

Bodies in the Service of the Japanese Empire: Colonial Medicine in Manchuria

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Abstract: *This article examines human experimentation under Japanese colonial rule, highlighting the practices by Japanese medical doctors at medical educational institutions in Manchuria in the years 1911-45. Although it proclaimed a civilizing mission in the colonies, colonial medicine exploited the bodies of the colonized for medical research and education. This article details unethical civilian practices which began well before the well-known, systematic atrocities of the Kwantung Army's Unit 731 in Manchuria. Bodies in the service of empire were long a part of the violent everyday life under colonial rule. The medical practices, experiments, and dissections carried out on the Chinese were more ethically problematic than those conducted in the home country. Over the period of colonial subjugation, such practices became steadily more radical. Colonial medicine, associated with physical experimentation, expropriated and endangered Chinese bodies. More importantly, the practices in medical colleges became the basis for Unit 731's human experimentation on Chinese using bacteriological and chemical weapons. The use of the human body is deeply intertwined with the interests of the power relations that governed the colony. This research shows how colonized bodies became material for the Japanese Empire.*

Keywords: *Asia-Pacific War, colonial medicine, Manchuria, Mukden Incident, Mukden Medical*

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Introduction

Between 1911 and 1945, Japan developed modern medical and hygienic practices in Manchuria, where the infamous germ warfare facility Unit 731 was located. There have been numerous studies concerning the medical crimes of Unit 731 (Shimamura, 1967; Morimura, 1981; Tsuneishi, 1981, 1999, 2005; Williams and Wallace, 1989; Harris, 1994; Matsumura, 1989; Dickinson, 2007; Nie and Guo, 2010; Chen and Dybbro, 2020, etc.). These studies have revealed that Unit 731 experimented on over 3,000 prisoners of war with biological weapons during the war, documented the human toll of the experiments in China, and shown how the Japanese researchers involved escaped justice at the end of the war. These medical crimes committed by the Japanese Imperial Army have usually been examined from the perspective of Japan's war-time aims.

However, the Unit 731 studies do not fully explain why or how large-scale human experimentation facilities were set up in Manchuria. Human experimentation is a way of controlling the human body, and colonial medical practices are not limited to war. This paper examines the nature of colonial medicine

itself which laid the groundwork for Unit 731.

Historians have recorded various dimensions of medicine in colonized and invaded countries (Arnold, 1987/1993; Cunningham & Andrews 1997). The relationship between colonial medicine and racism has also been noted (Lorcin, 1995, 118-145). There is a robust body of work underscoring the importance of medicine for Imperial Japan’s “civilizing” mission (Iijima, 2000/2005; Rogaski, 2004; Kingsberg, 2013; Akami, 2017, etc.). Most of these studies concern public health, i.e., infectious disease control, drug interdiction, and have not focused on the expropriation and use of the human body in the colonies. During the era of Japanese colonialism, many losses occurred in Northeast China, including loss of life, physical and psychological injuries, and forced migration and mobilization, all of which have had profound and lasting effects (Koga, 2016). We need to ask why medicine, which is supposed to save people’s lives, caused losses in the colonies.

In Europe and the United States, many studies involving human experimentation were based on race theories which positioned others as subordinate races, such as the Tuskegee syphilis experiment, Dr. J. Marion Sims’ experiments on enslaved black women, trials of Trypanosoma drugs with major side effects on Africans, and human experimentation carried out by Nazis in concentration camps. These medical crimes should be understood in historical context and can be viewed as the dark side of modern medicine. Similarly, the issue of Unit 731 should also be placed in the context of Japanese modern medicine in colonial Manchuria.

This paper considers how the bodies for medical experimentation were procured within the larger structure of Japanese colonial rule. With Manchuria as a case study, it examines how medical scientists acquired and used human bodies for research. Anatomical and

biological experiments are essential to modern medical research and education in both sovereign and colonial countries, but it is important to examine whether subjects voluntarily or involuntarily enter the laboratories or enroll in studies for experimental purposes. The treatment of the research subjects is equally important. The period under investigation spans more than thirty years, from 1911, when the South Manchuria Railway Company (SMR) established a Japanese medical college, to the end of the Asia-Pacific War in 1945. This period includes the Mukden Incident of 1931 which brought about changes in the acquisition and use of human bodies for research purposes. This paper traces the methods used to acquire bodies for research and the radicalization of human experimentation during this timeframe that led to Unit 731, as well as earlier collection and research on human subjects in Manchuria.



