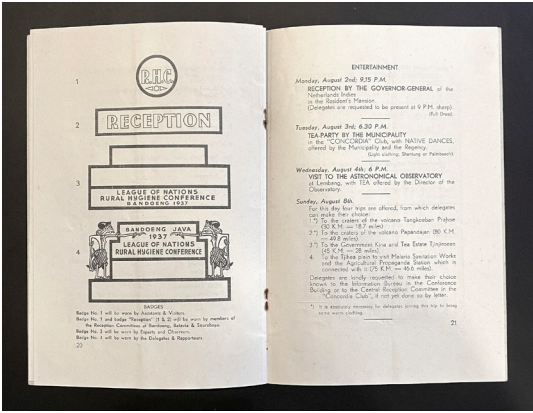
Figure 82 • Map of wireless stations involved in the League's epidemiological intelligence system in 1928. Receiving stations were limited to receiving information while broadcasting stations had the capability to both send and receive data. (Source: *United Nations Library & Archives Geneva*. C-48-M-28-1929-III_EN)

Figure 83 • 'Post and Telegraph Map of Java and Madoera.' Compiled on behalf of the PTT in the Dutch East Indies. Publication of the Topographic Bureau, Batavia.' Note the connection from Batavia to Singapore. 1895. (Source: *Nationaal Archief*. NL-HaNA_4.MIKO_1509)



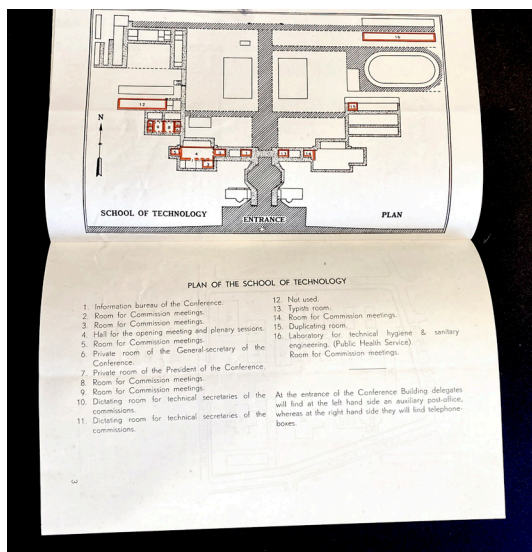
84

Figure 84 • Chart showing plague-related deaths in Java from divided by West Java, Central Java and East Java, 1935-1938 and a map showing the plague-related deaths per regency, 1938. (Source: *League of Nations Health Organisation Eastern Bureau, Annual Report for 1938*. R6198-8D-37586-341)



85

Figure 85 • 'Programme of the League of Nations Rural Hygiene Conference in a guidebook for delegates of the Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene. 1937.(Source: *Universiteitsbibliotheek Leiden. Collectie Beck, D H 900-108*)



86



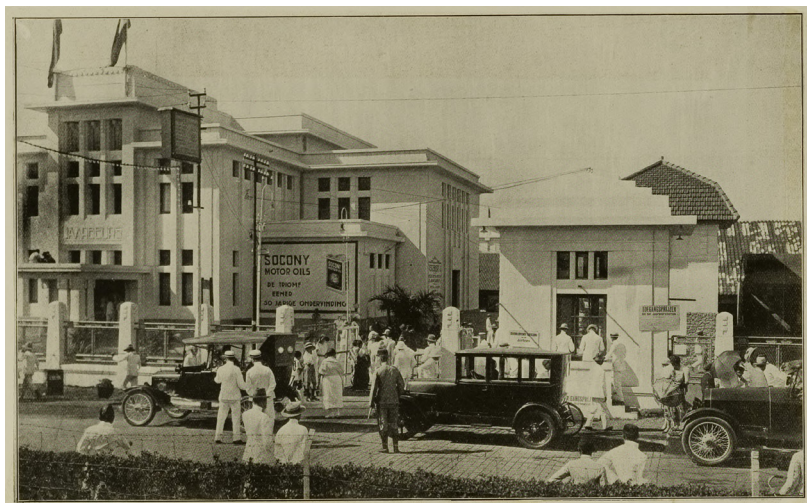
87

Figure 86 • Plan of the School of Technology in Bandung used as space for conference. In a guidebook for delegates of the Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene. 1937. (Source: Universiteitsbibliotheek Leiden. Collectie Beck, D H 900-108)

Figure 87 • Plan of the Exhibition on Rural Hygiene at the Bandung Fair Building. In the same guidebook 1937 (Source: Universiteitsbibliotheek Leiden, Collectie Beck, D H 900-108)



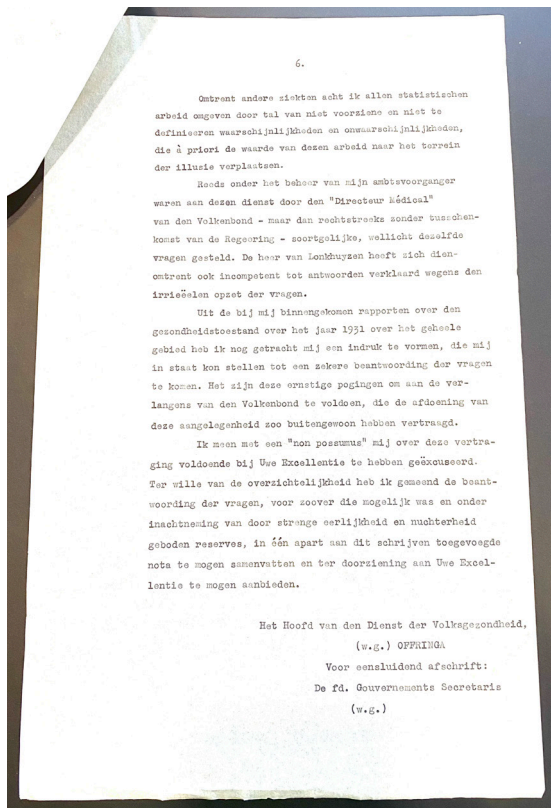
88



89

Figure 88 • Annual fair building 'B' according to the plan in the guidebook (Source: *Universiteit Leiden*. KITLV 153480)

Figure 89 • Jaarbeurs main building, Bandung, 1925. (Source: *Universiteit Leiden*. KITLV 26253)



90

Figure 90 • Typescript letter from Offringa to the governor general doubting the certainty of statistics on disease.
(Source: *Collectie Kerbosch*, D H 1420-[88])

The Imperial Network of Hygiene

Hygiene campaigns in the kampung were far from isolated from the global theatre of epidemiology. The experiments conducted in native villages participated in what Heidi Tworek describes as the ‘inter-imperial network of the sharing epidemiological knowledge.’⁹⁰ In fact, the kampung was brought to the global scene by Hydrick, who presented how the Health Service Department intervened in the kampung at the Intergovernmental Conference on Rural Hygiene, held in Bandung, West Java, in 1937. To understand the role of the kampung in this conference and its colonial representation through the lens of hygiene, it is necessary to contextualise the network established by global non the League of Nations Health Organisation (LNHO) and the role of the Rockefeller Foundation.

