CHAPTER 2

In and Out of Control: Technologies and Patients in Surgery

In a letter to the German journalist Werner Gauss dated 7 July 1952, Albert Schweitzer complained that his surgical team often lacked an assistant who knew how to work with chloroform or ether. Moreover, the ‘natives’ considered general anesthesia ‘something scary’ and would therefore favor being subjected to other methods of anesthesia, the most frequent being infiltration anesthesia, a technique developed by the German surgeon Carl Ludwig Schleich in the 1890s. A photograph of Schleich hung on the wall of the operating theater in Lambaréné, because Schweitzer wanted his patients to meet their ‘great benefactor from face’. He elaborated on this in a passage worthy of being quoted at length:

When I operate myself, there is a ceremony of gratefulness at the end of the intervention when the patient is dressed, but before he is brought away. I insist that the natives are trained towards an appreciation of gratitude. The ceremony goes as follows: ‘Say thank you, dear Dr Schweitzer’. The native responds: ‘thank you dear Dr Schweitzer’ – ‘Say: thank you dear Miss Maria’ (the nurse assisting in the operation room) ‘thank you dear Miss Maria’ – ‘Say thank you Pierre Piebé’ (the black auxiliary in the operation room who is also assisting) ‘thank you, Pierre Piebé’ – ‘And now finally say: thank you Monsieur Schleich’ ‘thank you Monsieur (and now something that very remotely sounds like Schleich is being articulated)’

Because the Natives cannot pronounce Sch.

How are we to understand such episodes in the context of surgical practices at the Albert Schweitzer Hospital, in Africa more generally, and indeed in the wider contemporary world? The passage illustrates common peculiarities of the doctor-patient relationship; it implies the importance of technology in surgical practice, in this case anesthesia; it hints at surgery’s need to control procedures and all involved parties; and it evokes questions on how individuals understand the body. Technology, control, and the human body are common concerns for historians of medicine and the African continent alike. This chapter combines

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1 Schweitzer to Gauss, 7 July 1952, AMS.
a Colonial Studies framework with one from Science and Technology Studies, merging different notions of control to assess the role and place of technology and patient agency in the hospital. Examining routines in and around the surgical ward, it illuminates an area that has, surprisingly, received only limited attention in both fields.

1 Surgery, Technology, and Control

The rise of surgery and the rise of the modern hospital are closely intertwined. Both built upon the scientific reasoning that had penetrated most domains of Western societies by the second half of the nineteenth century. Medical practices as well as administrative procedures and decision-making processes were reshaped according to these scientific norms. Hospitals reflected these developments by becoming ‘models of cleanliness, efficiency, and expertise’ as well as of ‘control and organization’. Such principles were similarly crucial for the emergence of surgery as a medical practice. Indeed, according to Thomas Schlich, surgery can be understood as a network of control, with the latter defined as ‘the power and ability of an individual to make a thing or an individual perform in a predetermined way’. For this purpose, phenomena have to be predicted and quantified. Through such processes, control becomes strongly connected to technology. As in any operating theater, doctors at the Albert Schweitzer Hospital were very concerned to exert this sort of procedural control.

When focusing on medical practices, it is important to retain a broad and flexible definition of technology that is difficult to separate from science and that stresses the interaction and agency of objects, individuals, and society. At least three meanings of the term ‘technology’ can thus be identified: ‘physical objects or artefacts, [...] activities or processes, (and) what people know as well as what they do’. In surgery, these correspond to instruments, lights, and tables; anesthesia and asepsis; and the anatomical atlas as well as surgery itself. As this chapter shows, surgery as a technology is sometimes difficult to differentiate from individual technologies in the narrower sense, which are usually

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2 Donzé, L’ombre de César; Granshaw, ‘The Rise of the Modern Hospital in Britain’; Howell, Technology in the Hospital; Schlich, ‘The Days of Brilliance Are Past’.
3 Stevens, In Sickness and in Wealth, 18.
4 Schlich, ‘Surgery, Science and Modernity’. Schlich takes this definition from Levin, who in turn borrows from Blaise Pascal. See: Levin, ‘Contexts of Control’, 22.
5 This view is influenced by actor-network-theory. See: Latour, Reassembling the Social see Chapter 4 especially. See also: Pickstone, Ways of Knowing, 15.
6 Bijker, Hughes, and Pinch, ‘The Social Construction of Technological Systems, Introduction’, 4.
conceived as tools to uphold procedural control. Since the hospital as an institution provided a more favorable environment to achieve this, these technologies accelerated surgery’s move away from the home of the patient to what Sally Wilde describes as the doctor’s ‘territory’. This shifted the balance of power away from the patient and his or her relatives to the surgeon. Another significant by-product of the increasing use of technologies was that medical treatment became more impersonal, to the extent that Joel D. Howell could term hospitals ‘repair shops’. This alienation was enabled through specific biomedical conceptions of the body as an individual site of intervention distinct from the patient's self.

The introduction of new medical technologies depended on such shifting conceptions of the body, as well as on practical considerations and the broader social and political context. Anesthesia, a key technology of surgical control, eventually became standard in surgical wards, not only because it suppressed pain, but also because it produced a ‘tranquilly pliant’ patient, as Martin S. Pernick has shown. Asepsis, the other main surgical technology that emerged in the late nineteenth century, has its theoretical foundations in germ theory. Pasteurian principles were fundamental for medical scientists and surgeons alike. As the former wanted to control organisms in laboratories in order to examine or manipulate them in a systematic way, the latter sought to control the patient’s body. Pasteurism, which views health as a social concern, also significantly shaped France’s ‘civilizing mission’. Through science, control

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7 On this point, see also: Schlich and Crenner, ‘Technological Change in Surgery’.
8 Wilde, ‘The Elephants in the Doctor-Patient Relationship’, 2. See also: Tröhler, ‘Surgery (Modern)’, 995.
9 Howell, ‘Hospitals’, 511. It has long been observed that the use of technology in diagnostics estranged doctor and patient. See: Reiser, *Medicine and the Reign of Technology*, 230. This view has been challenged, see for example: Stanton, ‘Innovations in Health and Medicine, Introduction’, 3.
10 The sociologist Stefan Hirschauer considers the administration of anesthesia as a separation of the patient’s body from his or her person, thereby protecting the patient and the surgeon from guilt or shame. See: Hirschauer, ‘The Manufacture of Bodies in Surgery’. The medical anthropologist Arthur Kleinman likewise underlines biomedicine’s focus on the individual body, which renders the suffering experienced by patients or their families as subjective and therefore irrelevant. See: Kleinman, ‘What Is Specific to Western Medicine’. The historian Schlich formulates a similar argument: by treating bodies as objects separate from patients, doctors turn problems of society into ‘purely technical and individual problems that can be solved by intervening into the individual’s body’. Schlich, ‘The Technological Fix and the Modern Body’.
11 Pernick, *A Calculus of Suffering*, 84.
12 Schlich, ‘Surgery, Science and Modernity’.
13 Chakrabarti, *Medicine and Empire*, 164. He takes from: Conklin, *A Mission to Civilize*. 
was now to be extended to spaces beyond the laboratory and the operating theater: the hospital, the city, the colonial world. This chapter provides an example of technology playing a less central role in surgical control. Furthermore, it adds to the growing literature discussed below that provides a more nuanced picture of what has hitherto been regarded as total colonial control.

With their arrival in Africa, biomedical technologies in the broad sense expanded an ‘existing medical market by additional concepts and means’.\textsuperscript{14} Africanist historians have frequently examined how practitioners and patients alike reconfigured the meanings, practices, and functions of such technologies, how they offered ‘alternatives to the dominant order of things’,\textsuperscript{15} and provided different conceptions of ‘bodies and their place in the world’.\textsuperscript{16} Paul S. Landau in his study of Christianity in colonial southern Africa gives an example. Medical missionaries there targeted individuals through surgical treatments and thus linked disease with personal wrongdoing. In this manner, they shifted illness from the broader social context, within which it was usually understood in African societies, to the realm of simple biology. Behind this process was the missionaries’ desire to remove individual Africans from their communities and to control and ultimately convert them.\textsuperscript{17}

On the surface, Schweitzer appeared to differ in this respect. Florence Bernault argues that his ‘patronizing triumph of medical assistance is predicated on hegemonic exchanges carefully confined to the physical’; she thus conceives of his hospital ‘as a locale where Schweitzer’s treatment of ailing bodies can refrain from reaching out to the patients’ inner self or cultural assets’.\textsuperscript{18} A closer examination of surgical practices and technologies at the hospital and an analysis of control inside and outside the operating theater reveal a more complex picture.

Surgery was a central element in the practice of biomedicine in colonial Africa too.\textsuperscript{19} Across the continent, surgery took some time before it found a

\textsuperscript{14} Bruchhausen, ‘Medical Pluralism as a Historical Phenomenon’, 104.
\textsuperscript{15} They did so by ‘creating new relations between herbal medicines and scientific technologies, between ancestors and laboratories, cures for witchcraft and the efficacy of pharmaceuticals’. Langwick, \textit{Bodies, Politics, and African Healing}, 237.
\textsuperscript{16} White, \textit{Speaking with Vampires}, 5. According to White, ‘new technologies and procedures did not have meaning because they were new or powerful, but because of how they articulated ideas about bodies and their place in the world, and because of the ways in which they reproduced older practices’.
\textsuperscript{17} Landau, ‘Explaining Surgical Evangelism’.
\textsuperscript{18} Bernault, ‘Body, Power and Sacrifice’, 226.
\textsuperscript{19} Crozier, \textit{Practising Colonial Medicine}, 24–26; Eckart, \textit{Medizin und Kolonialimperialismus}, 250; Kalusa, ‘Christian Medical Discourse and Praxis on the Imperial Frontier’, 256; Lachenal and Taithe, ‘Une généalogie missionnaire et coloniale de l’humanitaire’, 52; Landau, \textit{The Realm of the Word}, 117.
place for itself in the pluralist medical setting.\textsuperscript{20} Intrusive local body practices, such as cupping or piercing, accelerated the acceptance of surgery.\textsuperscript{21} Some missionaries, hoping to enhance the reputation of their respective denominations, invigorated the process of reinterpretation by attributing supernatural qualities to surgery,\textsuperscript{22} while others distanced themselves from such practices.\textsuperscript{23} Finally, it should not be overlooked that Africans ‘assessed empirical evidence’, as Sokhieng Au has insisted for the case of the Belgian Congo.\textsuperscript{24} Statistics for\textsuperscript{AF} suggest that biomedicine was most sought after when healing was perceived to occur after a low number of consultations. It is thus unsurprising that surgical interventions were the most frequent treatment in hospitals of the colony, along with injections against yaws.\textsuperscript{25}

Despite its centrality in medical practice, there are very few studies in African medical history that place surgery at the center of analysis. This chapter helps to fill this gap by linking what I have defined as procedural control with an Africanist understanding of control. Control is a frequently employed but rarely defined notion in Africanist medical historiography that is conceptualized either very broadly\textsuperscript{26} or rather narrowly.\textsuperscript{27} A recurrent theme is how ‘epidemic control provided a rationale for social control’.\textsuperscript{28} Case studies of

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\textsuperscript{20} This was the case in Malawi until the early 1960s. See: Good, \textit{The Steamer Parish}, 407. In south-eastern Tanzania, local residents were reluctant to undergo surgery in the 1930s. See: Ranger, ‘Godly Medicine’, 268. The same has been observed for Zambia. See: White, \textit{Speaking with Vampires}, 105.

\textsuperscript{21} Bruchhausen, ‘Heil und Unheil aus dem Leib’; Janzen, \textit{The Quest for Therapy}, 216; White, \textit{Speaking with Vampires}, 104.

\textsuperscript{22} Benedictines in Tanzania regularly incorporated prayers, benedictions and holy water into their medical practices. See: Bruchhausen, \textit{Medizin zwischen den Welten}, 325–26. Catholic missionaries of Efok in northern Cameroon referred to surgery as a ‘miracle’. See: Lachenal and Taïthe, ‘Une généalogie missionnaire et coloniale de l’humanitaire’, 52. See also: White, \textit{Speaking with Vampires}, 104.

\textsuperscript{23} In Tanzania, missionaries did so due to pressures from the metropole, where the introduction of a magical version of Christianity in Britian’s African colonies was feared. See: Ranger, ‘Godly Medicine’, 280–81. In the Belgian Congo, Dr. Chesterman performed surgeries in public in order to prove that there was nothing supernatural about the practice. See: Hunt, \textit{A Colonial Lexicon}, 120. In Uganda, surgeons did the same to demonstrate that no body parts were stolen or eaten during surgery. See: White, \textit{Speaking with Vampires}, 110.

\textsuperscript{24} Au, ‘Cutting the Flesh’, 306.

\textsuperscript{25} Headrick, \textit{Colonialism, Health and Illness in French Equatorial Africa}, 386.