Map of Manchukuo (1933-1945)

Goto Shinpei (*Photos of famous people in modern times, no.1, 1935*)

Manchurian Colonization and Medicine

South Manchurian Medical College and Mukden Medical College

The South Manchurian Medical College (SMMC) was founded in 1911 by Gotō Shinpei 後藤 新平, the first president of the South Manchurian Railroad, on SMR-owned land in Mukden. In 1922, the institution became Mukden Medical College (MMC).



The SMR sought to justify management of the colony through its civilizing mission. The SMR stated that “disseminating medical care to Manchuria is a key factor in Chinese consolidation, as well as a part of the company's civilizing mission” (SMR 1919, 866). The popularization of medical treatment was an important element of this goal, and the training of doctors was a central part of their plan. In other words, this college in the colony was founded with the mission of reintroducing advanced Japanese medicine at home. This sense of a “civilizing mission” was supported by Japan's self-identification as a “civilized country,” in contrast to the Japanese perception of the Manchurian people as “undeveloped.”

In the next section, I investigate how the SMMC and MMC obtained human specimens, anatomical bodies, and patients as medical research supplies, which relied on the patients for academic use. This term refers to a patient who, in return for reduced fees or complete exemption from medical expenses, became the subject of medical lectures, practical training, and medical experiments or who has been contracted to provide his or her body for anatomical research or education after death.



Mukden Medical College (picture postcard)

Bringing up the dead

According to Horie Kenji堀江 憲治, the first graduate of SMMC, in order to obtain the required osteology teaching materials, he and his friends secretly exhumed bodies from graves in Hokuryo 北陵 (Kumada 1978, 654). Nagahara Oriharu永原 織治, the fifth graduate of the medical college, recalled exhuming human bones from the graves of Manchurians (満人 Manjin, Chinese living in Manchuria) and processing them to make “a fine specimen,” though he wrote, “This is an unusual example” (Kumada 1978, 656). However, Hayashi Mitsuo 林三夫, a 1927 graduate, wrote that quite a few students at that time stole skulls from Manchurian graves and used them for study (Kumada 1978, 697).

These actions violated religious beliefs that disturbing a grave would result in retribution from the deceased. At the time, grave robbery was a criminal act prohibited under Article 19 of Japan’s Penal Code, which stated that, “A person who destroys, or obtains from dead bodies, remains, hair, or objects stored in a coffin is subject to imprisonment with labor for not less than 3 months but not more than 5 years.” Medical students, aware of these social and legal norms, acquired bones in the dead of night and in weather conditions when few people were likely to observe their actions.

However, the recollections of those who engaged in exhumation do not mention feelings of shame or remorse. Rather, these stories were told to signal the students’ eagerness to study, emphasizing, as Nagahara did, the creation of “a fine specimen.” Students were assigned the task of preparing “materials for osteology” by teachers who, far from warning

or reprimanding the students for grave robbery, instead praised them for their lab work.

The graves in Manchuria were fairly shallow, so some bodies were eaten by wild dogs or exposed to the elements (Kumada 1978, 656). Certainly, these differences in burial customs between the metropole and Manchuria made it relatively easy for students to obtain corpses, but they thought they were different from the people who stole bodies without permission. In the name of academia, surreptitiously exhuming of graves in Manchuria by Japanese medical candidates was justified. The theft of bodies was rooted in discriminatory attitudes toward Manchurians. On mainland Japan, desecration of bodies of the dead was not permitted, while in Manchuria colonial authorities praised such acts as part of the quest for truth.