In 1925, the same year the Health Service Department was founded, the LNHO (the precursor of the WHO) established the Far-Eastern Bureau in Singapore, then part of the British Straits Settlements.⁹¹ The Bureau functioned as Asia’s regional office, coordinating the collection and dissemination of information on infectious diseases and the implementation of preventive health measures. Supported substantially by the Rockefeller Foundation, which funded nearly 50% of its budget in 1928, the Bureau developed radiogram infrastructures to facilitate communication across Asia (Figure 81).⁹² This was part of an effort to replace the older telegraphic cable between Batavia and Singapore (laid in 1859), which had become too expensive to operate (Figure 83).⁹³ The Rockefeller Foundation, as the largest non-state sponsor, was instrumental in funding the bureau’s activities, including the development of wireless telegraphy, which became vital for transmitting public health information.⁹⁴ The Eastern Bureau played a critical role in brokering inter-imperial health collaboration, connecting Asia with the West through an elaborate system of radio towers (Figure 82). The Netherlands East Indies was central to this network, as Bandung hosted one of Asia’s key

90 Heidi J. S. Tworek, “Communicable Disease: Information, Health, and Globalization in the Inter-war Period,” *The American Historical Review* 124, no. 3 (June 1, 2019): 813–42, <https://doi.org/10.1093/ahr/rhz577>. She is a researcher of media, history, health communications, international organizations,

91 Kayo Takuma, “The Far-Eastern Bureau of the League of Nations: Linking the Regional and International Orders Through Health Work,” in *New Directions in East Asian History* (Springer, 2023), 61–79, https://doi.org/10.1007/978-981-19-7067-2_4. 66.

92 “Annual Report for 1928” (Singapore: League of Nations Health Organisation Eastern Bureau, 1929). 24.

93 Tworek, “Communicable Disease.” 830.

94 Ibid. 832.

broadcasting stations, linking cities such as Karachi, Madras, Saigon, Shanghai, Sandakan, and Tokyo. Bandung and Saigon were particularly significant due to their connections with Pasteur Institute branches, which further supported public health research and disease control.

Tworek notes that while health broadcasts were initially envisioned for colonised and Indigenous people to raise awareness and submit petitions, they primarily targeted technical elites: health officials, colonial administrators, and ship captains.⁹⁵ On the Dutch side, health broadcasts were instrumental in legitimising colonial governance by framing the presence of colonial authority as being essential to managing the health of Indigenous populations. For example, the 'Annual Bulletins' of 1937 and 1938 contained numbers-oriented depictions of the kampung, which appeared as statistics and maps, such as one depicting plague-related deaths in Java (Figure 84). These visualisations, accompanied by descriptions of rat nesting habits in native housing, implicitly referred to the kampung without naming it, framing it as a problem to be managed through epidemiological expertise

The Health Service Department in Batavia played a central role in this information network. Its division of statistics and publicity facilitated the exchange of epidemiological data with the Bureau in Singapore and maintained correspondence with foreign institutions on medico-hygienic matters. By leveraging wireless technology and inter-imperial collaboration, the Dutch established a communicative system that advanced public health initiatives while strengthening their administrative and political influence in the region.⁹⁶

The imperial order established the kampung as a key participant in a global network of epidemiological governance. The infrastructure developed under the LNHO, with substantial Rockefeller Foundation support, highlights how health campaigns were embedded in broader inter-imperial cooperation. Modern technologies, such as radiograms, were used to manage disease and manifest governance.

Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene

The kampung was deeply embedded in the network of inter-imperial knowledge, facilitated by the philanthropic organisation of the Rockefeller

95 Ibid. 832.

96 Hydrick, *Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene Preparatory Papers: National Reports of The Netherlands Indies*. 21.

Foundation dedicated to ‘promote the well-being of mankind throughout the world.’⁹⁷ John Lee Hydrick, Adviser to the Hygiene Organisation of the Netherlands Indian Public Health Service, as briefly discussed in the earlier chapter, was a key envoy of the Rockefeller Foundation. His work exemplified the Foundation’s mission to improve global human welfare beyond national boundaries.⁹⁸ As part of his role, Hydrick authored the 1937 report ‘Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene’, written in Batavia and later published in Geneva for distribution to conference delegates. The report which informed this thesis on the activities of the service in the kampung is built on Hydrick’s earlier publications on preventive health campaigns in the East Indies. Similarly, participating countries and colonies—including China, Japan, the Philippines, Ceylon, and British India—were required to submit reports outlining their hygiene programs.⁹⁹

The Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene was held in Bandung from August 3 to 13, 1937, the same city that hosted the First Exhibition on Hygiene in the Netherlands East Indies (Figure 85 to Figure 87).¹⁰⁰ It gathered technical experts from different colonial states. This marked the fourth such conference, following earlier gatherings in Europe (1932) and Africa (1935). Organised under the auspices of the League of Nations Health Organisation (LNHO), the conference served as a platform for exchanging epidemiological knowledge and health practices among nations and colonies.¹⁰¹

The conference agenda was structured into four topics. Medical and health services which focused on training personnel to align local health systems with colonial objectives; improving the situation in rural areas and promoting cooperation which addressed the social and economic challenges

97 Raymond Fosdick, *The Story of the Rockefeller Foundation* (New York: Harper & Brothers, 1952). 20.

98 The Rockefeller Foundation, established in 1913 as a philanthropic organisation, played a significant role in advancing preventive measures against diseases in the United States. Building on its domestic experience, the foundation expanded its operations to the tropics, applying the lessons it learned to combat diseases. Notably, Cornelius P. Rhoads, a physician associated with the foundation, became infamous for conducting unethical medical experiments in Puerto Rico. Daniel Immerwahr later exposed and critically examined these operations in his book *How to Hide an Empire*.