\textsuperscript{26} Feierman, ‘Struggles for Control’, 75. Feierman highlights that control over healing signified control over practical matters. Healers had the power to determine what professional or family duties an individual had to meet. They also had control over ideologies by defining the causes of suffering.

\textsuperscript{27} Cooper and Stoler, ‘Introduction Tensions of Empire’. Cooper and Stoler often focus on policing.

\textsuperscript{28} Malowany, ‘Unfinished Agendas’, 331.
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anti-sleeping sickness campaigns in particular have underlined the coercive nature of colonial medical and social control. In this sense, colonial control is more about gaining ‘the power and ability […] to make a thing or an individual perform in a predetermined way’ rather than executing it. Control represented a precondition for surgeons to perform their job, while for colonial doctors and administrators control was an expected outcome of their jobs.

Jonathan Sadowsky has recognized that by focusing on colonial medical institutions, for instance, historians must nevertheless modify ‘the grand theory of the nature of colonial power’. His study of Nigerian ‘institutions of madness’ shows that even though social control can be observed to a certain degree, what is more striking is the ‘contradictory, half-hearted nature of the institutions for most of the colonial period’. In her book on ‘violence, remedies, and reverie in colonial Congo’, Nancy Hunt similarly concludes that ‘the nervous state was limited in its ability to understand, perceive, and control its colonial subjects’. Hunt’s state has a second ‘mode of presence’, a biopolitical guise ‘that worked to promote life and health’. Lynn Thomas has likewise stressed that colonial power sometimes operated ‘through a political technology that promised life rather than threatened death’. The limits of Foucauldian biopower in African history have been frequently discussed; nevertheless, what Hunt and Thomas describe in their books resembles the kind of control patients experienced at the Albert Schweitzer Hospital, an institution that was atypical, but certainly not half-hearted. Being neither government- nor missionary-run, its primary goal was neither to convert Africans, nor to recruit them as laborers. While procedural control was clearly strived for, social control was of secondary concern only; the former contributed to a specific understanding of the body and intensified the latter by dispersing biopolitical promises.

2 Surgery at the Albert Schweitzer Hospital: Context and Development

Schweitzer repeatedly underlined the central status of surgery at the hospital. On arrival, he was surprised to find that the demand was so high that operations

29 Bell, Frontiers of Medicine, 161; Lachenal, Le médicament qui devait sauver l’Afrique; Lyons, The Colonial Disease, 201–3.
30 Sadowsky, Imperial Bedlam, 115.
31 Hunt, A Nervous State, 237.
32 Ibid., 8.
33 Thomas, Politics of the Womb, 176.
34 Cooper, ‘Conflict and Connection’, 1533; Vaughan, Curing Their Ills, 8–12.
could have been performed on a daily basis. Having believed that surgery would be rejected in equatorial Africa, he attributed the significant demand in Lambaréné to a military surgeon who had performed a number of successful operations in the area. ‘I harvest what he has sown,’ Schweitzer wrote. Together with his wife, who acted as an anesthetist, they offered surgical interventions only two to three times per week. As he did not want to neglect his other medical duties, they were left with little time to wash surgical instruments and cloths. Moreover, he admitted that he was not overly confident about his surgical skills: before each new intervention, he consulted a handbook to revise how to perform the upcoming operation properly. Despite this, all his surgeries ended successfully. ‘This only increases the redoubtable confidence of the blacks in my abilities. It makes me tremble,’ Schweitzer commented on the effects of these successes. In a more confidential report, he revealed that he was afraid of performing operations for fear of losing the trust of potential patients in case of failure. These writings support the assumption that African patients chose to go to a hospital only when a specific curative treatment, such as surgery, had proven to be efficient and successful.

Shortly after Schweitzer returned to Lambaréné in 1924, he wrote to Pierre Stolz, Professor of Medicine in Strasbourg, about how he had to neglect surgical patients because he was too busy treating numerous cases of various skin diseases as well as performing frequent blood tests. Schweitzer regretted this and sought for a solution:

This is a pity, because there would be a lot of surgical work. Hence, I decided to bring in someone for surgery. Can you find me in Strasbourg or somewhere else a young unmarried doctor, who has some experience in surgery, who would be tempted to spend a year in Africa? [...] He doesn’t have to be a great surgeon; the most important thing is that he knows how to properly operate on hernias, because this is the big piece of our surgical work here.

By asking for a surgeon, Schweitzer responded to both the local demand for surgery and his own limitations in surgical skill and confidence. Soon thereafter, the Alsatian doctor Frédéric Trensz, who served in Lambaréné in 1926–27, reported that the main reason for the popularity of the hospital was its surgical service. After the hospital’s relocation in 1927, a routine was established in

35 Schweitzer, Zwischen Wasser und Urwald, 65.
36 Schweitzer, ‘Notes et Nouvelles de la part du prof. Albert Schweitzer. Deuxième rapport’, 36–37.
37 Schweitzer, ‘Bericht an das Strassburger Comité’, 15 December 1913, AMS.
38 Schweitzer to Stolz, dated in retrospect 1924, AMS.
39 Trensz, ‘Le médecin’, 211.
which surgery would assume a central role. Once again Schweitzer attributed the renowned reputation of the surgical services at the hospital to the excellent work performed by his surgeons.\footnote{Schweitzer, ‘Briefe aus dem Lambarene Spital 1931’, 6.}

Surgery’s central position among hospital services and its radiance were reflected in doctors’ nicknames. For example, the Swiss physician Mark Lauterburg, who practiced at the same time as Trensz, was known as ‘Tschinda Tschinda’, translated by his wife, Elsa, as ‘the man who cuts the belly with courage’.\footnote{Lauterburg-Bonjour, Lambarene: Erlebnisse einer Bernerin im afrikanischen Urwald, 13.}
The belly appeared in the expression because it was regularly cut at the hospital, hernias and hydroceles being the most frequent operations. In his German translation of the nickname, Schweitzer simplified it to ‘the man who cuts boldly’.\footnote{Schweitzer, ‘Mitteilungen aus Lambarene: Zweites Heft, Herbst 1924 bis Herbst 1925’, 124.}
This was further reduced in translation by Dr. Margrith Schroeder, who served at the hospital in the late 1940s, to ‘the knife’;\footnote{Schröder, ‘On fait ce qu’on peut’, 179.} thereby rendering man and technology as one. This example thus demonstrates how the surgeon, the scalpel and the surgery procedure as a whole came to be seen not only as interconnected, but as almost inseparable elements of the same technological process.

Figure 5 compares the number of patients who underwent operations with the total number of inpatients at the hospital from 1926 to 1965.\footnote{The statistics relating to patients who underwent operations are taken from the operation protocols, in which each operation since 1926 had been recorded. See: L – P – O1-9, AMS.}
Every surgical intervention was recorded in books. These operation protocols include basic information on the patient, surgeon, and assistants; diagnosis and method of executing the intervention; and type of anesthesia as well as occasional general comments (see Illustration 10). For reconstructing surgical practices, these records are of limited value. However, they are useful for compiling statistics and cross-checking data with other sources. Between 1926 and 1960, the number of doctors working at the hospital besides Schweitzer remained largely stable at two or three; Schweitzer himself, with the notable exception of during World War Two, no longer practiced during this period. Only after Gabonese independence did the number of additional physicians rise to as high as four, five, or six.\footnote{This can be observed in the operation protocols, in various reports (see Chapter 1), and on http://schweitzer.org/2012/de/lambarene/mitarbeiter-1913-1965 (This site no longer exists.).}

From 1930 to 1932, a considerable and inexplicable rise in surgical interventions occurred; their number almost quadrupled without a corresponding increase in patient or doctor numbers. In the years that followed, the number of surgeries stabilized; approximately a quarter to a third of all inpatients at the
hospital underwent operations. Typically, two of the three doctors were responsible for surgeries, while the third was often required to assist. This was sometimes to the detriment of other treatments. The Dutch physician Barend Schweitzer, ‘Briefe aus dem Lambarene Spital November 1935’.
Bonnema, for instance, complained in 1932 that he was forced to neglect treating very frequent ulcer cases because he had to perform so many operations.\textsuperscript{47} Operations were scheduled for Tuesdays, Thursdays, and Saturdays. This timetable would be kept until Schweitzer’s death, but was not overly rigid as emergencies or lengthy operations occurred regularly and surgical patients often came in waves.\textsuperscript{48} In March 1934, for example, Ladislav Goldschmid, a Hungarian surgeon who served at the hospital three times until 1947, wrote of a ‘surgical high season’, in which operations were performed on a daily basis for a period of almost one month. He wanted to send patients home as soon as possible in order to minimize expenses for food.\textsuperscript{49}

During World War Two, the proportion of patients who underwent operations dropped considerably to approximately 5 to 15 percent because the hospital did not have the capacity to do more. Schweitzer was required to participate in surgery again due to a lack of funding and qualified personnel. After the war, he quickly expanded the hospital’s surgical services once more. The Swiss doctor René Kopp, who would serve in Lambaréné from 1946 to 1948 and again on several occasions after Schweitzer’s death, learned that it would be ‘useless for you to go to a school for colonial medicine. You work as a surgeon and you will be initiated into colonial medicine here on the spot’.\textsuperscript{50}

The percentage of surgical patients had almost reached its pre-war levels by 1946. A year later, almost 50 percent of all inpatients underwent a surgical intervention, possibly to make up for the low number of operations performed during World War Two, as postponements were often feasible with hernias. Thereafter, the numbers stabilized to roughly where they had been in the 1930s. During the 1950s it appears that Schweitzer struggled to recruit surgeons,\textsuperscript{51} even though his global reputation was growing rapidly at the time. He believed that eighteen months was too big a commitment for most surgeons, but considered this the required minimum in order to guarantee an efficient service.\textsuperscript{52} A tentative count reveals that in the 1950s the number of doctors and

\begin{itemize}
\item \textsuperscript{47} Bonnema to Schweitzer, 2 March 1932, AMS.
\item \textsuperscript{48} Schweitzer, ‘Briefe aus dem Lambarene Spital November 1935’, 8.
\item \textsuperscript{49} Goldschmid to Schweitzer, 7 March 1934, AMS. Dr. Bonnema reported the same surgical peak in: Bonnema to Schweitzer, 21 March 1934, AMS. The protocols support these claims.
\item \textsuperscript{50} Schweitzer to Kopp, 24 September 1945, AMS.
\item \textsuperscript{51} In 1951, Schweitzer approached the doctor at the government hospital of Lambaréné to request him to perform some surgeries, because he did not have enough personnel at the time. See: Bessuges, Lambaréné à l’ombre de Schweitzer, 92. In late 1958, a Danish doctor, who was visiting for three months reported that Schweitzer had claimed that he had not had a ‘fully trained surgeon’ for ten years. See: Østergaard Christensen, At Work with Albert Schweitzer, 13.
\item \textsuperscript{52} Schweitzer to Mellon, 7 July 1955. Published in: Schweitzer and Mellon, Brothers in Spirit.
\end{itemize}
the combined months that they served was only marginally lower than the corresponding figures for the 1930s.\textsuperscript{53}

After Gabonese independence in 1960, the proportion of patients who underwent surgery at the hospital rose again to 40 and occasionally over 50 percent. One explanation for this is that state institutions faced a shortage of qualified personnel at the time.\textsuperscript{54} In contrast, Schweitzer continued to employ new personnel and maintain his focus on surgery. In January 1961, Norbert Komora, assistant doctor in Bordeaux enquired if he might be allowed to work at Lambaréné. Schweitzer then wrote to Komora’s superior to ask if he would allow his assistant to leave and if ‘Mister Komora is capable of properly perform routine operations (hernias and others)? Hernias are our daily bread here. I have four physicians. Each of them has to know how to perform surgeries’.\textsuperscript{55} Even though Komora would never come to Lambaréné, Schweitzer’s questions illustrate the unceasing priority he assigned to surgery.

The information gathered for this overview indicates that surgery was the hospital’s main service and that much organizational time and energy was devoted to it. Schweitzer did not perceive surgery as practiced in the colonies as essentially different from that practiced in Europe. Above all, he considered it to be the most important medical skill a physician needed to possess in order to practice at Lambaréné. As seen in Chapter 1, he had clear ideas about any prospective doctor’s required competencies, medical and non-medical alike. In the area of surgery, this allowed Schweitzer to ensure procedural control, of which he had very specific preconceptions.

By far the most common surgical intervention during the whole study period was the repair of hernias.\textsuperscript{56} Hernias were attributed to strenuous labor and

\textsuperscript{53} From 1930 to 1939, 15 doctors served for a combined total of over 370 months. From 1950 to 1959, 14 doctors served for a combined total of over 340 months. These figures are derived from the incomplete list on http://schweitzer.org/2012/de/lambarene/mitarbeiter-1913-1965 (This site no longer exists. The author possesses a copy of the list).

\textsuperscript{54} Mabika Ognandzi, Médicaliser l’Afrique, 235.