Supplying anatomy classes

The practice of anatomy is indispensable to the study of the human body. For doctors to learn to treat the living, it is necessary for them to dissect the dead. As a colony, Manchuria had several features that made it easy for the hospital to procure and study cadavers. As Nagahara recalls, “The cadaver room also contained dead bodies that had frozen at 40 or 50 degrees below zero in winter, and the students at that time had no shortage of anatomical material” (Kumada 1978, 656). The abundance of frozen corpses was due to the great number of people who froze to death in Manchuria. These bodies, delivered by the SMR from rural areas, were sent without the consent of the bereaved families let alone the subjects themselves. According to SMMC statistics, between September 1911 and March 1921, 333 cadavers were used for lineage anatomy to understand the structure of a normal human body through pathological anatomy (South Manchurian Medical College 1921, 29-97).

A comparison between the supply of cadavers for lineage dissection to the anatomy class at Tokyo Imperial University (TIU) and to SMMC in the same period sheds light on different attitudes and approaches in Japan and Manchuria. The number of students and researchers at TIU was much larger than that at SMMC, and the two schools differed regarding research content, relationships with neighboring medical colleges, and climatic conditions, making it difficult to draw a simple comparison between the two. However, it is possible to look at cadaver retention procedures. The main suppliers of cadavers to TIU were such institutions as the Tokyo Poorhouse, the Japan poorhouse, and prisons; on occasion, bodies were also privately donated. According to responses to inquiries by the Ministry of Education in 1921, TIU anatomy classes needed 280 cadavers but only obtained 182 in 1919 and 127 in 1920 (Kozai 2007, 92). In other words, the supply of cadavers was significantly lower than the demand in the laboratory. SMMC was clearly far more successful in obtaining cadavers than TIU.

Koganei Yoshiaki 小金井 良精, a professor of anatomy of TIU for 32 years, paid a subsidy for each cadaver from the Tokyo poorhouse in an attempt to increase the supply and offered year-end bonuses to staff in charge of the poorhouse to secure such cadavers (Koganei 2016, 101-125). Mori Oto 森 於菟, an assistant professor of anatomy of TIU, recalled, "From the end of the Meiji period [1868-1911] to the Taisho period [1912-1926], the issue of treatment of cadavers was problematic, and consent was required from the bereaved family. There was a lot of trouble with the cadavers of patients treated in public hospitals and those of the dead on the street" (Mori 1944, 75). At the time, Japanese law required that consent be obtained from relatives, if they could be found, before a dissection could be performed on a body.

However, no such protocol hampered

researchers in Manchuria, and there was a sufficient supply to meet demand. Underlying this supply was a harsh social environment in which frozen corpses were common and there was a lack of regulations governing their use. This framework, in which Japanese medical professionals could freely use the bodies of dead local people, exemplifies the structure of colonial society.

Chinese patients for academic use

At the time of the opening of SMMC, few people had access to its affiliated hospital, and the college suffered from a lack of patients required for education and research purposes. The population of Mukden, the biggest city in Manchuria, was approximately 170,000. Japanese residents accounted for only 4,200 of that total (SMR 1912, 93-102). The SMR Affiliated Area, where the attached hospital was located, was separated from Mukden, where the Chinese population lived. Because this segregation of the two populations hindered the supply of outpatients, a clinic called the Palace Branch Hospital was established in Daximenli Manbogui Hutong to cater to the Chinese population, and measures were taken to recruit patients for the school (South Manchurian Medical College 1921, 17-19). As part of the affiliated hospital, a branch hospital was set up in Mukden to provide medical care while collecting patients for academic use. The president of the college at that time, Yamada Motoi 山田基 recalled that he needed to increase the number of Chinese patients in order to obtain clinical materials and cadavers for pathological autopsies (Manchurian Medical College 1936, 317-318). One of the roles of the Palace Branch Hospital, then, was to find suitable candidates from among the many Chinese patients to become patients for academic use who could be sent to the main hospital.