99 multiple authors, “Rural Hygiene - Conference in the Far East, Bandoeng - Collection of Documentation.” (League of Nations, 1937), R6099/8A/29782/8855/Jacket2.

100 J. Offringa, “Brief van J. Offringa, Hoofd van de Dienst van de Volksgezondheid Te Batavia, Aan Beck, Hoofdambtenaar Ter Beschikking Voor de Bestuurshervorming, Betreffende Het Bijwonen Als ‘Observer’ van de Intergovernmental Conference of Far Eastern Countries on Rural Hygiene Te Bandoeng; Met Bijlagen,” n.d., Universiteitsbibliotheek Leiden, Collectie Beck, D H 900-108.

101 League of Nations, “Conferentie Ter Bevordering Der Landelijke Hygiene in Het Verre Oosten” (1937), United Nations Library & Archives, Pel_Pp195_21-1.

of rural areas, improving hygienic conditions which covered housing and pest control with an emphasis on regulating colonised spaces, such as the *kampung* and finally nutrition, which explored rural dietary inadequacies and their impact on health and productivity and nutrition.¹⁰²

The conference took place at the School of Technology (Figure 86), while the accompanying exhibition was held at the Bandung Jaarbeurs (Figure 87 to Figure 89), at the same site as the earlier hygiene exhibition of 1927. The material displayed largely mirrored that of the earlier EHITINI, showcasing the colonial administration's achievement in governance through hygiene and public health. The exhibition served as a culmination and celebration of the hygiene operations conducted in the *kampung*, effectively sharing the knowledge of local interventions on a global scale, in particular to the governing elite and experts in the medical and hygienic field.

Buildings F1 and F2 housed photographs of native houses taken during plague control campaigns, previously discussed in the earlier chapter. These visual representations were accompanied by propaganda films, screened in another section, to reinforce the narrative of colonial health efforts. One of the exhibition's most notable features was the live reenactment of hygiene operations, allowing visitors to witness the 'house-visit technique' performed by the *mantris* in the *kampung*. This demonstration enabled an immersive knowledge transfer of practices used in the colonial hygiene programs firsthand.

The conference was presented as a diplomatic event and as a platform for the exchange of colonial knowledge. It showcased how various colonial administrations, through the voice of experts, implemented their governance strategies, offering insights into the trajectory of power. This trajectory was marked by the meticulous regulation of both the physical environment—shaping the built spaces where bodies lived—and the inputs consumed by those bodies, such as nutrition programs. These interventions underscored the biopolitical nature of colonial governance, wherein the physical and social dimensions of rural life were recalibrated to align with broader colonial objectives. In the broader context of colonial rule, this trajectory reflects a shift in the exercise of power: no longer focused solely on legal subjects over whom the ultimate authority was death, power turned to managing living beings. As Foucault notes, power was now exercised at the level of life itself, aiming to control and optimise life rather than merely threatening death. It was through

102 Ibid.

this ‘taking charge of life’¹⁰³ that power extended its reach to the body in unprecedented ways, and in the present context, the kampung was part of this broader colonial strategy for managing lives.

In addition exhibition effectively repurposed the materials and techniques originally developed for kampung-level propaganda—such as latrine models, village house replicas, and health demonstrations—for a new audience of international delegates, colonial officials, and professionals. By rehearsing these operations within a curated space, the colonial administration framed their public health interventions as a model of modernisation and progress and governance designed to justify and legitimise their control over Indigenous populations. This transformation of kampung practices into a spectacle for an elite audience highlights the exhibition’s role not just as a celebration but as a political statement reinforcing the asymmetrical dynamics of colonial power as the audience this time did not involve the native and colonised population as shown by the guidebook targeted for delegates (Figure 85).

A site for contradiction

The ‘kampung improvement programmes’ discussed in the previous exemplify how colonial health initiatives were intertwined with broader networks of inter-imperial governance and international collaboration. These efforts relied heavily on data collection and the systematic use of statistics to legitimise interventions. However, a deeper analysis of archival records reveals a paradox: the very data that underpinned colonial hygiene campaigns was fraught with uncertainty and contradictions, exposing the fragility of the colonial project’s claims to rationality and scientific authority. Arjun Appadurai’s voice is particularly relevant here and joins Stoler in her observation of the fragility of colonial epistemology. He notes from the British experience that while early colonial quantification policies were initially utilitarian, they evolved into a means of creating an illusion of bureaucratic control. Numbers became essential in shaping a colonial mindset that viewed countable abstractions of people and resources as a way to manage and control the indigenous population. The colonial elite, influenced by their experiences with literacy, came to see quantification as socially beneficial.¹⁰⁴

This illusion is contained within a document contained in the archives

103 Foucault, *The History of Sexuality*. Vol. 1. 143.

104 Arjun Appadurai, “Number in the Colonial Imagination,” ed. Saul Dubow and Taylor and Francis, *The Rise and Fall of Modern Empires*, 2016, 243–68. 245–246.

of the Health Service Department at Leiden University Library, a series of typescript letters between the League of Nations Health Organisation (LNHO) and colonial administrators in the Netherlands East Indies highlights these dynamics. One particular document, titled 'Correspondence with and about the League of Nations in connection with the fight against malaria, with notes on kina and quinine; conference in Bandoeng 1937 on hygiene in the Far East' (1931–1934, 1937), reflects the complexities and contradiction of colonial health administration.

This correspondence was initiated by an inquiry from the LNHO's medical director, requesting specific data about malaria in the colony. The inquiry sought details on: the extent to which malaria has been fought in the last four to five years, the number of cases being treated annually, quinine consumption, legal frameworks on the production and distribution of quinine by the administrators, and the real required amount of quinine to fulfil the colony's needs.