\textsuperscript{55} Schweitzer to Dubourg, 23 February 1961, AMS.

\textsuperscript{56} The ‘Statistiques de l’Hôpital’ provide the following numbers: In 1932, out of a total of 438 operations, 239 were hernia repairs and 38 were hydrocele surgeries. In 1937, there were 400 hernia repairs and 104 hydrocele surgeries in a total of 614 operations. In 1946, 186 hernia repairs and 43 hydrocele surgeries were conducted in a total of 360 operations. See: L – A – S2-3, AMS. For the years 1961 and 1962, Dr. Rolf Müller reported that 50.6 percent and 54.3 percent of all operations were to repair hernias and hydroceles respectively (see Müller, ’50 Jahre Albert-Schweitzer-Spital’, 16). This suggests a slight reduction in the relative frequency of these operations, probably due to the increasing number of women who visited the hospital and the resulting increase in gynaecological interventions.
were widespread throughout the region, with Schweitzer having already reported the high prevalence of the condition during his first stay. In 1933, Goldschmid repaired over one hundred hernias in the first eight months after his arrival. Three years later, Dr. Heinz Barasch wrote to Schweitzer that he had performed a total of almost four hundred hernia operations in fifteen months. A hernia repair, he reported, would now take him no longer than thirty-five minutes, a pace which enabled him to conduct four instead of three repairs per operation day. In August 1957, hernia operations alone were undertaken for a week to overcome a backlog of requests, but a waiting list had developed once more just a month later. In the 1960s, Tuesdays were reserved for hernia repairs. Using two operating tables, up to fifteen patients went under the knife per day. This account clearly evokes the impersonal ‘repair shop’ invoked by Howell and cited at the beginning of this chapter. However, a closer examination of surgical practice and post-operative care at the Albert Schweitzer Hospital provides a slightly different and more nuanced picture.

Figure 6 is compiled from scattered and somewhat problematic records. It compares the number of surgical operations performed at all government health facilities in colonial Gabon with the number of individual patients

57 In the Belgian Congo, hernias represented 50 to 80 percent of all major operations. Waiting lists of up to eight months were common for such interventions at mission hospitals. See: Au, ‘Cutting the Flesh’, 305. Mabika also refers repeatedly to hernias. See: Mabika Ognandzi, Médicaliser l’Afrique, 59, 249.
58 Schweitzer, ‘Bericht an das Strassburger Comitee’, 15 December 1913, AMS.
59 Schweitzer, ‘Briefe aus dem Lambarene Spital Februar 1934’, 2.
60 Barasch to Schweitzer, 3 June 1936, AMS.
61 Van der Kreek to Schweitzer, 18 August 1957, AMS. The protocols reveal that between 27 July and 29 August 1957, 44 of the 52 operations performed were hernias repairs. See: L-P-O6, AMS.
62 Friedmann to Schweitzer, 8 September 1957, AMS.
63 Müller, ‘50 Jahre Albert-Schweitzer-Spital’, 16.
64 In the 1930s, there were three hospitals primarily responsible for surgical services: Libreville, Port-Gentil, and Oyem (the latter on an on-off basis). After 1950, a total of eight hospitals provided hernia repairs and other forms of surgery. See the annual reports of the Service de Santé for aef and for Gabon: ZK 005-121(1934–35)/160(1940, 1942–44)/089(1945–47)/093(1953)/016(1954)/095(1955–56), SHD; ZK 005-127(1925–33)/128(1950–51)/005(1957), SHD. Besides large and inexplicable fluctuations (from 1934 to 1935 or from 1953 to 1954), a major problem in compiling these statistics was the difference in categorising ‘small interventions’. ‘Abscess, caries, hydro adenitis, vaginal hydroceles, urethral stenosis, onychia, wounds, ulcers’ were labelled as such and executed frequently, but they were not protocolled at the Albert Schweitzer Hospital. I have thus substracted those from the relevant government statistics. All records are rather inconsistent. The numbers should not be assumed to be complete, but serve their purpose of providing a general overview of surgical procedures.
undergoing surgery at the Albert Schweitzer Hospital. During the interwar period, surgeons at the latter performed operations on at least as many patients as all those who underwent surgery at government institutions. Despite their superiors’ suspicions about Schweitzer, touring government doctors or those from less well-equipped medical posts sent patients to his hospital.\(^{65}\)

Indeed, there are regular reports of people who came from over two hundred kilometers away to undergo an operation at the hospital.\(^{66}\)

Immediately after World War Two, Schweitzer’s surgeons still performed approximately one-third of all operations in the colonial territory of Gabon, but this proportion dropped below 15 percent by 1957. In the 1950s, a similar number of patients underwent surgery at the hospital as in the 1930s. While the population of Gabon is estimated to have remained more or less stable, more and more women started to come for treatment in the mid-1950s.\(^{67}\)

However, reports of surgical patients coming from afar diminish from 1945 onwards. This can be partially explained by the fact that during this period the French colonial government expanded its medical services by opening medical posts throughout Gabon, especially in the first ten years after the war, as

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65 In 1932, Dr. Bonnema reported that a government doctor, who went on an anti-sleeping-sickness-tour, directed people with hernias and hydroceles to seek treatment at Schweitzer’s hospital. See: Bonnema to Schweitzer, 29 May 1932, AMS. In 1936, Dr. Barasch performed an operation on a woman who had been sent to him by the government doctor in Mouila, which is almost two hundred kilometers to the south. See: Barasch to Schweitzer, 3 June 1936, AMS.

66 Hediger to Schweitzer, 18 May 1928, AMS. He mentioned people from Libreville and Fernan Vaz; Bonnema to Schweitzer, 10 April 1932, AMS. Bonnema reported of patients coming from Franceville.

67 As indicated in Chapter 1 and discussed in more detail in Chapter 3.
Hines Mabika has shown.68 Some of these hospitals were also famous for conducting hernia repairs.69 There is indeed a correlation between expanding government services and decreasing demand at Schweitzer’s hospital, not only as a result of general trends, but also within individual years, such as 1935. This suggests, perhaps unsurprisingly, that patients tended to choose the nearest facility.

3 Controlling the Surgical Arena: Actors and Organization

The patient is physically at the center of every operation, but reports of surgery seldom focus on him or her. A close reading of the many reports of surgery at the Albert Schweitzer Hospital nevertheless allows for a tentative sketch of how patients went through it. Guy Barthélemy, a French forester who visited in 1951 while travelling through Africa, provided an especially detailed account.70 On the day on which their operation was scheduled, patients moved from their sleeping quarters to the Grande Pharmacie, apparently without assistance from a nurse. There, they were made to wait in a designated area next to the operating theater. Here, Barthélemy takes up the already familiar thread of patients being policed. ‘A black auxiliary guards them so that they do not disappear at the last moment or quickly take a big meal from their family to strengthen their courage’, he wrote.71

During Barthélemy’s visit, there were two mobile operating tables; while one patient underwent surgery on the one, another patient was prepared for his or her operation on the other. One nurse remained next to the patient for the duration of an operation to monitor blood pressure, pulse, and respiration.72 Towards the end of the 1950s, surgeons at the hospital started to operate at two tables simultaneously.73

68 Mabika Ognandzi, Médicaliser l’Afrique.
69 Lavignotte, L’évur: croyance des Fañ du Gabon, 93. Lavignotte, a missionary, reported from Ovan in the north-east of the territory.
70 Barthélemy, Wie ich Lambarene erlebte. For Barthélemy’s description of surgical practices, see pages 34f in particular. Barthélemy returned to Lambaréné towards the end of the decade to take charge of the hospital’s maintenance. It was then that he met Dr. Greet van der Kreek, with whom he returned to France in 1960. After marrying each other, they opened a ‘Village Albert Schweitzer’ in Dordogne where they cared for mentally and physically ill patients.
71 Ibid., 34.
72 Ibid., 34–35.
73 Anderegg, ‘Operationssaal und Sterilisation’, 55; Müller, ‘50 Jahre Albert-Schweitzer-Spital’, 16.
Many reports describe in detail how patients who had just undergone surgery were moved back from the operating theater to their sleeping quarters (see Illustration 11). In 1925, patients were accompanied by the doctors themselves, but they soon handed this task over. In the late 1920s, the auxiliary Boulingui was entrusted with the role of sitting next to the patient during an operation to monitor his or her vital signs. After the intervention, he then carried the patient ‘on his arms’ to the quarters for the recently operated. In the 1950s, two helpers transported patients on a stretcher to the Case Bouka, the post-surgery ward named after Dominique, the long-serving African aide (see Illustration 12). Here, patients were placed under the supervision of an African assistant and were visited daily by a physician. In comparing these scattered accounts, a trend towards greater efficiency can be observed: from carrying patients by

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74 Nessmann, *Avec Albert Schweitzer de 1924 à 1926*, 148.
75 Schnabel, ‘Von ärztlichen Verrichtungen’, 53–56.
76 Lehmann, ‘Meine Erinnerung an das Frischoperiertenhaus’, 59.
77 According to his long-term secretary Emma Haussknecht, it was Schweitzer himself who went on these daily rounds through the ward in the Case Bouka, at least until the late 1940s. See: Haussknecht, *Emma Haussknecht, 1895–1956*, 113–14; Later, doctors wrote of
hand to using a stretcher, or from performing operations one after the other to conducting two at the same time. Medical staff, rather than technologies, however, remained central to maintaining and controlling the surgical routine.

Schweitzer had a clear vision of how the hospital’s surgical services should be run. In 1934, Goldschmid was happy to report that ‘the surgical service is now provided according to your instructions’.78 Over and above the organizational routine just outlined, Schweitzer provided a rigidly defined order for how surgical interventions themselves should be performed. Especially and unambiguously important to him was to be in control of the various personnel responsible for its execution. The recruitment process was a first step towards achieving this, but control continued to be exerted in Lambaréné. In 1947, Schweitzer wrote to Edward Hume, one of his most important supporters in the USA, that a new doctor would soon arrive from Switzerland, adding that

I still insist on initiating them myself. Because you know well how necessary it is in medicine that new doctors conform to the traditions and

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undertaking their own daily ward rounds in Schweitzer’s absence. See, for example: Van der Kreek to Schweitzer, 27 October 1959, AMS; Percy to Schweitzer, 2 October 1955, AMS. 78 Goldschmid to Schweitzer, 22 August 1934, AMS.
spirit of the hospital in which they will work in order to assure that they do not introduce innovations there that have no reason.\textsuperscript{79}

To his niece, Schweitzer wrote in a similar manner concerning his anxieties about novel staff introducing new practices that would run counter to the values and traditions of his hospital. He was nevertheless confident about his ability to control new personnel and convince them of the superiority of his specific approach:

Dr. P and Dr. N. are hardworking and kind. They can be convinced to execute the service in my spirit and making sure that no innovations are introduced. This is the big danger for the hospital, because before having served for a year, the newcomers cannot really see its meaning as it is.\textsuperscript{80}

In order to ensure that his surgeons practiced according to his wishes, Schweitzer often personally attended the first significant operations performed by recently arrived physicians. This was the case in 1925 with Dr. Lauterburg, a very experienced surgeon and the second additional doctor to arrive at the hospital: Schweitzer acted as an assistant in order to ‘test the quality of surgery of the new doctor’.\textsuperscript{81} Similarly, Dr. van der Kreek recalled that many of the approximately 2,000 operations that she performed from 1955 to 1960 were undertaken ‘under his attentive gaze’.\textsuperscript{82} These examples illustrate how the Lambaréné Spirit related to medical practice: besides a personable attitude on the part of his staff or their ability to engage in polite conversation at the dinner table, for instance, Schweitzer expected their full compliance with his medical ideals.

Schweitzer’s desire to control the manner in which his employees practiced medicine is remembered explicitly by many of his former personnel. A case in point from the surgical domain can be found in a lively and engaging memoir by Dr. Edgar Berman. A surgeon from Baltimore, Berman visited Lambaréné for two months in the fall of 1960 and furnished an account of his stay replete with exaggeration and self-aggrandizement.\textsuperscript{83} Schweitzer’s controlling nature

\textsuperscript{79} Schweitzer to Hume, 8 November 1947, AMS.
\textsuperscript{80} Schweitzer to Oswald, 17 May 1950. Published in: Oswald, Mein Onkel Bery, 116–17.
\textsuperscript{81} Nessmann, Avec Albert Schweitzer de 1924 à 1926, 144.
\textsuperscript{82} Becht, ‘Témoignage d’une chirurgien, Mme Le Docteur Greet Barthélemy’, 170. Dr. Greet van der Kreek married Guy Bartélemy, thus explaining her change of name (see note 70).
\textsuperscript{83} Berman, In Africa with Schweitzer. Berman claims to have performed numerous operations at the hospital. In the protocols, he appears on 8 out of 21 occasions between 29 November and 17 December 1960, usually as an assistant and always working in cooperation with
occupies a central place in Berman’s description of his first surgical intervention at the hospital, an intervention that cannot be found in the protocols. Two hours after his arrival, Berman was asked to operate on a strangulated hernia. He was assisted by three long-serving Gabonese aides: Joseph (Ndolo or Bissangoy), Pierre Piebé, and Ambroise Nyama. In addition, Schweitzer remained in the operating theater for the two hours that it took to complete the procedure. Berman was certain that ‘this case had purposefully been singled out to test me’. After they agreed that the piece of bowel was beyond saving, Schweitzer ordered a colostomy. At this point, Berman dared to disagree, explaining that this method was no longer commonly practiced. Instead, he proposed to cut out the diseased piece and sew the ends together. Schweitzer replied that the hospital had achieved poor results with this method. Berman objected again and then proceeded to perform the surgery in his preferred manner and Schweitzer remained silent for the rest of the operation.\(^\text{84}\) Although this story is probably exaggerated or perhaps even invented, it does illustrate how even short-term visitors were made to feel the constant presence of Schweitzer’s controlling gaze. Indeed, it was usually these very visitors who dared to describe it.