This measure was successful, and in 1915 the

“Chinese ward,” also known as the “Manchurian ward,” was established within the main hospital. Professor Hashimoto Takashi 橋本 喬 of the dermatology department, who was assigned to the hospital in 1922, recalled that Japanese patients at the hospital were required to pay for their treatment, while Chinese patients were exempt from payment (Kuroda, 1936, 341). The premise of the patients for academic use system was that recipients of medical treatment would pay their debt to the college by providing their bodies for the hospital’s educational research program. Chinese patients at the hospital were exclusively patients for academic use. Their numbers remain unknown.

The patients for academic use system was interlaced with broader conditions in the colony, which made it difficult for patients to disentangle themselves once they had started treatment. *The Patients for Academic Use Handling Manual* stipulated: “When a person leaves the hospital for his/her own convenience, or stops going to the hospital, our hospital collects the specified fees from said person or their guarantor” (Mukden Medical College 1934 68-69).

Patients who wished to withdraw could do so only by reimbursing the college for the costs of the treatment they had already received. This patients for academic use system, and the welfare system in general, became a tactic to keep patients’ bodies in the hospital. A nurse in charge of the patients for academic use ward recalled the family of a Chinese patient who said, “We sold cattle, but we have no more money. Please use our child as a patient for academic use” (Kumada 1978, 1077-1078). This family had sold its property to pay for medical treatment and, when it could no longer afford the cost of the treatment, it was forced to give their child over for academic use. The school patient system was premised on the rampant poverty of the colony.

The critical point is that there was no way to opt out. Once patients were enrolled, they lost control of their bodies. Article 5 of *The Patients for Academic Use Handling Manual* stated that, “patients for college use shall not be allowed to refuse experiments on them by medical students” (Mukden Medical College 1934, 68-69). This amounts to a declaration that patients had no power to veto invasive procedures performed on their bodies and did not have the right to speak out against the nature of procedures or experiments conducted upon them. Furthermore, medical teachers and students were not required to obtain consent for experiments on patients for academic use.

While some Japanese nurses recalled physicians, who treated patients for academic use well, others cast doubt on the doctors’ behavior. For example, when a physician who was “tired after a picnic” neglected to visit a patient, the result was the death of the patient. Another patient who had undergone a craniotomy was discovered, during an autopsy, to have been misdiagnosed (Kumada 1978, 1077-1078). What these two cases have in common is that they were considered neither newsworthy nor subject to reprimand or litigation. In fact, they were not even viewed as problematic. If a problem is not identified as such, then no problem exists, and it is cannot be subjected to historical verification. In the circumstances of Chinese patients for academic use, incidents and abuses were simply unreported.

Patients for academic use in Japan

In 1935 the total number of paying patients and patients for academic use at National Universities in Japan was 518,304. Of those, 40,426—that is, about 7.5%, or 1 in 13—were patients for academic use (Kanazawa University School of Medicine Centennial History Editorial Committee 1972, 292-293). This system was positively upheld as “the most

urgent condition to assist the development of medicine (Fusuikenshujin 風水軒主人 1909, 6).” However, when knowledge of the system became widespread, newspapers and magazines began to criticize it.

For example, in 1916, Dr. Ishigami Toru 石神亨 wrote: “Because research is the main focus, the attitude of doctors and nurses is a seeming unwillingness to help people with illnesses” (Ishigami 1916, 56). Under the headline, “Patients for academic use are being abused and left crying like criminals. This is a social problem that cannot be overlooked.” Universities were accused of harsh treatment and crude medical care of patients for academic use (“Patients for Academic Use” 1920, 2). Tohoku Imperial University called for equal care of all patients, stating that “treatment of patients for academic purposes should not differ from that of private patients” (Tohoku Imperial University 1917, 121). While the treatment of patients for academic use became recognized as a social problem in Japan, there is no evidence that the same issue was the subject of discussion or criticism at SMMC and MMC. In Manchuria, poor Chinese patients were forced to adhere to the patients for academic use system with its attendant risks. The above comparison between SMMC/MMC and academic specimens, anatomical bodies, and patients for academic use in mainland Japan shows that the burden and risk of medical research and education materials in Manchuria were unilaterally concentrated on the Chinese.