The LNHO's request set off a chain of internal communications among key colonial agents, including the General Governor, the Head of the Department of Health Service, the Ministry of Foreign Affairs, the Department of Agriculture, and the Director of the Quinine and Tea Company. The General Governor subsequently forwarded the LNHO's letter to Offringa, Head of the Department of Health Service, in 1932, instructing him to provide a response.

Offringa's reply revealed frustration and scepticism (Figure 90). While the LNHO's questions seemed straightforward, Offringa argued that fulfilling the request was nearly impossible due to the unreliable and uncertain nature of the colonial health apparatus's data. He openly doubted the validity of the statistics collected by his own institution, noting that such data were often riddled with uncertainty, rendering any conclusions illusory and inadequate for drawing meaningful insights. His scepticism is encapsulated in the following statement:

When the collection of reliable data on mortality percentages already encounters almost insurmountable difficulties, it is obvious that only illusory attempts can be made regarding the orientation of the morbidity frequency. It even seems to me that Western regions that are fully developed in this area do not possess or

can possess anything other than a very partial, therefore insignificant direction.

As regards other diseases, I consider all statistical work to be surrounded by numerous unforeseen and indefinable probabilities and improbabilities, which a priori push the value of this work into the realm of illusion.¹⁰⁵

Offringa's admission is particularly striking, given his position at the centre of the 'kampung improvement programme' being the head of the Health Service Department, a colonial initiative aimed at reshaping Indigenous fabric under the guise of hygiene reform. His critique effectively undermines the rational basis upon which the entire colonial health operation was constructed. The illusion of rationality and data-driven governance, foundational to the colonial project, begins to collapse under the weight of his candid acknowledgement of uncertainty.

This moment exposes the fragility of colonial knowledge systems and aligns with Ann Stoler's concept of 'colonial uncertainties', where archives served as sites of both command and countermand. While colonial health officials presented data as factual and objective, discrepancies, dissenting voices, and extraneous details within the archive often disrupted this narrative and hindered effective action. The colonial agenda relied on provisional truths that were carefully framed to align with imperial interests, even as the administrators themselves privately acknowledged the certainty of their claims.¹⁰⁶

In summary, the paper trail uncovered in these exchanges reveals how the kampung was shaped by uncertain and constructed realities. Hygiene campaigns, presented as scientifically grounded interventions, were ultimately illusory. The fragility of the data behind these campaigns demonstrates the contradictions inherent in colonial governance, where statistical 'truths' served to project colonial control while simultaneously revealing the limits of that control.

105 "Correspondentie Met En over de Volkenbond in Verband Met de Bestrijding van Malaria; Met Nota's over Kina En Kinine; Conferentie in Bandoeng 1937 over Hygiëne in Het Verre Oosten." (1934, 1937 1931), Universiteitsbibliotheek Leiden, Archief van Matthieu Gérard Jacques Marie Kerbosch (KITLV).

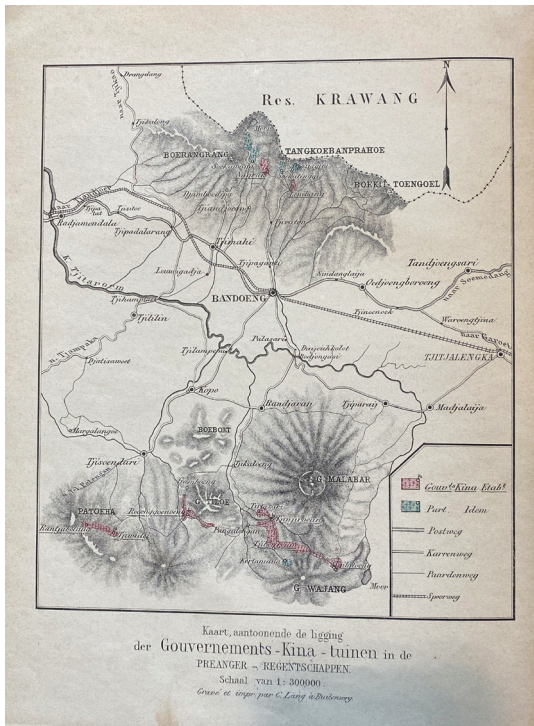
106 Stoler, *Along the Archival Grain*. 50.

The Plants of Our Backyard

The early development of medicine in the Netherlands East Indies, centred on quinine and the cinchona tree, illustrates the intersection of colonial medical intervention and its impact on kampung life. Introduced to Java in the 1850s, the cinchona tree became a cornerstone of colonial public health and economic enterprise. This commodification of medicine directly disrupted the traditional healing practices rooted in kampung communities. Indigenous knowledge, embodied by the *doekoen*—a healer and caretaker of local health—and the herb gardens surrounding kampung homes, was systematically marginalised as colonial medicine gained dominance.

The introduction of the cinchona tree and the institutionalisation of healing practices through hygiene centres and clinics in rural kampungs transformed the role of care and health in these communities. The *doekoen*, once central to kampung health systems, saw their authority eroded, while the herb gardens, vital for cultivating medicinal plants, were displaced by the colonial state's medical priorities. These changes reveal how the kampung became a site of cultural and environmental transformation under colonial governance.

The commodification of medicine and the environmental shifts it aligned with the broader colonial project of reconfiguring the kampung. This narrative highlights the kampung as a focal point where power, medicine, and cultural displacement converged, reflecting the long-lasting colonial interventions on local practices, spaces, and lives.



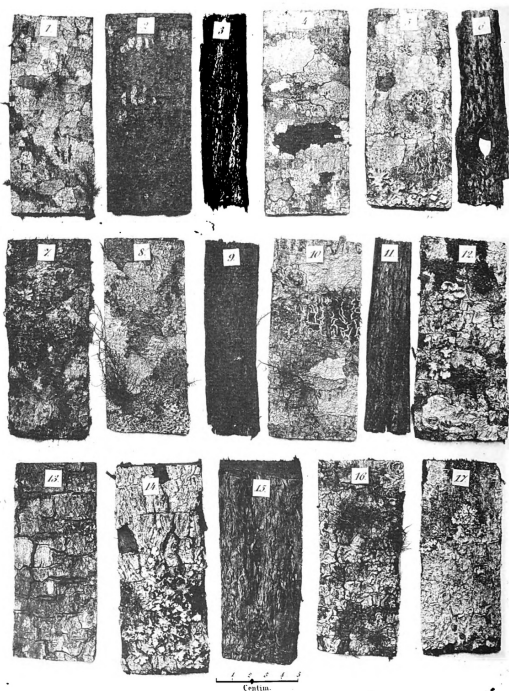
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Figure 91 • Map showing the location of Government Cinchona Plantations in the Preanger Regencies of Java, highlighting key areas of cultivation. (Source: *De kinacultuur in Azië 1854 t/m 1882, 1882.*)