The colonial government doctor Jacques Bessuges performed a number of surgeries at the hospital at Schweitzer’s request in early 1950. He provided a particularly detailed and more credible account of his first operation that expressly illustrates Schweitzer’s desire for procedural control in surgical practice. During the three-and-a-half-hour intervention to repair an incarcerated hernia, Schweitzer served as an assistant. In addition, Pierre Piebé and Ali Silver, who had both been at the hospital for years, were also present as assistants. Schweitzer and Bessuges disagreed on a number of occasions during the operation. Bessuges assumed that the patient would receive a general anesthetic, whereas Schweitzer proposed a local one. When Bessuges started connecting the loose ends of the affected intestine by applying the usual French method of ‘surjets’, an overcast suture that he claimed would take only five minutes, Schweitzer suggested the more reliable German method of ‘points séparés’, an interrupted suture which took forty minutes to complete. Thereafter, Bessuges wanted to end the operation so as not to place more strain on the patient and to leave an opening in case of infection; Schweitzer, however, urged him to

\[^{\text{84}}\text{Ibid., 11–16.}\]
perform the complete suture, which required another forty-five minutes’ work. In all three of these differences of opinion, Bessuges ultimately surrendered to Schweitzer’s authority and did as instructed.85 Bessuges returned to perform surgery at the hospital regularly thereafter, but Schweitzer only assisted and supervised him on one further occasion. During these procedures, Bessuges was usually assisted by Piebé and Silver, or occasionally by Dr. Emeric Percy, a Hungarian who served two terms in the 1950s.86 If not through his own presence, Schweitzer could thus ensure procedural control via that of his long-term employees.

All surgeons who describe surgical procedures at the hospital – from Ilse Schnabel in the 1920s and Bessuges in the 1950s to Rolf Müller in the 1960s – mention being assisted by at least one African and one European.87 A glance through the protocols reveals that the names of African assistants were only recorded in some years of the 1950s. No clear pattern of surgical team-composition can be discerned for any period. The chief surgeon was sometimes assisted by an additional physician and two European nurses, sometimes by one European and one African nurse, or on other occasions by a single European or African assistant.

Unlike the majority of the European surgical personnel, who normally returned to their home countries after approximately two years, some African assistants served at the hospital for decades. Piebé started to work at the hospital in 1929. He had been a former surgical patient who went on to serve as a nurse in the post-surgery ward.88 Here, his task was to ensure that patients would not eat, remove their bandages, or go for a walk or swim, all actions that were difficult to police. After World War Two, the nature of Piebé’s duties changed (see Illustration 13). He now worked in the operating theater, where Dr. Jeanette Israël described him as ‘very intelligent’ with ‘very fine hands’.89 Dr. van der Kreek emphasized Piebé’s value as a surgical assistant, underlining

85 Bessuges, Lambaréné à l’ombre de Schweitzer, 112–15.
86 According to the operation protocols, Bessuges had already performed two operations at the hospital two days before the episode described here, namely a simple hernia repair and a hydrocele procedure during both of which he was assisted by only Piebé and Silver. Thereafter, Bessuges performed eighteen further operations at the hospital, with his last on 14 February 1950. See: L – P – O5, AMS.
87 Schnabel, ‘Medizinisches aus Albert Schweitzers Urwaldspital’, 379–81; Bessuges, Lambaréné à l’ombre de Schweitzer, 100–116; Müller, ‘50 Jahre Albert-Schweitzer-Spital’, 16–24.
88 Schweitzer, ‘Briefe aus dem Lambarene Spital März 1938’, 3. Piebé is on a 1962 ‘liste des employés les plus anciens, proposés pour une décoration’ The list was found in a folder entitled ‘affaires concernant le personnel indigene’, within a box with the brief title ‘divers’, in the cellar of the AMS.
89 Israël, ‘Schweitzer, le médecin que nous avons connu’, 177.
his experience, which had equipped him with considerable confidence and even a certain authority over his chief surgeon, whom he occasionally corrected. She considered him ‘irreplaceable’ and recalled that he ‘often gave peremptory suggestions and advice when we were hesitating’.\(^{90}\) Echoing this sentiment, Schweitzer purportedly told Dr. Berman in 1960 that Piebé ‘was rarely wrong in the operating room’. According to the American surgeon, whose assertions must be treated with caution, Piebé occasionally even operated on simple hernias himself.\(^{91}\)

Another African assistant in the surgical ward was Boulingui, whom Schweitzer described in 1931. He highlighted the considerable surgical competence that his assistant had acquired:

> Bolingi, who has been with me since 1924, works in the operating theatre and the quarters of the operated patients. Since he has some judgement about the way a surgical intervention is performed from the many operations he has attended, he often acknowledges Dr. Schmitz with a word of appreciation if, in his opinion, she has completed an incarcerated hernia at a pleasing pace.\(^{92}\)

In her characterization of Boulingui the nurse Elsa Lauterburg-Bonjour illustrates, albeit in a slightly mocking tone, the wide variety of tasks that auxiliaries had to perform. She wrote that Boulingui ‘checks the pulse (‘le moteur ça marche’), boils out instruments (‘bouillir les sentiments’), opens ampules (‘ouvrir la poule’), ignites the autoclave (an ‘allumer l’esclave’) and dresses the recently operated patients’.\(^{93}\)

Lauterburg-Bonjour named Nyama as an important surgical assistant. Like Piebé and many others, he was a former patient at the hospital. For Lauterburg-Bonjour, Nyama was crucial as ‘the right hand of the doctor’.\(^{94}\) He was first mentioned in 1928 as an assistant in the pre-operation procedure.\(^{95}\) By 1960, Dr. Berman claimed that Nyama ‘ran the whole O.R. suite’.\(^{96}\) Dr. Armin Rutishauser was similarly effusive in his praise of Nyama and other African aides in 1937, also mentioning their numerous and diverse tasks:

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\(^{90}\) Becht, ‘Témoignage d’une chirurgien, Mme Le Docteur Greet Barthélémy’, 173.

\(^{91}\) Berman, *In Africa with Schweitzer*, 13.

\(^{92}\) Schweitzer, ‘Briefe aus dem Lambarene Spital Pfingsten 1931’, 9.

\(^{93}\) Lauterburg-Bonjour, *Lambarene: Erlebnisse einer Bernerin im afrikanischen Urwald*, 18.

\(^{94}\) Ibid.

\(^{95}\) Schnabel, ‘Von ärztlichen Verrichtungen’, 53.

\(^{96}\) Berman, *In Africa with Schweitzer*, 13.
Nyama, our best, does intravenous injections like any white doctor, perhaps even better, since hardly anyone has as much practice as him, and it is even more difficult to find a vein in Negroes than back home. He is also the best in the surgical ward, besides he acts as an interpreter and other things, although he can neither read nor write. What such auxiliaries do is astounding. Year after year, day after day, from early in the morning to late in the evening, always in a good mood, always helpful. You call the name and he appears. Many barefoot, but cleanly dressed and washed.97

These examples show that when it came to concrete medical duties, especially those relating to surgery, African staff at the Albert Schweitzer Hospital was depicted as skillful and competent. This is a much more positive portrayal of

97 Rutishauser, ‘Wie eine Insel’, 131.
their ability than that we receive from more general sources relating to the hospital.\textsuperscript{98} Even though the assistants had not been medically trained in the formal sense, they acquired a remarkable level of skill through their extensive on-the-job training, which demanded a high degree of flexibility and bestowed on them valuable experience. They combined competences in surgery assistance and nursing, enjoying considerable power and responsibility in the process.

African aides from the surgical ward helped to mediate between patients and doctors, but also functioned as middles for different types of control. They ensured procedural control by making sure that mistakes were minimized and that operations went according to plan – or, more precisely, according to Schweitzer’s plan. Their proximity to the hospital’s founder and their own levels of experience, often much higher than those of the typically young and recently graduated European surgeons, helped to secure their place within the hospital hierarchy.

4 Technologies of Control: the Example of Lamps

Schweitzer depended more on practitioners than technologies to implement and uphold his rigid vision of surgical practice. He ensured control over personnel working in the surgical ward by careful selection and via his own authority, which was often mediated through highly trusted long-term European and African employees. Nonetheless, technological artifacts played a significant role in surgical practices at the institution.

An important factor determining whether technological artefacts were introduced to the Albert Schweitzer Hospital was their cost, as is argued for other colonies.\textsuperscript{99} In 1938, Schweitzer received a donation from European settlers living in the area to buy radiological equipment,\textsuperscript{100} but with World War Two

\textsuperscript{98} As seen in the Introduction, Schweitzer and other European staff and visitors considered Africans as lazy and backward. Furthermore, a considerable number of reports did ascribe these qualities to the auxiliaries, but these mostly did not relate to those working in the surgical ward. These reports will thus be analyzed elsewhere, especially in Chapter 5.

\textsuperscript{99} Hardimann, ‘The Mission Hospital’, 204–5; Howell, ‘Hospitals’, 53. Yet, a shortfall of funding usually also implies a lack of will. In contrast, the Basel Mission’s Agogo Hospital in the Gold Coast colony had a reputation for and self-perception of maintaining a high technological standard. The hospital was established in 1931, and less than ten years later already possessed state of the art surgical equipment, including X-ray machines. See: Schmid, ‘Mission Medicine in a Decolonising Health Care System’.

\textsuperscript{100} Ott, ‘Natur, Mensch und Tier’, 110.
In and Out of Control

looming, he chose to spend the money on medication and rice instead.\textsuperscript{101} When in March 1954 an X-ray apparatus was finally introduced, Schweitzer justified this not only with reference to the necessity for accurate tuberculosis diagnoses. He also emphasized that the machine had been especially designed by a Dutch manufacturer for use in the tropics and that Dr. Percy knew how to set it up and repair it.\textsuperscript{102} This example suggests that Schweitzer was rather reluctant to introduce technical medical devices. He and other members of the hospital staff argued repeatedly that expensive machinery would be very prone to defects in the tropical climate and that it was difficult to repair easily and cheaply.\textsuperscript{103} For Schweitzer, technological artefacts were thus perceived as operating outside of his own control; instead of ensuring procedural control they threatened the orderly functioning of hospital services.