One characteristic of the exploitation in Manchuria was the relative slowness with which rules and procedures were put in place compared to mainland Japan and the lack of exposure of medical personnel to public criticism. The existence of regulations, surveillance, and censure would have provided a degree of deterrence against abuse, but this was entirely lacking in Manchuria. An assistant professor in the Department of Internal

Medicine, Dr. Kanokō Takashi 鹿子生嵩 was studying Kashin-Beck disease, which occurred frequently in Manchuria. He sought people suffering from this disease to enlist as patients for academic use. However, some patients ran away, and afterwards doctors took measures to prevent escape (Kumada 1878, 178-179). We can see that they understood that they were in danger and sought to escape.

In Manchuria in particular, medical professionals including medical students, could acquire bodies without adhering to mainland ethical standards. While medical science claimed to have a civilizing mission in the colony, it actually hinged on the exploitation of different norms in the metropole and colony. Medical development and physical deprivation took place simultaneously.

The Mukden Incident and Japanese Medicine in Manchuria

The Rehe 熱河 investigation and medical research

In peacetime, cadavers used for research and educational purposes were often the victims of road and other accidents as well as patients for academic use who had died. However, in wartime, the source of cadavers changed. An internal medicine researcher at MMC recalled, “The outbreak of the Mukden Incident was extremely unfortunate, but it was a great opportunity for surveying and researching local diseases in Manchuria and Mongolia” (Kumada 1978, 144). The opportunity that war provided for medical research demands further examination.

In July 1933, a group headed by MMC Professor of Pathology Kubo Hisao 久保 久雄 and Professor of Internal Science Takamori Tokio 高森 時雄 traveled to Rehe Province 熱河

省, to investigate rural goiters. The Kwantung Army had annexed Rehe Province to Manchukuo in March of the same year. Noticing the prevalence of locals with goiters, the military commissioned medical researchers to conduct investigations because they feared for the health of the troops stationed there. Goiters are a thyroid disease resulting from iodine deficiency, which causes the thyroid to enlarge. It is common in areas with low concentrations of iodine in the drinking water, such as mountainous and inland regions. The intake of iodine-rich seaweed and salt is an effective prevention. Although the study of goiters in Rehe Province had long been seen as a necessity, “it was impossible to conduct investigations and research due to the political situation” (Kumada 1978, 144). Japanese military operations changed those conditions.

Following the Mukden Incident, the construction of railways and roads for military purposes proceeded on a large scale throughout Manchuria. By 1934, with Manchuria under military control and with the founding of the puppet state of Manchukuo, a degree of political stability was established in Rehe. However, anti-Japanese resistance continued. Military subjugation of rebels became an ongoing mission of the Kwantung Army. The Japanese at the time commonly used the term “bandits” (匪賊 or *hizoku*) to refer to the anti-Japanese organization that resisted Japanese domination.



Captured partisans (Manchurian Incident Photo Album, Chukoh no Nihonsha 1932)

Dissection immediately after execution

Professor Kubo examined “bandits” from Rehe Province who had been sentenced to death, both to check them for the presence of goiter and to interview them for information about drinking water. Once the prisoners were executed, Kubo dissected the corpses and brought part of the thyroid from each of them back to the university as samples. He summarized the resulting research in an academic paper published in a medical magazine (Kubo 1934a, 556).

Furuta Keisuke 古田 敬助, a pathology technician who accompanied Kubo, reported that he had managed to get “a precious organ that was fresh and difficult to obtain easily after death” and explained “how useful this autopsy was” for scientists who had to follow the Daijokan rules 太政官布達 in mainland Japan (Furuta 1934, xxx).

Under a Japanese law promulgated in 1884, the burial or cremation of corpses was not permitted until 24 hours after death (“Rules for Cemetery and Burial Control,” no. 25). Consistent with this, and to allow for the

possibility that a relative might come forward to retrieve a corpse within 24 hours, researchers were not allowed to conduct research on a body until that time had elapsed. However, in the occupied territories, this rule was ignored. There, as Furuta pointed out, medical scientists there had access to undamaged organs that provided better research samples. Moreover, many of these young “bandits” were in good health at the time of death. Healthy human corpses were rare and more medically valuable than dead bodies with pathologies. Because the Rehe study focused on goiter, Kubo and his colleagues could select bodies that had not been affected by other diseases in order to make systemic findings about goiter.