Figure 92 • Labourers packing cinchona bark for the medical industry. East Indies, before 1940. (Source: *Collectie Wereldmuseum. TM-10012686.*)



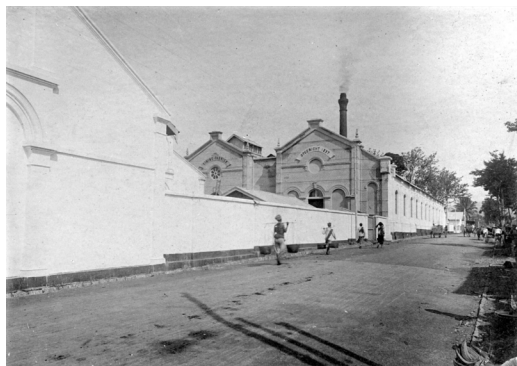
1. Bast van *C. succirubra*. - 2. Id. een jaar met mos bedekt. - 3. Id. onder mos vernieuwd. -
4. Bast van *C. caloptera*. - 5. Bast van *C. micrantha*. - 6. Id. onder mos vernieuwd. -
7. Bast van *C. cordifolia*. - 8. Bast van *C. Pahundiana*. - 9. Id. onder mos vernieuwd. -
10. Bast van *C. Hasskarliana*. - 11. Id. vernieuwd onder mos. - 12. Bast van *C. calisaya*. -
13. Bast van *C. Josephiana*. - 14. Bast van *C. Ledgeriana*. - 15. Id. vernieuwd, na afsnijding der buitenste schorslagen. -
16. Bast van *C. officinalis*. - 17. Bast van *C. lancifolia*. -

Photographie de C. Lang à Buitenzorg.

Digitized by Google

93

Figure 93 • Bark samples of various *Cinchona* species used in quinine production in the East Indies illustrating differences in texture, moss coverage, and regeneration stages. Photograph by C. Lang, Buitenzorg. (Source: *De kinacultuur in Azië 1854 t/m 1882, 1882.*)



94

Figure 94 • The main building of a quinine factory in Bandoeng is seen from the east side. The quinine factory in Bandung, West Java. 1900–1910. (Source: *Collectie Wereldmuseum. TM-10012683*)



95

DOEKOEN DJAWA

OETAWA

KITAB DARI ROEPA-ROEPA OBAT

NJANG TERPAKE DI

Tanah Djawa,

TERKARANG OLEH

NJONJA VAN BLOKLAND.

TITIKAN JANG KA 3



BATAVIA,
ALBRECHT & Co.,
1899.

Figure 95 • Stand of the Government's
ina Experimental Station at the Trade
Fair in Bandung, Java. K1920-1926.
(Source: *Collectie Wereldmuseum*. TM-
ALB-0275-77)

Figure 96 • Frontispiece of the *Doekoen
Dejawa* (1899), a compendium of 1809
herbal medicines

96

Right • An excerpt from *Doekon Djawa*,
Oetawa Kitab dari Roepe-Roepe Obat
with the recipe n°519 indicating the recipe
of the jamu to drink when having a fever
or feeling unwell.

Lantas ambil salmoniak 2 tetes tjampoer aer 4 sendok kasi minoem nanti baik.

No. **515.** Bikin koewat baden en bersih dada dan membaiken napsoe.

Ambil itoe serboek berat 3 doewit tjampoerken dengan aer delima en makan 3 pagi.

No. **516.** Obat panas badan en koeroes badannja.

Ambil itoe serboek berat 3 doewit tjampoer aer limoh nipis di makan 3 pagi.

No. **517.** Obat badan bengkak.

Ambil dringoe 1 djari pandjang, banglé 3 iris, kentjoer 3 iris, djinten item 10 saga, mesoei 1 djari pandjang, bawang merah 3 bidji, siri temoe oerat 7 lembar, pinang moeda 1 bidji, tjampoer dergan sagoe menta 7 saga, giling sama aer tjoeka tjampoer doebang woeroeng sapoeken dibadan.

No. **518.** Obat kaloe badan bengkak oemoer seperti tadi 40 sampe 50 taon.

Ambil sagoe menta $\frac{1}{2}$ mangko koffi, dringoe 1 ros djari, banglé 3 iris, bawang poeti 3 sioeng, kentjoer 3 iris, djinten item 3 saga, mesoei 1 ros djari, sintok 1 ros djari, sprantoe 1 bidji bakar, siri temoe oerat 2 lembar, pinang moeda 1 bidji, kapoer siri 1 klingsi, bawang merah 2 bidji bakar, temoelawak 3 iris, giling tamboes pake sama tjoeka panas dibadan.

No. **519.** Boregnja bikin piles kaloe orang demam tiada enak badan.

Ambil tegari 7 saga dibakar, siri 6 saga, djinten item 4 saga, en poeti, mesoei 5 saga, sintok 3 saga, sprantoe 1 bidji dibakar, adas 2 saga, poelosari 3 saga, tjengké 2 saga, tai angin 2 saga, kentjoer 5 saga, soenti 5 saga, banglé 3 iris, lempoejang pait 3 iris, bidara laoet 3 saga, tjendana 3 saga, ganti 4 saga, giling sama aer betoel kasi pake.

No. **520.** Bedak badan kaloe lesoe.

Adas poelosari 5 saga, tjengké 5 saga, pala 3 saga, poetjoek 6 saga, oenem 4 saga, djinten poeti 3 saga, mesoei 4 saga, waron 3 saga, klabet 5 saga, sari 7 saga, tegari 5 saga, klemba 5 saga, bidara laoet 3 saga, ganti 4 saga, kajoe tai 3 saga, kajoe rasamala 5 saga, kajoe

A Colonial Drug Cartel

Quinine production originated from Indigenous use of the cinchona tree in South America, which was extracted during colonial conquests, transplanted to Java, and commodified with the help of colonial science towards the end of the 19th century. Both quinine research and hygiene campaigns in the *kampung* were rooted in the colonial science of systematising—implying the process of selection of Indigenous knowledge—into frameworks that prioritised imperial goals. Both were disseminated through colonial networks, as seen in the League of Nations conferences on malaria and hygiene, which formalised and globalised these practices as tools for governance.