The example of electric lights serves to illustrate this point more precisely. Lighting is one of the few aspects in which the agency of surgeons at the hospital becomes immediately visible. They took advantage of Schweitzer’s regular leaves to Europe to improve the ward according to their own preferences. Lights were of considerable importance for visual control during surgery. Surgical interventions had to be regularly performed at night. In 1913, for example, Schweitzer performed an operation while using only a paraffin lamp for lighting.\textsuperscript{104} The Swiss doctor Ilse Schnabel, who worked at the hospital from 1928 to 1930, recounted performing daring operations under makeshift lights:

Operations in the dark require a great deal of time and effort. With the help of two large petrol lamps on stacked chairs or tables, the surgical area could be illuminated to a certain extent, but an electric torch had to be directed onto the areas to be made clearly visible and had to be held for hours during an extensive intestinal resection.\textsuperscript{105}

In 1935, Schweitzer proudly reported that ‘a grateful white patient has donated a big petroleum lamp with incandescent gas mantle, which gives wonderfully bright light’.\textsuperscript{106} Apparently, these improvisations were sufficient until World

\textsuperscript{101} Schweitzer, ‘Briefe aus dem Lambarene Spital März 1946’, 2–3.
\textsuperscript{102} Schweitzer, ‘Briefe aus dem Lambarenespital Oktober 1954’, 17.
\textsuperscript{103} Lauterburg-Bonjour, ‘Man stellt sich um’, 164; Joy, Arnold, and Schweitzer, The Africa of Albert Schweitzer, 116; Taap, Lambarener Tagebuch, 65.
\textsuperscript{104} Schweitzer, ‘Notes et Nouvelles de la part du prof. Albert Schweitzer. Deuxième rapport’, 36.
\textsuperscript{105} Schnabel, ‘Medizinisches aus Albert Schweitzers Urwaldspital’, 379.
\textsuperscript{106} Schweitzer, ‘Briefe aus dem Lambarene Spital November 1935’, 4.
War Two. In 1941, Schweitzer ordered equipment for electric lightning from the USA. He justified its introduction not only with reference to the hospital’s lighting challenges at the time – ‘we need better lighting’, as he wrote matter-of-factly – but also for its economic benefits; ‘petrol is very expensive here’, he explained.¹⁰⁷ It remains unclear when exactly the equipment eventually arrived, but three years later spare parts for a small engine that provided light in the operating theater had already been sent to Lambaréné.¹⁰⁸ In 1946, lighting equipment needed to be replaced. By then, operations took place regularly under electric light. Schweitzer now attributed this practice to the dim daylight in the equatorial latitudes.¹⁰⁹

In July 1951, Dr. Percy informed Schweitzer that an engine had broken down and that the operating theater was without lights. Lighting had become essential for surgery, even during the day, and Percy went to great lengths to replace the defective engine. He retrieved an old engine and, with the help of a mechanic from a lumber company, worked for three days to repair it. Percy estimated that this makeshift solution would work for three months at the most and thus listed in great detail the properties that he thought a new engine should possess.¹¹⁰ In the following months, Percy solved the problem and expanded their power system. In October he reported without providing details that ‘everything is fine with the engines. [...] We supplied the whole central building with electricity; there are now lamps in all rooms except the delivery room’.¹¹¹

The lighting situation, however, remained precarious. In September 1957, Dr. Richard Friedmann, who had arrived a year earlier, described to Schweitzer in a very detailed manner how the large operating lamp had been fixed. Its wires had been burnt through ostensibly due to a wet climate and previous inadequate repairs.¹¹² Eventually, in 1959, a powerful operating lamp was donated to

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¹⁰⁷ Schweitzer to Hume, 9 January 1941, AMS. Schweitzer rarely sent letters in English. When he did, he usually had these translated by a member of staff who could speak English.

¹⁰⁸ Schweitzer to Hume, 27 August 1944, AMS. The digital file is falsely dated with 1942. Schweitzer attached a copy of a letter from the same date, which he sent to ‘les Directeurs de la commission qui accorde la Licence d'importation pour l'AEF’, in which he mentions the spare parts.

¹⁰⁹ Schweitzer to Hume, 17 February 1946, AMS.

¹¹⁰ Percy to Schweitzer, 7 July 1951, AMS.

¹¹¹ Percy to Schweitzer, 21 October 1951, AMS.

¹¹² Friedmann to Schweitzer, 8 September 1957, AMS.
the hospital by the Prince of Monaco. Subsequently, it appears that the surgeons were satisfied with the operating light.

It was difficult to convince Schweitzer of the necessity to introduce novel technologies, whereas the surgeons demanded a steady improvement in the quality of lighting. Percy thus acquired new gear while Schweitzer was in Europe or Barthélemy brought surgical material from Paris ‘while hiding myself’. The frequent reports of electric lights that had to be repaired prove that they did not always operate smoothly, but visual control was a deeply rooted desire in the 1950s for the hospital’s surgeons. Like the scalpel in Dr. Lauterburg’s nickname, lighting is an example of the interconnectedness of object, technology and person: surgeons could not properly do surgery without adequate lamps.

5 Controlling Bacteria: Asepsis and Manual Labor

One of the most urgent practical concerns in surgical wards was and is bacterial control. Western operating theaters were specifically designed for enforcing asepsis, the state of sterility. At the Albert Schweitzer Hospital a considerable amount of time and labor was dedicated to this quest. Surgeons described the disinfection of surgical instruments and body parts in great detail. It is difficult to tell if they were impressed or even surprised by the great care given to asepsis at the hospital, or if they wanted to underline that, even in more challenging circumstances, its surgical services operated in line with Western standards. Numerous reports allow us to outline how asepsis was enforced over the course of the study period and to recognize patterns therein. In 1928, Dr. Schnabel described the pre-surgical disinfection process as follows:

Anderegg, ‘Operationssaal und Sterilisation’, 55. Earlier in the decade, at the initiative of Barthélemy, the Prince of Monaco had already donated other surgical equipment, possibly including one of the above-mentioned lamps. See: Barthélemy, Lettre à Albert Schweitzer, 121. See also: Becht, ‘Témoignage d’une chirurgien, Mme Le Docteur Greet Barthélémy’, 174; Penn, ‘A Visit to Albert Schweitzer’, 174. A rather sophisticated lamp is prominent in Penn’s photograph of the operating room.

This was stated explicitly by some. See, for example: Østergaard Christensen, At Work with Albert Schweitzer, 80; Müller, ‘50 Jahre Albert-Schweitzer-Spital’, 17.

Barthélemy, Lettre à Albert Schweitzer, 121.

Schlich, ‘Surgery, Science and Modernity’, 231.
When I enter the big room of the infirmary at ten past eight in the morning, three healing assistants are still gathered at the middle table, with spoon and fork in their hands. The first part of washing hands occurs in this room. My colleague and I put on a white cap, remove a sterile brush from the container that Nyama gives us, and wash our hands thoroughly with soap under running hot water. A Negress sits by the large container and lets the water run out of the tap as needed. [...] After this preparation, we move to the actual operating room. [...] On a long box, there is a basin with foaming lysol solution, into which we immediately dip our hands and continue washing them. [...] We receive sterile, perfectly white surgical gowns and the auxiliaries naturally assist us in putting them on. The gloves, however, meant a disappointment to me; we could not take them beautifully powdered from a gauze cover, as I had been used to, but from a pot filled with sterile solution, in which they were carefully piled up pair for pair by sticks of palm wood.¹¹⁷

Some twenty years later, Bessuges described a similar procedure: first the surgeons washed their hands in Cresyl water, before putting on coats and gloves and washing their hands again in alcohol (see Illustration 14). After having administered an anesthetic, they changed their gloves once more.¹¹⁸ Almost ten years later, Berman reported that before entering the operation theater ‘a native aide poured soapy liquid over my hands, then rinsed them with germ-free water – the excess running into a galvanized tub’. The surgical team received ‘heavy rubberized aprons’ and ‘good modern O.R. gloves’. Berman also scrubbed himself a second time after administering an anesthetic.¹¹⁹ These descriptions reveal that some innovations were introduced into the pre-operative asepsis process, as occurred, for example, through the provision of new gloves to increase surgeons’ sense of touch and their manual control. However, the general sequence and extent of disinfection, as well as the sterilizing solutions used, remained very similar throughout the study period.¹²⁰

The sheer physical challenge of performing surgical interventions in Lambaréné was a particular concern for surgeons practicing there. Dr. Jilek-Aall, a Norwegian physician who had previously worked as an itinerant doctor in Tanzania and for the United Nations forces in the Congo Crisis before practicing at the Albert Schweitzer Hospital in 1961, recalled that

¹¹⁷ Schnabel, ‘Von ärztlichen Verrichtungen’, 53–54.
¹¹⁸ Bessuges, Lambaréné à l’ombre de Schweitzer, 101–3.
¹¹⁹ Berman, In Africa with Schweitzer, 13–14.
¹²⁰ Lysol and Cresyl were both brand names of disinfectants based on phenols.
the ordeal of standing for hours in the humid, hot air, face mask, hair cover, heavy gowns, rubber gloves and all, was nearly more than I was able to endure. [...] The duty nurse had to constantly wipe our faces to prevent the sweat from dripping into the operating field. Sometimes when one of us was close to collapse she would quickly get us a cold drink.121

Jilek-Aall was not the only surgeon who remembered assistants having to wipe sweat from his or her face.122 As was the case with the X-ray apparatus,

121 Jilek-Aall, Working with Dr. Schweitzer, 48.
122 Barthélemy, Wie ich Lambarene erlebte, 35; Berman, In Africa with Schweitzer, 14; Bessuges, Lambaréné à l’ombre de Schweitzer, 111.
Schweitzer did not want to install an air conditioning system, because he believed that it would soon break down and that there would be no one able to repair it. In the early 1960s, members of staff found an air conditioner in a basement and, without informing Schweitzer, installed it in the radiology room. When he discovered the machine, Schweitzer was ‘furious’, because his permission had not been sought.\textsuperscript{123}

Medical instruments and cloths were other sources of infection. Sterilizing these was a time-consuming undertaking, much of which had to be done by hand. Indeed, during his first stay, Schweitzer could not satisfy the demand for surgeries precisely because there were not enough personnel to wash and prepare instruments and cloths.\textsuperscript{124} Similarly, the Alsatian Victor Nessman, the first additional doctor to join Schweitzer in Lambaréné, complained in 1925 that the surgical procedure in Europe begins and ends with thorough and long hand washing. Here, contrariwise, it is preceded by sterilization preparations of instruments, gowns, sterile cloths and with the final washing of hands after the operation, it is not finished either. It is up to us to clean the instruments, boil them a second time, then grease them to protect them from the terrible humidity that ruins everything here.\textsuperscript{125}

Soon thereafter, a nascent division of labor had emerged. In a 1926 report, Lauterburg-Bonjour listed the afternoon tasks of the African auxiliaries. They had to maintain a fire, boil water, degrease surgical instruments, and sterilize operating equipment in an autoclave that ran on a petroleum flame. Female relatives of patients, meanwhile, washed and prepared bandages and other cloths under Lauterburg-Bonjour’s constant supervision.\textsuperscript{126}

The development of these practices can be traced throughout the study period. In the 1930s, sterilizing surgical cloths, or supervising the Africans assistants responsible for this task, was a very time-consuming job for nurses on surgical duty.\textsuperscript{127} The disinfection process was primarily undertaken using hot water (see Illustration 15). In the late 1940s, ‘surgical instruments (were) boiled in pans, and kettles (were) kept steaming to provide sterile water of the operating room’.\textsuperscript{128} Oxidation was also a problem. Dr. Schnabel wrote in 1936 that all

\begin{footnotes}
\item[123] Interview Munz and Munz.
\item[124] Schweitzer, ‘Notes et Nouvelles de la part du prof. Albert Schweitzer. Deuxième rapport’, 36.
\item[125] Nessmann, \textit{Avec Albert Schweitzer de 1924 à 1926}, 148.
\item[126] Schweitzer, ‘Neues von Albert Schweitzer Advent 1926’, 3.
\item[127] Schweitzer, ‘Briefe aus dem Lambarene Spital März 1938’, 2.
\item[128] Joy, Arnold, and Schweitzer, \textit{The Africa of Albert Schweitzer}, 140.
\end{footnotes}
surgical instruments were stored in a layer of paraffin to prevent them from rusting; there was one set of stainless steel instruments reserved for emergencies.\textsuperscript{129} A second was acquired over two decades later, as the Swiss nurse Elisabeth Anderegg, who served four terms in the surgical ward from 1958 to 1968, recalled. The other instruments continued to be disinfected in boiling water and soda in between interventions. For this purpose, the auxiliary Marcel Kwamba was given the task of maintaining a fire in a stone oven outside the Grande Pharmacie. As had been the case in the 1930s, the nurse responsible for the surgical ward was tasked with sterilizing surgical cloths on the three operation-free days per week.\textsuperscript{130}

In the surgical ward, technological devices provided limited assistance for sanitizing cloths. In 1913, Schweitzer claimed to possess an autoclave for sterilizing bandaging material.\textsuperscript{131} The next reference to a similar item dates from the late 1950s, when Anderegg wrote of a vapor autoclave that was used to disinfect rubber and plastic surgical material and to prepare two sets of surgical instruments on the night before an operation.\textsuperscript{132} The nurse Hedwig Schnee remembers that in the 1960s there was an autoclave in the operating theater for cleaning dressing materials that could also be used by staff members from other wards.\textsuperscript{133} Unfortunately, details of the size, structure, and workings of these autoclaves have not been provided.

What applies to the surgical procedure as a whole extends to the enforcement of bacterial control: people were more important than technological artefacts. With no air conditioning system, surgeons’ sweat continued to be wiped from their brows by their assistants; instead of using a large autoclave, washerwomen were tasked with disinfecting cloths. Moreover, asepsis exemplifies how technology can be defined in different ways depending on the scope of analysis. All recognized meanings of the term have been raised in this discussion: ‘physical objects or artefacts’ – in the form of autoclaves or sterilized knives – have been used to sustain ‘activities or processes’, maintaining asepsis and executing the surgical intervention as such, – which are in turn dependent on ‘what people know as well as what they do’.\textsuperscript{134} This chain of action illustrates that asepsis, like surgery, only becomes operational when human beings who are in control of themselves and their environment become involved.