Death sentences were scheduled to be carried out at predetermined times, so autopsy preparations could be made in advance. Negotiations for the collection of jaw and neck organs were conducted by military police and the National Police Agency. The army's subjugation of “bandits” enabled the use of their bodies as research material (Furuta 1934, 15-18). This was another advantage Kubo had over his counterparts in Japan, who only had access to a few healthy bodies they received by chance as the result of crime, war, accident, or suicide. Professor Kubo was in the position to gain biological data following a scheduled death and compare this with previous information about the body. Thus, medical research in Manchuria directly benefitted from military executions. As Kubo wrote, “It was our great honor to have been commissioned by the Kwantung Army. In addition, Rehe is a medically unexplored land, so our research spirit was forced to rise to high tide.” He thanked the army for the new knowledge he had acquired through research he was able to conduct “while receiving the great asylum of the Kwantung Army” (Kubo 1934b, 124).

Requesting “bandit” bodies from the army

In addition to acquiring “bandit” bodies through military-commissioned research, medical scientists found other ways to obtain cadavers. Following the project in Rehe, Kubo also dissected “bandits” that the army provided to him at Nongan 農安 in Jilin Province 吉林省. In his account, “Dissecting 12 Bodies in Two Hours: The Fate of Bandits,” published in the *Tokyo Medical Journal*, Kubo described how he came by his “materials:”

In mid-November 1933, I heard from a person who was sure that 27 prisoners of war from the subjugation in Nongan, in the countryside of North Manchuria, would be put to death. I had always thought about increasing the number of materials for the anatomy of diseases in the classroom, and I also wanted to compare materials that I had dissected in the endemic area of Rehe in the summer. It was difficult to obtain this from other studies, so I immediately asked the people concerned if I could study the disease using the bodies of the men who had received the death penalty. The parties in Manchuria agreed with a good understanding of my intention. (Kubo 1934c, 35-36)

Kubo carried out autopsies on twelve “bandits” immediately after execution, harvesting their organs as samples. His paper Kubo acknowledges the help of the Kwantung Army and the Manchukuo Army as well as the Japanese consulate in Nongan.

What is noteworthy about this instance is that it was for his own research that Kubo dissected the bodies of the executed bandits “for his own research.” The study was neither commissioned nor compelled by the army. In this case, the army, which had the power to seize and kill

insurgents, willingly complied with the request of a medical scientist.

Kubo's article was published in a respected medical journal and disseminated to the Japanese medical community. This implies that it was not confidential information, which would have been censored. In blunt terms, conducting medical research on the bodies of these twelve executed men was simply considered common sense in the context of Manchuria.

The lax restrictions in Manchuria attracted medical scientists from the mainland. Okamura Yasuji 岡村 寧次, deputy chief of staff of the Kwantung Army, described how

...two or three professors in charge of surgery at a certain national university visited and asked to see the cross-section of the head of a bandit who had been executed with a sword by the Ministry for Army as punishment for burglary. They said it was a good opportunity, and made the request in secret, so I sent them to the army in Jilin to fulfill their wishes (Okamura 1970, 390).

Probably the Army also worked to provide "good" materials by choosing methods of execution that would have protected the corpses for research purposes. Medical scientists took advantage of military violence and executions to advance their own research, gathering and using materials that would have been unavailable in Japan. The above was only possible because Manchuria was controlled by Japan.