By the 18th century, cinchona attracted European botanists, culminating in 1820 with French chemists Pelletier and Caventou isolating quinine's alkaloids, marking a turning point in its commodification.¹⁰⁷ In Java, Dutch botanist Franz Junghuhn—often referred to as the 'Humboldt of the Netherlands'—planted over a million cinchona trees. However, these early plantations failed because the selected trees did not contain high-quinine bark due to a romanticised, naturalist approach to planting. Success only came with K.W. van Gorkom, who, between 1864 and 1875, established scientifically managed plantations in West Java in the Dutch Colonial Cinchona Estate at Cinyiruan (Figure 91). He collaborated with private entrepreneurs to plant quinine-rich cinchona varieties, establishing Java as the global leader in quinine production by 1890, providing over 90% of the world's supply.¹⁰⁸ In 1913, the Dutch colonial government formalised its dominance through the Quinine Agreement, which set prices for cinchona bark and created the world's first pharmaceutical cartel.¹⁰⁹ This cartel united the government, planters, scientists, and drug manufacturers under colonial economic goals—ensuring steady global demand for quinine while reinforcing the Netherlands' economic and political power. The Dutch also actively lobbied by promoting their product as the best on the global market and centralised medicinal practices supported by the government.¹¹⁰

The culmination of the Dutch position as a global exporter of

107 Andrew Goss, "Building the World's Supply of Quinine: Dutch Colonialism and the Origins of a Global Pharmaceutical Industry," *Endeavour* 38, no. 1 (March 1, 2014): 8–18, <https://doi.org/10.1016/j.endeavour.2013.10.002>. 9.

108 Ibid. 8–10

109 Ibid. 18.

110 "Correspondentie Met En over de Volkenbond in Verband Met de Bestrijding van Malaria; Met Nota's over Kina En Kinine; Conferentie in Bandoeng 1937 over Hygiëne in Het Verre Oosten."

quinquina was evident in the preparatory report of the 1937 Conference for the Promotion of Rural Hygiene in the Far East, held in Bandung. Critiques from other LNHO members address the monopoly of the Dutch on the cinchona trade as it suggested looking beyond Western Medicine and focusing on 'Hindu, Chinese and Arabic medicine, which are based on traditional empiricism.'¹¹¹ It critiqued the Dutch dismissal and devaluation of traditional medical practices without proper evaluation. It argues for humility and recognition of these ancient practices, which often parallel or complement modern medicine. Furthermore, it critiques the blind faith in Western pharmaceuticals, reminding readers that scientific progress should include critical reflection and openness to diverse knowledge systems. However, this unsincere critique is rooted in the pretence of disabling the Dutch hegemony over the quinine cartel position. This selective recognition is rooted in economic objectives to undermine their monopoly, instrumentalising Indigenous contributions to healing for imperial competition.

Dispossessing the Garden

The rise of quinine marked the onset of the institutionalisation of healing practices that subsequently sidelined Indigenous healing practices, especially those rooted in the *kampung*, starting from the time when the Dutch dominated the global market. As the influence of Western medicine grew, the processes of institutionalising medical practice consequently dispossessed the *dukun* from its own garden. They were thus considered untrained people who practised medicine.¹¹² The herbal gardens they tended—were diminished. These gardens, once rich with inherited knowledge and spiritual significance, were stripped of their meaning and reduced to mere backyards. The *dukun* was demonised because only mysticism and spirituality remained in their practice. This consequence resonates with Marx's *Critique of the Political Economy*: 'In handicrafts and manufacture, the workman makes use of a tool; in the factory, the machine makes use of him.'¹¹³ This especially applies to the *dukun bayi*, who, in parallel to the preparation of herbal medicine, also embodied the role of the midwife of the *kampung*. Her role was domesticated and sterilised by the Health Service Department to be part of its broader system of hygiene

111 Adrianus Pelt, "Bandoeng Conference on Rural Hygiene: letter, Dutch article" (Geneva: League of Nations Health Organisation, 1937), United Nations Library & Archives, Pel_Pp195_21-1. 3.

112 Hydrick, *Intensive Rural Hygiene Work an Public Health Education of the Public Health Service of Netherlands India*.

113 Karl Marx, *Capital; A Critique of Political Economy*, vol. 1 (Penguin Books, 1976). 548.

as her task was to assist with the deliveries of babies according to Western methods and to further reverberate hygiene propaganda to pregnant mothers.

The heroic narrative of quinine as a 'miracle cure' for malaria conceals the colonial economic agenda it served. Beneath this facade, the commodification of cinchona and the institutionalisation of medicine marginalised non-institutionalised local healing practices, stripping the garden of the kampung of its traditional knowledge and cultural agency. This process underscores the broader colonial strategy of dispossession and domination in the name of hygienic progress.

In the early 1900s, the introduction of Western medicine to kampungs faced significant resistance. It was seen as unfamiliar, expensive, and closely tied to colonial authority, as government physicians were viewed as agents of the colonial state. However, public health campaigns, such as the successful anti-yaws vaccination program, began to gain acceptance among the local population.¹¹⁴ This shift led to the gradual displacement of traditional healers.