\textsuperscript{129} Schnabel, ‘Medizinisches aus Albert Schweitzers Urwaldspital’, 380.
\textsuperscript{130} Anderegg, ‘Operationssaal und Sterilisation’, 57.
\textsuperscript{131} Schweitzer, ‘Notes et Nouvelles de la part du prof. Albert Schweitzer Lambaréné’, 7.
\textsuperscript{132} Anderegg, ‘Operationssaal und Sterilisation’, 57.
\textsuperscript{133} Interview Hedwig Schnee.
\textsuperscript{134} Bijker, Hughes, and Pinch, ‘The Social Construction of Technological Systems, Introduction’, 4.
Animals, however, were less controllable. The operating theater at the hospital formed part of the Grande Pharmacie and, as such, was not hermetically enclosed. The floor and walls were wooden, while its finely gridded windows were built to keep mosquitoes out and let air and light in. There are various anecdotes of unexpected guests arriving during surgery. For example, Jilek-Aall was assisting in an operation in 1961 when a lizard, seemingly dizzy from evaporating ether, dropped into the patient’s open wound. This did not cause too much panic, she noted, as

without a word, the surgeon took the forceps, fished out the lifeless animal, and threw it over his shoulder. He then sprinkled antibiotic powder
into the abdomen and continued the operation as if nothing unusual had happened.\footnote{135}

Dr. Berman wrote of a tarantula that suddenly appeared from a sterile pile of sheets as well as of a goat that knocked things down.\footnote{136} Two nurses confirm that goats and dogs roamed rather freely around the hospital grounds and were not a rare sight in the adjacent consultation rooms.\footnote{137} These reports may be exaggerated or even invented, but together they point towards one particular obstacle to ensuring bacterial control.

Despite such difficulties in maintaining asepsis, staff members claim that post-surgical infections were extremely rare.\footnote{138} In earlier years, they were referred to more frequently. Dr. Lauterburg reported in 1925 that patients would usually recover quickly after an operation, but added that ‘the only danger is an infection, which occurs very easily here’.\footnote{139} In a 1932 letter, Dr. Bonnema explained to Schweitzer how surgeons tried to decrease such dangers:

I have good news from the operating room. Miss Berthe had the good idea to prepare the patients for the intervention herself and to fix a strong cloth with cloth clips to the wound edges immediately after the skin incision, since we have been doing this even large hernias and Elephantiasis plastics heal primarily. Hopefully this will also prevent suppuration and the often lengthy after-treatment.\footnote{140}

In 1959, Dr. van der Kreek wrote to Schweitzer that no secondary infections had occurred, ‘because we are very strict about sterility’.\footnote{141} The introduction of antibiotics at the beginning of the 1950s, after which reports of serious infections disappear, might have helped to lower the post-surgical infection rate. In 1957,

\begin{footnotes}
\item [135] Jilek-Aall, Working with Dr. Schweitzer, 51.
\item [136] Berman, In Africa with Schweitzer, 76–77.
\item [137] Stocker, ‘Diary 1961–63’, 17; Interview Hedwig Schnee.
\item [138] Interview Elisabeth Anderegg. Dr. Munz explained that constant micro-infections on his patients’ feet from walking barefoot granted them some degree of immunity, in: Interview Munz and Munz. Reliable statistics on the post-operation mortality rate could not be found, but Dr. Berman placed it at 0.5 percent. See: Berman, In Africa with Schweitzer, 1986, 84. Dr. Goldwyn, who was present at the hospital at the same time, claimed that it lay at 0.88 percent. He also wrote of 85 ‘accidents’ occurring during the 450 interventions that took place from June 1959 to June 1960. See: Goldwyn, ‘Diary 1960’, AMS, 32.
\item [139] Lauterburg-Bonjour, ‘Man stellt sich um’, 31.
\item [140] Bonnema to Schweitzer, 25 September 1932, AMS.
\item [141] Van der Kreek to Schweitzer, 27 October 1959, AMS.
\end{footnotes}
Dr. Friedmann calculated that half of the hospital’s penicillin supply had been used in the Case Bouka, which at the time was not the only ward for recovering surgical patients. In his view, van der Kreek, who was responsible for the ward, had dispensed it far too liberally. In intriguingly, antibiotics receive little attention in the primary sources.

6 Controlling Patients via Technology: the Example of Anesthesia

Another crucial aspect of surgical control is anesthesia, for which there were a variety of options at hand in Lambaréné. Ether was available, but difficult to control. In 1924, for example, Noel Gillespie, a chemistry student at the University of Oxford who accompanied Schweitzer on his second journey to Gabon, described how ‘it was fiendishly hot in the theatre and the ether was all over the place – that’s the main difficulty here – the ether vapourises so much in the heat that the operating staff risks being put to sleep’. This difficulty was also mentioned by Dr. Schnabel in 1936, who added that ‘ether becomes costly until it reaches the tropics’. Another problem in controlling ether was its flammability, especially when used in proximity to paraffin lamps. In 1934 Dr. Goldschmid reported to Schweitzer that he had used chloroform in two gynaecological interventions that he had performed at night, because he ‘did not dare to use ether with the open lights’. During Schweitzer’s first stay in Lambaréné, most operations were performed using chloroform, which was administered by a missionary. After the arrival of Dr. Nessman in October 1924, Joseph Azoawanié, who from 1913 had

\[\text{References:}\]

142 Friedmann to Schweitzer, 8 September 1957, AMS. A degree of personal tension between Dr. Friedmann and Dr. van der Kreek is evident in their correspondence. Friedmann’s letter is very interesting in regard to the use of antibiotics. He and Schweitzer had calculated earlier that year that the hospital, including the leprosy village, required 10–12 million units of penicillin per day. Shortly after Schweitzer left for Europe in July, Friedmann and Ali Silver discovered that, even without considering the leprosy village, the hospital used 20–25 million units daily. By the time Friedmann wrote the letter, this number had risen again to 60–70 million units per day (without specifying whether this included the leprosy village’s usage).

143 Gillespie, ‘With Schweitzer in Lambarene: Noel Gillespie’s Letters from Africa’, 181.

144 Schnabel, ‘Medizinisches aus Albert Schweitzers Urwaldspital’, 380.

145 Schweitzer, ‘Briefe aus dem Lambarene Spital Juni 1935’, 4; Berman, In Africa with Schweitzer, 84.

146 Goldschmid to Schweitzer, 21 December 1934, AMS.

147 Kik, Beim Oganga von Lambarene, 30.
been Schweitzer’s first African assistant, was given this responsibility.\textsuperscript{148} Thereafter, chloroform is rarely mentioned. In 1938, Schweitzer wrote to his pharmacist, Robert Weiss in Strasbourg, that the hospital would use it only for ‘mixed anesthesia’.\textsuperscript{149} As seen in this chapter’s introductory quotation, Schweitzer justified his customary usage of infiltration anesthesia with reference to both a lack of competent personnel who could administer ether or chloroform and to the preferences of his patients.

All types of hernia, hydrocele, and elephantiasis procedures at the hospital were generally performed using infiltration anesthesia. This form of local anesthesia, which directly injects the sedating substance into the location of the operation,\textsuperscript{150} was also standard for hernia operations in Europe at the time.\textsuperscript{151} It appears that the technique was brought to Lambaréné in 1925 by Dr. Lautenburg, who was considered an experienced and distinguished surgeon by his colleagues and patients. He succeeded in convincing Schweitzer of the superiority of the method for the simple reason that ‘this greatly diminishes the risks’.\textsuperscript{152} This method was subsequently used as her standard approach by Dr. Schnabel, who reported that the anesthetizing procedure by infiltration was performed at the hospital in the same manner as it was in Europe.\textsuperscript{153}

About a quarter of a century later, at the above-mentioned operation conducted by Dr. Bessuges, the French physician acknowledged that infiltration anesthesia would be sufficient for a simple hernia repair. For an incarcerated hernia, however, he considered general anesthesia necessary, because of the risk that the surgeon might have to make a very deep incision, for which the surrounding tissue would be insufficiently numb. The procedure could take so long that the patient would require a second narcosis before the closing of the wound. This disagreement can be interpreted as a clash of two preferences of control. While Bessuges ultimately did as he was instructed, the reasons behind

\textsuperscript{148} Nessmann, \textit{Avec Albert Schweitzer de 1924 à 1926}, 155–56.
\textsuperscript{149} Schweitzer to Weiss, 31 January 1938, AMS.
\textsuperscript{150} According to the protocols, the hospital mainly used procaine anesthetics of the ester group. They preferred Scurocaine until World War Two when they switched to Novocaine. In the 1950s, the precise substance was rarely noted; instead, the records usually show only ‘anes. loc.’ (local anesthetic), with Novocain sometimes mentioned. See: L – P – O5-6, AMS. From 1964, Larocaine was the standard anesthetic. See: L – P – O8-9, AMS. All of these substances are said to be mood-enhancing, which may go some way to explaining patients’ preference for them.
\textsuperscript{151} Friedl-Meyer, \textit{Lehrbuch der Chirurgie für das Pflegepersonal}, 181. In her fourth edition (1969, 238), Friedl-Meyer continued to recommend infiltration anesthesia for hernias. See also: Vogeler, \textit{Chirurgie der Hernien}, 26, 41.
\textsuperscript{152} Nessmann, \textit{Avec Albert Schweitzer de 1924 à 1926}, 148.
\textsuperscript{153} Schnabel, ‘Von ärztlichen Verrichtungen’, 54–55.
Schweitzer’s preference for infiltration anesthesia even in complicated cases remain unclear.\textsuperscript{154}

Some experts claimed, however, that it did provide a sufficient degree of control for most interventions. During the late 1950s, a visiting doctor from Denmark reported that infiltration anesthesia was even used for very complicated hernias in Lambaréné and that there were ‘no more narcosis complications than in Europe’.\textsuperscript{155} Another visiting surgeon disagreed, arguing that ‘anesthesia here is either too light or too deep’.\textsuperscript{156} Dr. Rolf Müller, who served in Lambaréné from 1960 to 1964, explained to an expert readership in 1963 that local anesthesia for hernias ‘has excellently proven itself’.\textsuperscript{157} Barthélemy’s explanation for this preference was similar to that given by Schweitzer: ‘The doctors prefer, if possible, a local anesthetic to general anesthesia because it reduces the after-effects of the operation and is better tolerated by the natives’.\textsuperscript{158}

We can now return to considering the introductory anecdote of this chapter. Firstly, it remains uncertain how often the ritual, as I want to call it, was actually practiced in Lambaréné. Schweitzer circulated the story quite widely,\textsuperscript{159} but he only acted as a surgeon during World War Two, and no other physician mentioned it. How should the anecdote thus be interpreted in light of what has been revealed in this chapter about technology and control in surgical practice? Why did Schweitzer introduce a ritual that was seemingly foreign to the biomedical practices of surgery? How was it incorporated into the medical discourses and practices at the hospital?

At first glance, it appears that Schweitzer, like many biomedical practitioners, neglected the social context of his patients, instead choosing to invoke the legacy of a surgeon from a bygone era and a distant country. His motivations for the introduction of the ritual were in line with his thinking and it was an exception to his general reluctance to intrude into the manners of Africans. Following his conception of the ‘civilizing mission’, Schweitzer sought to provide his patients with a lesson in gratitude for and appreciation of his services.

\textsuperscript{154} Bessuges, \textit{Lambaréné à l’ombre de Schweitzer}, 100–102.
\textsuperscript{155} Ostergaard Christensen, \textit{At Work with Albert Schweitzer}, 79.
\textsuperscript{156} Goldwyn, ‘Diary 1960’, AMS, 32.
\textsuperscript{157} Müller, ‘50 Jahre Albert-Schweitzer-Spital’, 17.
\textsuperscript{158} Barthélemy, \textit{Wie ich Lambarene erlebte}, 34.
\textsuperscript{159} The story has been published in slightly modified versions in: Kik, \textit{Beim Oganga von Lambarene}, 36; Joy, Arnold, and Schweitzer, \textit{The Africa of Albert Schweitzer}, 121. Additionally, it appeared in the Berlin or Viennese newspaper \textit{Der Kurier} on Christmas Eve in 1953. A cut-out copy of the article was found at the AMS among the correspondence with Gauss. Schweitzer had contacted the journalist specializing in the history of Pomerania, where Schleich was born, to find out more about the German inventor of infiltration anesthesia.
Within the surgical service, this ritual represented an additional means of control, which was again to be exerted by people rather than technology. Schweitzer’s patients were expected to perform, according to his own ‘predetermined way’. In the process, he reached beyond the confined and controlled space of his operating theater, beyond his patients’ bodies, to what Bernault terms their ‘inner sel(ves) or cultural assets’.160

In this sense, the ritual can be read as one of submission: patients were expected to waiver to the authority of the medical staff and their technologies. From another perspective, however, this ritual did grant patients a certain presence that they would not have enjoyed under general anesthesia. They were more responsive than ‘tranquilly pliant’ patients and cared for in a more personal manner than bodies in a ‘repair shop’.161 Although the unequal power relations in the ritual are palpable, its interactive nature thus acknowledged the patient as an active participant within the surgical intervention.