In Manchukuo, the "Provisional Disciplinary Rebellion Law 暫行懲治叛徒法 " and "Provisional Disciplinary Theft Law 暫行懲治盜匪法 " were enacted in September 1932 as legal grounds for the subjugation of rebels. The former targeted "those who organized groups with the aim of disrupting the national constitution and rapidly undermining the foundation of the existence of the state (Imperial Society of Local Administration 1933, 127-128)." Breaking this law was punishable by imprisonment for more than ten years or even death (Kato 1979, 634). The latter law provided for severe punishment, including death, of "...a person who has profited through robbery of another person's property by means of coercion or intimidationThe commander of the armed forces and high-level police officers stipulated that members of the armed forces could also be punished under this law (Imperial Society of Local Administration 1933, 131-133)." No judicial process was required for the "bandits" who were captured under this law; their punishment was left to the discretion of the supreme commander on the ground. The suppression of the anti-Japanese movement was carried out through these laws. International laws regarding the treatment of prisoners of war were ignored, and the military was able to carry out executions without trial in Manchuria (Ogino 2017, 7-9). They had a free hand to dispose of their enemies however they deemed fit, including taking their lives. Medical researchers could rely on a steady supply of research materials because of the detention and execution of Chinese "bandits" under these laws. Colonial bodies became experimental materials under the empire. While local people were used as patients for research use, "anti-Japanese bandits" were used for this purpose.

Radicalized Medical Research

"Legalizing' the supply of cadavers"

Vivisection by a geneticist

Thus far, all the cases reported have been of medical research conducted on bodies immediately after death. As Kubo explained, it was the military that ended the lives of the “bandits” who served as cadavers. However, in the mid-1930s, a change occurred in the laboratories of MMC: they began conducting vivisection experiments. This section presents experiments with living bodies in the MMC, revealing that civilian researchers had been radicalized.



**Oguma Mamoru, professor of agricultural science at Hokkaido Imperial University
(Cytology: Dr. Oguma Retirement Commemorative, 1949, frontispiece)**

Oguma Mamoru 小熊 捍 (1885-1971) was a professor of agricultural science and genetics at Hokkaido Imperial University, and he laid the foundation for animal chromosome research in Japan. He was a pioneer in the study of chromosomes in insects, reptiles, birds and mammals, and his work on human chromosomes was internationally recognized. After retiring from Hokkaido Imperial University, he established the National Institute of Genetics and became its first director (Japan Zoological Society 1973, 78, CoSTEP 2018) .

He is believed to have been another researcher who made use of information and opportunities offered by the dissection of living people. His motivation for turning to vivisection may have been a research competition within the genetics community to understand the morphology of human chromosomes. At that time, there was no definitive theory on the number of human chromosomes. According to H. de Winiwarter’s and Oguma’s XO theory, males have 47 chromosomes and females 48, and sex is determined by the presence of either one X or two X chromosomes; T. S. Painter’s XY theory suggested that both males and females have 48 chromosomes, with sex determined by an X and Y chromosome or two X chromosomes. The dispute over chromosomes divided the academic world (Makino 1963, 50).

But the germ cells (cells responsible for producing reproductive cells) of healthy human beings, which were essential research materials, were not usually available, and microscopy, sampling, and staining methods at the time were less well developed than they are now. Sample chromosome images were blurry, hampering observation.

Oguma intended to settle the debate with global competitors by using dyes to stain samples he obtained through the dissection of living subjects. He published his results in the international journal, and his work proved the

XO theory (Oka 1939, 239). Oguma “declared victory in the genetics world (Takebe 1939, 2).”

The *Journal of Morphology* research that made Oguma famous was published in 1937. In this paper he described his subjects.

The present study, unlike our previous ones, has chiefly been carried out on the testicular cells of Manchurians. I was fortunate in grasping a chance where the execution of a Manchurian criminal took place during my sojourn at Moukden [Mukden]. The criminal was about 30 years old and quite healthy in every respect as seen from the diagnosis made by army surgeons. The fixatives used were 1) Flemming’s solution without acetic acid and 2) Champy’s fluid. The material was brought to Japan in alcohol and sectioned in my laboratory at Sapporo. There was no trace of pathological change and the chromosomes were excellently fixed. Later, new material from the same race obtained under similar conditions came to me through the kindness of Professor Kudo. This material was obtained from two criminals, one supposedly about 35 and another about 40 years of age, fixed in the same fluids (Oguma 1937, 62).