The earliest case of discrediting traditional healing practices was during the Bandung Trade Fair in 1923. The government opened a stand which showcased a model of the building where chemical experiments were conducted on the extraction of alkaloids from the quinquina (Figure 95). Hanging on the wall, underneath the charts, are displayed botanical phototypes of the numerous variations used in their experiments. This display of knowledge dominates the existence of Indigenous practices and emphasises colonial scientific achievements. Later in the First Exhibition on Hygiene of the Netherlands Indies, discussed earlier, Satirical poems, such as Clinge Doorenbos' *Probatum Est*, mocked kampung remedies, portraying them as unscientific. He draws a caricatural portrait of the *dukun* (traditional healer) who recommends using 'rat paws in a bag' or 'hanging a cod eye around your neck.' These instructions mock traditional folk medicine by reducing them to the realm of purely superstitious beliefs. By titling the poem *Probatum Est*, the poet mocks the tendency to accept unproven or illogical remedies as 'proven' cures.¹¹⁵

One of the reasons that such a poem exists is that Dutch settlers, towards the end of the century, showed a curiosity about the healing capabilities of the *dukun*. Often, elderly men or women *dukuns* combined empirical knowledge of

114 Boomgaard, "The Development of Colonial Health Care in Java; an Exploratory Introduction."

115 Vereeniging tot Bevordering der Hygiëne in Nederlandsch-Indië., *Eerste Hygiëne-Tentoonstelling in Nederlandsch-Indië, Bandoeng 25 Juni-10 Juli 1927*. 73.

herbal medicine with ritualistic practices.¹¹⁶ They exercised the task of care for their own kampung and sometimes for other villages if they got a reputation. Their expertise passed orally through generations, was jealously guarded.¹¹⁷ A missionary wrote that a *dukun bayi* passed on her magic formulas to her children or grandchildren when her end was near. Colonial interest in their methods, as documented by medical officers, anthropologists and missionaries, reflected both fascination and an intent to control and undermine these practices. For Europeans, it was difficult to uncover the magical service of the *dukun* as they would not relinquish their writings, even for payment. They had their own language, just like the physicians and pharmacists in the Netherlands had ‘dog Latin’.

Another example of Dutch interest in the practices of the *dukun* is depicted by *Njonja* (Madam) Blokland’s publication, a Eurasian woman whose publication presented a compendium of 1810 recipes of *jamu* (herbal medicine), each addressing a type of symptom (Figure 96). Her work preserved kampung herbal traditions while encouraging European domestication of these practices. Her ethnic background of being half native—and being a woman—allowed her to bridge colonial and local knowledge from local healers and women who safeguarded the recipes for these ailments. The book was written in Malay because Eurasian women played a central role in domestic management. Many were responsible for overseeing native servants who primarily spoke Malay or Javanese.¹¹⁸ She even invites the readers to ‘call upon a Javanese woman skilled in such matters or a Javanese healer who is knowledgeable about their medicines and their uses’¹¹⁹ to source the ingredients from them and to transplant the medicinal plants in their own garden, mimicking the *dukun*’s. Typically, the *dukun* prescribed specific herbs for the patient to use. They would gather these from their garden or purchase them at the market before preparing them.¹²⁰ The care that the *dukun* were tasked to perform also went beyond the body as they regularly organised the cleaning of the village to cleanse it from evil forces. The locals would then clean their houses and remove weeds from the yards to rid the village of

116 Liesbeth Hesselink, “The Medical Market around 1850,” in *Healers on the Colonial Market, Native Doctors and Midwives in the Dutch East Indies* (Brill, 2011), 9–52, <https://www.jstor.org/stable/10.1163/j.ctt1w8h2db.6.14>.

117 Ibid. 16.

118 Susan Blackburn, *JAKARTA: Sejarah 400 Tahun*, 3rd ed. (Komunitas Bambu, 2024).

119 Van Blokland, *Dokoen Djawa Oetawa Kitab Dari Roepa-Roepa Obat Njang Terpake Di Tanah Djawa*, 3rd ed. (Batavia: Albrecht & Co., 1899). 3.

120 Hesselink, “The Medical Market around 1850.” 26.

evil influences. This indeed had a protective impact, making the village less appealing to mosquitoes, ticks, and snakes.¹²¹

The rise of quinine and its institutionalisation as a cornerstone of colonial medicine marked a long-lasting transformation in the kampung's social, cultural, and environmental fabric. Traditional healing practices, embodied by the *dukun* and their herbal gardens, were not just sidelined but actively displaced by the colonial. The *dukun*'s authority, rooted in inherited wisdom and community trust, was stripped away and replaced by the sanitised and systematised frameworks of colonial healthcare.

121 Hesselink, "The Medical Market around 1850." 17-18.

4. CONCLUSION

Reframing the Kampung: Reclaiming Agency

This thesis *The Bodies, The Building, and The Garden*, has examined the transformation of the kampung in the Netherlands East Indies into a site of colonial control through the intersections of public health, architecture and governance. By analysing documents and visual material of Dutch and non-state agents of colonisation, it argued that the kampung was politicised as a space of disease and disorder, manipulated under the guise of hygiene and modernity. From the microscopic realm of pathogens to the global networks of epidemiological governance, colonial interventions reframed the kampung as a laboratory for biopolitical experimentation, optimising labour and sustaining imperial dominance.

Across different scales, this thesis traced the material and ideological reshaping of the kampung. The first part examined the politicisation of native bodies, showcasing how germ theory and colonial health campaigns instrumentalised surveillance and sanitation to control the kampung while addressing the epistemic anxieties that drove these interventions. The second part explored the kampung as a site of biopolitical experimentation, where architectural regulations and anti-plague campaigns dismantled Indigenous construction practices, framing traditional tectonics and traditional materials as sources of disease. The last part discussed the entanglement of the kampung in global networks of epidemiological governance, revealing how institutions like the League of Nations and Rockefeller Foundation positioned hygiene campaigns with broader imperial competitions, erasing indigenous medical practices within the kampung in favour of Western medicine.

Colonial efforts to transform the kampung, while projected as rational and data-driven, were riddled with contradictions. Archival records reveal that statistical data, often presented as truthful and objective, was fraught with uncertainties, reflecting the fragility of the colonial epistemological foundation. The kampung, framed as a problem to be solved, became a space where colonial anxieties about disease and rebellion intersected, exposing the limits of the imperial state's control. This dichotomy of confidence and uncertainty highlights the instability of the colonial order and its reliance on provisional truths.

The transformation of the kampung serves as a critical lens for understanding the legacy of colonial modernity. It illustrates how public health and architectural interventions, while framed as progressive, often perpetuated systems of exploitation and marginalisation. These findings challenge contemporary global development projects in the name of progress that continue to marginalise local practices in favour of euro-centric solutions. This thesis underscores the need to decolonise knowledge systems and recent marginalising practices in contemporary governance by critiquing these historical dynamics.