The crucial question of how patients understood the ritual nevertheless remains. In the following subchapter, I address the delicate issue of the perspectives of African patients,162 seeking to answer two key questions in the process. First, to what degree were European surgeons able or willing to control patients outside of their immediate territory, the operating theater? Here, I am especially interested in where, when, and how patients escaped this control. Second, I attempt to explain why patients were readily prepared to incorporate surgery into their quest for therapy and what the surgical process represented for them.

7 Beyond the Operating Theater: Limits and Implications of Control

Schweitzer effectively controlled the surgical procedure and the people responsible for executing it, namely the surgeons, nurses, and assistants. Patients, however, enjoyed considerable freedom.163 There are numerous reports

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160 Bernault, ‘Body, Power and Sacrifice’, 226.
161 Pernick, A Calculus of Suffering, 84; Howell, ‘Hospitals’, 511.
162 Flurin Condrau has discussed the complex nature of this task for medical historians. See: Condrau, ‘The Patient’s View Meets the Clinical Gaze’. I go some way towards enacting the solution that he proposes, namely to undertake ‘carefully contextualised analyses of “patients”’ (536).
163 To remain coherent, this chapter maintains its primary focus on surgical patients. The inclusion of patients from other wards in this analysis would probably not render a manifestly different picture, although the use of some coercive measures against patients will be discussed in Chapter 4.
from European medical staff lamenting the undesired behavior of their patients. In a 1934 letter, the nurse Elise Stalder updated Schweitzer on a patient who had just undergone an operation. Her statement is indicative of the difficult position held by African auxiliaries, who were required to act as mediators between persons with unequal degrees of power, as well as between different kinds of control. Stalder described how the African auxiliary Louemba

had great difficulties in making him understand that he must not eat. Again and again the sick man made Palabres: he, Louemba, did not want to give him anything, while the doctor and I had supposedly agreed to do so. It is not always easy for Louemba either.164

Stalder's letter also shows that patients' diets were one of the many aspects of patient care beyond staff members' control. According to the doctors, patients often started to eat too soon after an operation.165 There were other recurring complaints about patients' non-compliance with doctors' orders. Staff members were irritated by patients' tendency to take the bandages off their recent surgical wounds.166 Another key issue was patient mobility. Barthélemy observed how recovering patients moved freely around the hospital to visit friends in other wards, even reporting that some patients who had undergone recent operations were going fishing.167

The reasons for the doctors' concerns were mostly medical, but they were also upset by their inability to maintain control of their patients. Dr. Bonnema, for instance, wrote in 1932 that

a big hernia went for a walk a couple of days after the operation. Suddenly, he felt very sick and soon he died. The dissection revealed an embolism. The fact that our patients always do what they are not allowed to do very much increases the risk of an operation here.168

164 Stalder to Schweitzer, 3 June 1934, AMS.
165 Schweitzer, Afrikanische Geschichten, 70–71.
166 Schweitzer, ‘Briefe aus dem Lambarene Spital Juli 1933’, 9; Joy, Arnold, and Schweitzer, The Africa of Albert Schweitzer, 123. The only explicit explanation offered by a European as to why patients may have done this is to be found in a children's book, according to which bandages were taken off to release pain as well as any evil spirits. See: Franck, My Friend in Africa, 63.
167 Barthélemy, Wie ich Lambarene erlebte, 50–51.
168 Bonnema to Schweitzer, 10 April 1932, AMS.
Stalder, on the other hand, was astonished at the lack of consequences for such premature exercise. She claimed that she had not witnessed any deaths from intestinal resection during her eighteen-month stay and was surprised that ‘walks down to the landing place during their first night did not even harm’.169

A final recurring staff complaint was that patients frequently went for a bath in the river. Dr. van der Kreek recalled that the Gabonese ‘wash very often, mostly in the river. And our concern [...] was to prevent the operated patients of going to soak themselves with their bandages from the day before in the nearby Ogooué’.170 According to Schweitzer, this sort of bathing had occurred since the hospital’s establishment.171 Barthélémy assumed that patients believed this would accelerate the healing of their wounds.172 Contemporary missionary and ethnographic writing supports the view that many Gabonese attributed healing powers to water.173 Most of the staff did not seem interested in an explanation, or at least did not provide one, for this seemingly perplexing behavior among their patients.174

The fact that accounts of patients’ supposedly ignorant behavior appear repeatedly throughout the study period indicates that Schweitzer tolerated their conduct intentionally. It also suggests that he either did not seek complete control over his patients or was willing to accept that this was not possible. Frederick Franck, a Dutch dentist who regularly visited the hospital in the late 1950s, observed how recovering surgical patients went fishing and visited friends. Exasperated, he asked a nurse whether they were ‘allowed to get out of their beds?’ She responded that there was ‘nothing to allow, they just go. We can't have cops around here. It would not help anyway’.175 Similarly, Anderegg recalled that she once asked Schweitzer why the surgical staff needed to be so careful in following disinfection procedures when their patients were allowed to swim in the river shortly after their operations. Her superior replied: ‘Elisabeth, if you do not understand this, you are in the wrong place’.176 Here, Schweitzer refrained from intruding into his patients’ personal realm. He did not aim to change their habits, but nevertheless expected his staff to provide

169 Stalder to Schweitzer, 3 June 1934, AMS.
170 Becht, ‘Témoignage d’une chirurgien, Mme Le Docteur Greet Barthélémy’, 172.
171 Schweitzer, ‘Briefe aus dem Lambarene Spital Mai 1937’, 3.
172 Barthélémy, Wie ich Lambarene erlebte, 36–37.
173 Fernandez, Bwiti, 218; Grébert, Au Gabon, 136–41; Lavignotte, L’évur: croyance des Fañ du Gabon, 64.
174 The next chapter on obstetrics will explore such indifference further.
175 Franck, Days with Albert Schweitzer, 103.
176 Interview Elisabeth Anderegg.
them with the best possible service. This approach might have been motivated by an awareness that patients would be more reluctant to come to the hospital if they were forced to remain lying still for days after surgery. In another sense, this attitude conveyed an abdication of responsibility, a reading supported by Schweitzer’s lack of involvement in public health measures.

As we have seen, one task assigned to the African assistants was to police patients in the post-surgery ward in order to ensure that they did not eat. However, the low numbers of assistants, the fact that Schweitzer and his other staff were aware of the close relationship that they enjoyed with their patients, and statements such as the ones just cited suggest that keeping patients under control was not the auxiliaries’ primary duty.

Doctors had little control, if any, over when a patient sought hospital treatment. Doctors and prospective patients had drastically different conceptions of when it was appropriate to operate on a hernia. When Dr. Karl Hediger toured the surrounding region in 1929, he sent several of the approximately one hundred patients whom he examined to the hospital to undergo surgery.177 Three years later, a government doctor on tour in the area, who was tasked with administering sleeping sickness prophylaxis, sent people to Schweitzer’s hospital for surgery.178 Hernias and hydroceles were conditions that allowed patients to choose their moment of entry. During the 1932 dry season, Dr. Bonnema reported that ‘the hospital gets a little less crowded. I believe people prefer to go fishing and do not really have the time to have their hernias and hydroceles operated.’179 There are frequent reports of patients arriving at the hospital too late for surgery; if a hernia was incarcerated, this occasionally resulted in the patient’s death.180 Other hernias simply became too large to be repaired.181 Schweitzer was aware of this danger and attempted to ‘let the whole region know’ that hernias had to be operated upon as quickly as possible.182

Schweitzer believed that two of the main reasons for patients coming too late for surgery were that they and their relatives did not want to make the long journey to the hospital or that local healers had delayed them from making the decision to seek biomedical treatment.183 In relation to the first of these claims, it is notable that accounts of patients arriving too late for hernia repairs

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177 Hediger to Schweitzer, 9 August 1929, AMS.
178 Bonnema to Schweitzer, 29 May 1932, AMS.
179 Bonnema to Schweitzer, 3 July 1932, AMS.
180 Bonnema to Schweitzer, 3 May 1934, AMS.
181 Stalder to Schweitzer, 3 June 1934, AMS.
182 Schweitzer to Boyard, 18 August 1946, AMS.
183 Schweitzer, ‘Briefe aus dem Lambarene Spital März 1938’, 3; Schweitzer, ‘Briefe aus dem Lambarene Spital Februar 1939’, 2.
decrease significantly after World War Two, a period when the colonial government expanded its healthcare services. In connection to the latter, reports of prior treatment of hernias are scarce, but a few exceptions from various phases of the study period offer some valuable insights.

Dr. Walter Munz asserts that most of his patients had seen a ‘medicine man’ before coming to the hospital, a claim that he deduced from examining their scarring. Dr. Berman, who was in Lambaréné shortly before Munz’s arrival, describes a surgery that he performed on a patient who had already undergone an intervention in which a fishbone had been used as a counter-irritant. According to Berman, no one at the hospital was willing to talk about the incident and the local treatment behind it. In 1932, Dr. Bonnema examined two patients with incarcerated hernias, adding rather dispassionately, as was the manner of many of the doctors when they wrote to Schweitzer, that ‘one of them, who had torn his intestines in two while trying to have it reduced in the village, has died’. Ten months later, he wrote of a man who had cut open his own incarcerated hernia, adding in a similarly disinterested tone that ‘there were still enough intestines to take over so I did not have to perform a resection’. Even if some misunderstandings are contained these accounts, together they clearly suggest that hospital surgery was not necessarily the first choice of every patient.

Statistics do reveal, however, that a considerable number of Gabonese did seek surgery at the hospital. As I argued earlier in this chapter, the wider context had to be conducive for the introduction and broad acceptance of a technology like surgery. The question thus arises why they were willing to expose themselves to the knife in such great numbers. The obvious answer is that surgery offered ‘a possibility for the treatment of ailments that were previously not effectively treated’. This claim is difficult to dispute and must undoubtedly be taken into consideration; nevertheless, in other parts of Africa people

184 This could simply be a result of the limitations of the sources. It may also indicate a lack of interest in the matter on the part of Schweitzer and his personnel. Another possibility is that it was the product of a taboo at the hospital, possibly imposed by Schweitzer, that dictated that the local customs of patients should not be discussed. Whatever the cause, it comes as no surprise, since references to Gabon’s wider medical, economic, social, or political context are unexpectedly rare in the sources.

185 Munz, *Albert Schweitzer im Gedächtnis der Afrikaner und in meiner Erinnerung*, 222.

186 Berman, *In Africa with Schweitzer*, 97. As always, Berman’s accounts should be treated with some skepticism. It can be assumed, however, that they had some foundation in reality.

187 Bonnema to Schweitzer, 29 May 1932, AMS.

188 Bonnema to Schweitzer, 14 February 1933, AMS.

189 Au, ‘Cutting the Flesh’, 306.
were less satisfied with the results surgery produced and were much more reluctant to make use of it.\textsuperscript{190}

In Gabon, surgery was consistent with local understandings of disease and health, as well as with common conceptions of the body and practices related to it. Cutting the body, for instance, was common during autopsies. These were performed neither to acquire anatomical knowledge nor strictly to identify the cause of death, but to locate what was typically referred by European observers as a sort of parasitic being, the ‘Evu’ of the Fang language.\textsuperscript{191} The Evu granted those who hosted it enhanced and often destructive powers over others. Although hosting the Evu was considered essential for personal success, Gabonese felt very ambivalent towards it due to its aggressive potential to harm others.

Some accounts of surgery at the Albert Schweitzer Hospital resonate with the idea of Evu, even if they never explicitly refer to the concept as such. Joy and Arnold, two important supporters from the USA who visited Schweitzer in 1947, for example, wrote that ‘in the early years of the Hospital, relatives of a patient insisted on standing over Dr. Schweitzer to make sure he took something out (‘there goes the Evil Spirits’) and did not put anything in’.\textsuperscript{192} It is unclear if Schweitzer or his surgeons believed that patients thought that they would extract something during surgery.

The vast majority of doctors did not discuss local conceptions of disease in their writings, and their practices certainly did not reflect a special awareness thereof. One exception can be found in Barthélemy’s account of his stay at the hospital. Visiting Lambaréné after the publication of Joy and Arnold’s book, he

\textsuperscript{190} Good, \textit{The Steamer Parish}, 407; Ranger, ‘Godly Medicine’, 268; White, \textit{Speaking with Vampires}, 105.

\textsuperscript{191} Bernault writes of an ‘organic/mystical substance’ with ‘divine agency’. In: Bernault, ‘Carnal Technologies’, 178. Raponda-Walker and Sillans provide translations of the term for many other Gabonese languages, but the Fang’s use thereof has been by far the most intensively studied. See: Raponda-Walker and Sillans, \textit{Rites et croyances des peuples du Gabon}, 82–84. They further write that around 1900 almost all corpses underwent an autopsy, but that this practice had become uncommon by the mid-twentieth century (116). Contemporaries provided anatomical-biomedical explanations for the Evu. The botanist and ethnologist Günter Tessmann claimed to have attended autopsies in which he had seen ‘Ewus’, which he believed to be internal injuries. See: Tessmann, \textit{Die Pangwe}, 2329–33. The missionary Lavignotte wrote that ‘each trace of tumour, ovarian or liver cyst, or syphilis on a placenta, internal bleeding, etc., is proof of the presence of the évur’. In: Lavignotte, \textit{L’évur: croyance des Fañ du Gabon}, 53–54. According to anthropologist James Fernandez, autopsies ‘uncover certain unnatural growths or formation (zi evu) which are said to be the seat of the evus’. In: Fernandez, ‘Christian Acculturation and Fang Witchcraft’, 247.

\textsuperscript{192} Joy, Arnold, and Schweitzer, \textit{The Africa of Albert Schweitzer}, 124.
refuted their statement that the belief in spirits had been more widespread in the hospital's early years. Barthélemy explained that patients

attach great importance to seeing the parts removed from their bodies later on, and after they have determined the removal of the bad pieces in this manner, they explain with a content expression that they now feel much better.\footnote{Barthélemy, \textit{Wie ich Lambarene erlebte}, 36.}

Another reference to spirits can be found in a children's book published by Franck in 1960 in memory of his stays in Lambaréné the previous years. The protagonist is a local child who comes to the hospital to have an ulcer treated at the narrator's insistence. The boy reflects on surgery, thinking to himself how ‘everyone knew that a knife was a powerful thing. So it must be the very best thing for cutting out the evil spirits that made a man sick’.\footnote{Franck, \textit{My Friend in Africa}, 61.} Through the eyes of a child, we thus return to the knife, the technological artefact that had become inseparable from the physician and the surgery process itself, a powerful technology of healing that could possibly even free spirits and \textit{Evus}.

There is no evidence, however, to suggest that Gabonese viewed surgery in this way. The legitimacy of the above accounts is hampered by their lack of specificity; for example, what precisely did these authors mean by ‘evil spirits’? It appears that they subsumed everything that they considered supernatural, including the \textit{Evu}, under this term. These accounts are therefore perhaps best understood as colonial genre-writing, as discussed in the Introduction. Furthermore, some Europeans living in the region claimed that the \textit{Evu} prevented Gabonese from seeking surgical care. The head of the Service de Santé observed that patients were reluctant to undergo surgery, because they feared that the \textit{Evu} would be released.\footnote{Gaulene, ‘Coutumes des races gabonaises’. In: ‘Rapport Annuel du Service de Santé de la Colonie du Gabon 1932’, ZK 005-127. SHD, 139.} The missionary Lavignotte asserted that local residents believed that European hospitals, including Schweitzer's, were powerless to treat diseases of the \textit{Evu}.\footnote{Lavignotte, \textit{L'évur: croyance des Fañ du Gabon}, 91.}

Contemporary ethnographers were a little more exact, both when discussing the causes of and the therapy for hernias specifically or the wider significance of surgery and its connection to the spirit world. In general, spirits were assumed to be able to cause disease, as we have seen in Chapter 1 in relation to

\footnotetext[193]{Barthélemy, \textit{Wie ich Lambarene erlebte}, 36.}
\footnotetext[194]{Franck, \textit{My Friend in Africa}, 61.}
\footnotetext[195]{Gaulene, ‘Coutumes des races gabonaises’. In: ‘Rapport Annuel du Service de Santé de la Colonie du Gabon 1932’, ZK 005-127. SHD, 139.}
\footnotetext[196]{Lavignotte, \textit{L'évur: croyance des Fañ du Gabon}, 91.}
the Nganga, who was required to perform a sort of ‘exorcism’ in response. Fernandez supposed that the main goal of such treatments was the ‘voiding, actually or sympathetically, of the interior of the body’. He described a ‘water spirit’ that caused ‘afflictions of the stomach and bowels’, especially ‘watery bowels’, which were treated with various plants. Fernandez further alluded to ‘demons’ that caused ‘blockages’. These were countered with ‘running water and the flow of verbal confession’. ‘Exorcism’, ‘voiding’, and ‘blockages’ could easily be linked to surgery; however, since the course of therapy depended to a large degree on the cause of the affliction, the question of how locals believed surgery acted to cure hernias is difficult to answer. A linguistic comparison connects hernias with neither cause nor therapy, but with form: in the Fang language they were known as the ‘disease of the nut’.

However, the Evu remains important to understand the willingness of Gabonese to undergo surgery. By being connected to a specific person and his or her body, belief in the Evu allowed for a conception of the individual body as both a seat of disease and a site of intervention, in the sense outlined by Landau.

The use of charms to improve personal fortunes, widespread in early colonial Gabon, illustrates this. Bernault explains how charms channeled the agency of the dead through the use of body parts from ‘remarkable ancestors’, whose agency was thereby rendered present in ‘ritual experts’ and ‘political leaders’ in the form of their Evu.

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197 Raponda-Walker and Sillans, *Rites et croyances des peuples du Gabon*, 137–41; See also: Gollnhofer and Sillans, ‘Phénoménologie de la possession’, 742.
198 Fernandez, *Bwiti*, 625.
199 Ibid., 598.
200 Ibid., 218.
201 A dictionary published in 1892 provides two Fang translations for the French ‘hernie’ or ‘descente’: ‘Ethout’ and ‘Mbang’. Lejeune, *Dictionnaire français-fang*. The first of these terms could not be found in a dictionary published seventy years later by the Swiss missionary Samuel Galley. ‘Mbañ’ is translated therein as ‘Fruit kernel, almond, etc.’ and is also one of the words given for ‘testicles’ (Mbañ afam). Hernias, here specifically testicular hernias, were ‘Ôkon Mbañ’, with ‘Ôkon’ the term for ‘sicknes’. Galley adds: ‘It is called that way, because what comes out looks like a nut’. He also provides a further translation for hernia: ‘minsoñ’, a plural noun for all kinds of worms, including intestinal ones. He insists, however, that for hernia, ‘it’s improper, the true word is mbañ’. Galley, *Dictionnaire fang-français et français-fang*.
202 At the same time, building on the work of Homi Bhabha, Landau cautions us that ‘the very idea of the ‘individual’ was a particular European historical construct’. As this paragraph suggests, I retain my doubts about this claim. Landau, ‘Explaining Surgical Evangelism’, 279.
203 Bernault, ‘Carnal Technologies’, 178.
In the 1920s, the French colonial government imposed laws regulating the handling of corpses, which complicated the production of charms. Consequently, their trade grew more occult and their contents less specific.\textsuperscript{204} In the next decade, wage labor, of which hernias were a painful reminder, and colonial head tax collection intensified.\textsuperscript{205} Given these developments, it is unsurprising that in the years that followed Fernandez observed a growing importance being attached to the \textit{Evu}, which now came to be viewed in a more positive light.\textsuperscript{206} The contemporary sociologist Georges Balandier had already highlighted the \textit{Evu}'s individualizing aspects; from a social and political perspective, he interpreted the workings of this ‘non-communal power for strictly personal purposes’ as a ‘radical form of opposition to the clan order; they represent its most individualizing part, the most revolutionary part of Fang magic’.\textsuperscript{207} Taking into account the dynamic reciprocal relationship between technology, individual agents, and society at large, my argument can be stretched further. Hernia repair contributed to the growing sense of individualization in the region because it relied on existing individualistic conceptions of the body, disease, and power that it in turn further reinforced and diffused.

In addition, the above-mentioned accounts from the hospital, invoking powerful knives and relatives glancing over surgeons’ shoulders, remind us of the ‘work of the knife’ in the Belgian Congo, the expression patients and their relatives used to refer to surgery. Dr. Clement Chesterman, encouraged the use of this term, which again blurred the boundaries between agents, objects, and technology. He staged surgical interventions as public events in order to increase local acceptance of surgery and demonstrate that there was nothing ‘magic’ about it. Nancy Hunt then conceives of missionary surgery, just like dining, as a performance.\textsuperscript{208} The Albert Schweitzer Hospital also provided reasons to support such a reading.

Returning to the introductory anecdote of this chapter, Schweitzer continued his letter disclosing the performative aspects of surgery at his hospital. He described what happened before a patient entered the operating theater as follows:

In the room where patients who were recently operated lie together with those to be operated soon, the ones who have already participated in the

\textsuperscript{204} Ibid., 181.
\textsuperscript{205} Gray and Ngolet, ‘Lambaréné, Okoume and the Transformation of Labor’.
\textsuperscript{206} Fernandez, \textit{Bwiti}, 209.
\textsuperscript{207} Balandier, \textit{Sociologie actuelle de l’Afrique Noire}, 146–47.
\textsuperscript{208} Hunt, \textit{A Colonial Lexicon}, 84, 117–20.
ceremony of gratitude, rehearse with those who still wait to be part of it. Mainly they articulate the difficult name of Schleich and are greatly amused when the really wild people from the interior are not able to stutter something like Schleich. When he is carried out for the operation, they call after him: ‘say Schleich’.209

How can we relate what we have learned in this final subchapter to this ritual, a practice that can simultaneously be read as one of Schweitzer acknowledging the presence of the African patient and as one of the patient submitting to Schweitzer and his technologies? The patients’ reaction, as described by Schweitzer, is thought-provoking. They rehearsed and joked, but then complied, turning the pre and post-surgical act into a theatrical spectacle, a performance (see Illustrations 16 and 17). We can only speculate as to why patients felt the need to comply with this ritual. Perhaps they believed that it was an essential step towards being healed by Schweitzer in particular. Another contributing factor may have been the relative freedom that they enjoyed elsewhere in the hospital, where they were less frequently subjected to such measures of submission and control. Perhaps they really wanted to express their gratitude and felt acknowledged; or possibly the answer is even more straightforward: namely, patients tend to do as doctors say in their presence. After all, the latter ‘promised life rather than threatened death’210 and hence followed the biopolitical logic. Whatever the patients’ motivations, the story is an excellent illustration of the ambiguous interactions in the colonial medical sphere. It serves to broaden our understanding of medical and colonial control and the role played by technology therein.

8 Conclusion

There is every reason to believe that patients came to the Albert Schweitzer Hospital for surgery of their own volition. They wanted to see and experience the surgeons, the knives, and the lamps that repaired hernias and other conditions. Surgery did not upset their relationship with their own body, which they were able to conceive of as a site for individual medical intervention. This idea pre-dated Schweitzer’s arrival in Gabon, and hence was a precondition for surgery’s ultimate success in Lambaréné. During the study period, however, Gabonese expanded their conceptions of the individual, as tax-payer, convert, consumer, political participant, powerful person, and so on; simultaneously their

209 Schweitzer to Gauss, 7 July 1952, AMS.
210 Thomas, Politics of the Womb, 176.
ILLUSTRATION 16  The operation room and two assistants in 1940
© ARCHIVES CENTRALES ALBERT SCHWEITZER GUNSBACH

ILLUSTRATION 17  The operation room in 2015. It is now a museum and the picture of Schleich still hangs there
PHOTOGRAPH BY HUBERT STEINKE
powerful individual force *Evu* grew in importance. Surgery drew from these notions while it probably also contributed to their broader acceptance.

In the process of having their hernias repaired, patients at the hospital were not obliged to submit themselves to doctors' complete control. They were allowed to go for walks, bathe, or possibly even fish. Schweitzer consciously permitted this high degree of personal freedom. He and his staff did not seek to intrude too deeply into the daily lives of their patients within and beyond the hospital. In Lambaréné, the practice of surgical biomedicine did not form part of a broader program of strict colonial social control.

Within the operating theater, however, the maintenance of procedural control was of central concern. In Lambaréné as elsewhere, the technologies of asepsis and anesthesia were unsurprisingly important in enforcing this control, although, due to the frequent use of the infiltration method, anesthesia carried with it a slightly different meaning with less emphasis on control. The means of enforcing these technologies of control were different than in European operating theaters. Asepsis relied less on technological devices than on manual work. The same is true for the whole surgical process; individuals, patients and medical staff alike, were controlled by other persons, with technologies playing a less influential role. There were exceptions, such as lamps, which posed considerable technical challenges. However, Schweitzer believed that he could remain in control – make things and individuals act in a predetermined way – through his own and others' personal authority and experience. Long-serving African auxiliaries occupied a central role in this order, acting as mediators between different groups of people and different modes of control.

Through the analytic focus on medical practices, I have been able to define and contextualize different layers of control. Medical procedural control occurs during specific instants only; the control that it then exerts is almost absolute, as our example of an operating theater in a private hospital in colonial Gabon has shown. Colonial social control was envisioned to be extremely broad, but it was not all-embracing, even in a confined and well-organized space such as a private hospital in colonial Gabon. At the Albert Schweitzer Hospital, both types of control on their own and their merging empowered a number of improvised reactions to counter or uphold them.