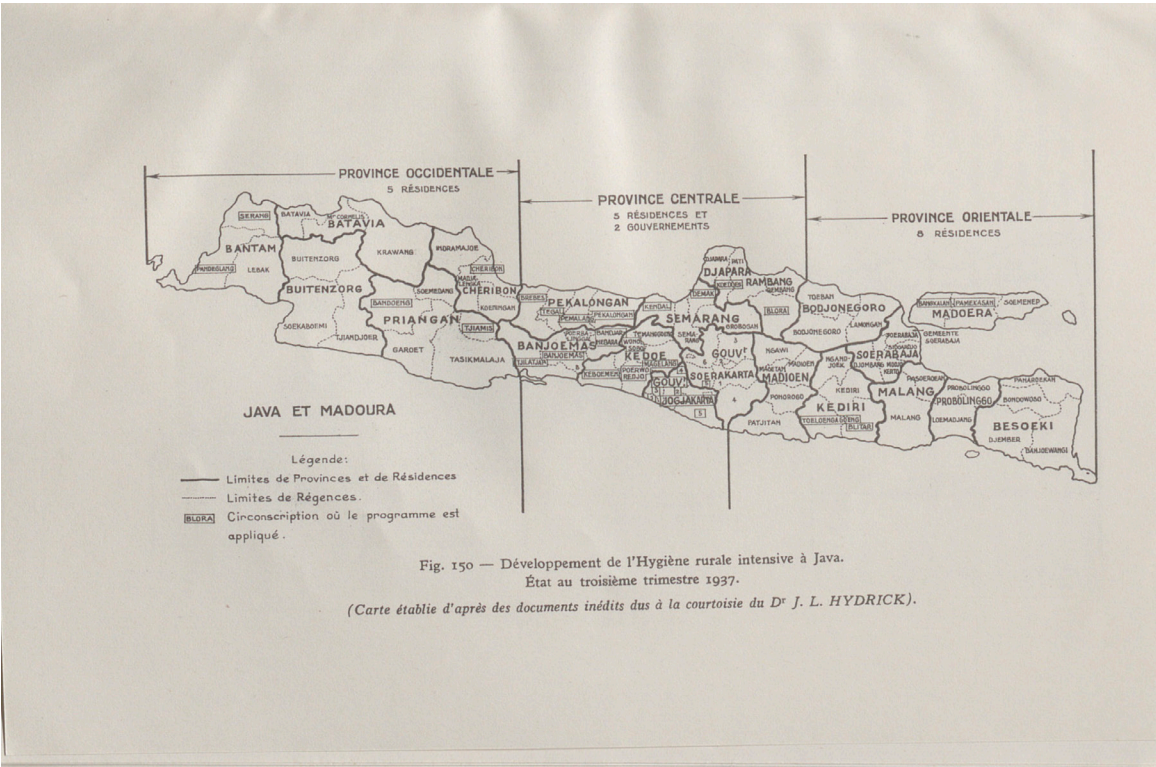
The limitations of this methodology must also be acknowledged. Consulting archival documents that facilitated colonial interventions often disempowers the kampung and its residents from having autonomy in self-representation. As a result, the kampung is portrayed as passive, with little agency for self-determination. Acts of resistance and voices from within are largely absent from these archives, which remain sterile of such content.

The parallel work of the short film *Memories of a Kampung* addresses these issues in contemporary Indonesia, following Ania Loomba's definition of postcolonialism. She situates it not just as a condition following the formal end of colonial rule by discussing the importance of recognising that many people in formerly colonised and colonising countries still experience the enduring oppressive framework established by colonialism.¹²² Although the focus has shifted away from the rural kampung, the urban kampung is now in the crosshairs of the government: in a capital city where the land is becoming less abundant, these kampungs face heightened pressure from municipal governance, threatening marginalised cultures and identities. Although Indonesia is a post-colonial nation, colonial dynamics are still at play. Pak Epni, the eldest resident of his kampung, observes, 'Indonesia still uses colonial law.'¹²³ Postcolonialism must thus address the ongoing influence of colonial power structures and ideologies.

122 Ania Loomba, *Colonialism/Postcolonialism*, Third edition, New Critical Idiom (London ; New York, NY: Routledge, Taylor & Francis Group, 2015).

123 *Memories of a Kampung*, 2024.

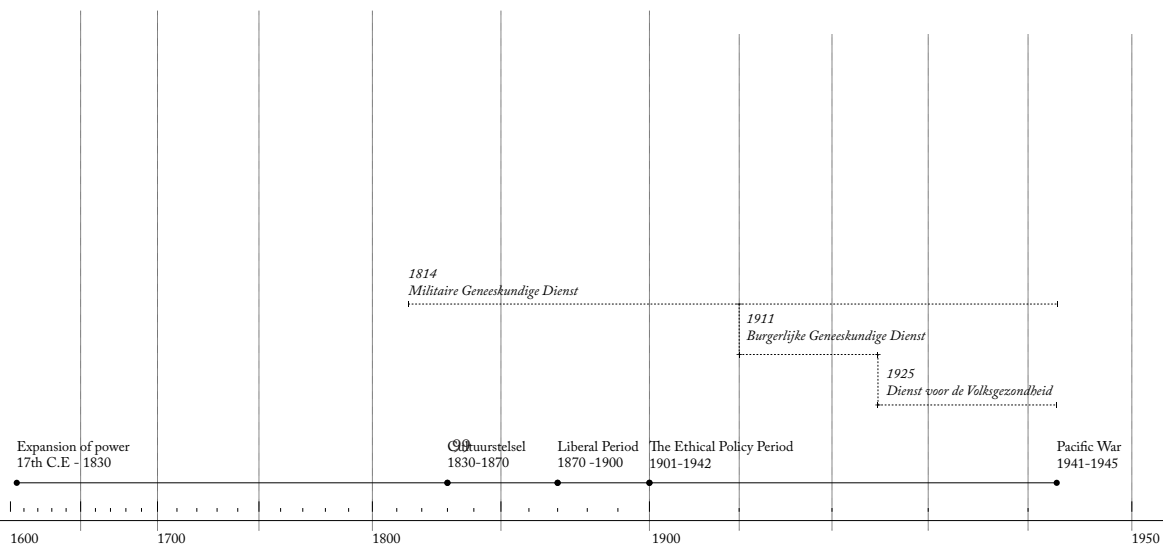
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