This notes that he used the bodies of criminals, not bandits. The paper contains no reference to vivisection. But he wrote the following acknowledgments to the Army doctor and the professors at MMC:

It is my great pleasure to express here my cordial thanks to three colleagues in Medical College of Moukden [Mukden], Professors Shiino and Kudo, and Assistant Professor Suzuki, for their great kindness

during my sojourn in Manchuria and for assistance in getting and treating the material I wanted. I am also greatly indebted to Doctor Kijima, the director of Moukden [Mukden] Garrison Hospital, who acted so kindly and satisfactorily in performing the delicate operations desired (Oguma 1937, 61-62).

Chromosome research on “bandits”

In 1939 Oguma gave a lecture entitled “Human Chromosomes” at the Ethnic Hygiene Study Group at the Ministry of Health in Tokyo. A transcript of the lecture published the following year stated:

For purposes of human chromosome research, healthy testes must be in the range of twenty to thirty years of age. However, within the 24-hour period that had to pass before an autopsy was allowed in Japan, chromosomes would normally deteriorate. This led me to conceive of the idea of extracting chromosomes from the testes of executed Manchurian “bandits. Bandits do many unscrupulous things and kill innocent people. Therefore, I thought about how to use these bandits as useful materials, because they will eventually be executed. ...I stayed in Mukden and, with the cooperation of the MMC, I was in contact with a special agency in Mukden and waited for the arrest of bandits for a long time. Finally, I was able to get a very good subject of a bandit who was captured. He was ideal material. The next issue is how to remove the testes from this material and treat it with chemicals. If I were to discuss these methods, I think that they would become a historic episode in the advancement of scholarship, but it

should be a secret. So, for a while, I will keep my mouth shut. I can swear to God that I obtained some very good experimental material to process. Killing bandits was beneficial. (Oguma 1940, 15-16)

Oguma was proud that he had obtained “good material” and found a “perfect method,” yet he felt the need to keep his sampling method secret. Given the technology of the time, his words imply the use of vivisection. Although Oguma frankly discussed vivisection in his public lecture, he did so with the implicit consent and acceptance of his audience.

Justification of vivisection

According to the lecture records, Oguma justified his behavior on two grounds. The first involved the death penalty. The “bandits,” he said, “will eventually be executed” (Oguma 1940, 16). The living bodies of these condemned men were a useful research tool for medical scientists that would otherwise go to waste. This is the logic of thorough human expropriation of the bodies, in which human dignity is unrecognized and physical and mental distress are not taken into consideration. The second was the principle of the supremacy of “academic progress.” Oguma described his experience as a “historic episode in the advancement of scholarship” (Oguma 1940, 16). He went as far as to say, “Killing bandits was beneficial,” (Oguma 1940, 16).

Here, the “bandit” is framed as a sacrifice at the altar of medicine, where the medical scientist is the priest conducting the ritual. It is also implied that the benefits of medical research are in the interests of everyone, not merely the individual medical researcher who advances his reputation. The cause of “academic progress” becomes justification for

forced sacrifice while obscuring personal ambition. Justifications such as Oguma’s—citing an irrefutable death penalty and the advancement of science—helped to lower ethical standards.

Oguma was able to undertake his chromosome research because of both the hard aspects of military procurement of human bodies and the provision of research facilities and the soft aspect of debased ethical standards. The case of Oguma demonstrates how even geneticists in fields unrelated to bacterial warfare or other military research were willing to stain their hands for access to vivisection and biological experiments.

Observing the disease progression in a healthy body

Based on the publication date of the article, it is likely that Oguma experimented with a healthy young man in Manchuria before 1936. About the same time, another medical researcher used a healthy body of a soon to be executed prisoner to understand disease progression.

In a paper published in the *Manchurian Medical Journal*, Tasaki Kameo 田崎 亀夫 (graduated from Manchurian Medical University in 1931), an assistant in the skin urology class, reported injecting an emulsion that contained the inguinal gonorrhea pathogen into a healthy “bandit” days before his execution. He then observed the subject’s progress. This anthropometric experiment allowed for an understanding of the mechanisms of disease onset and progression. “Two days after inoculation” the subject was confirmed to have developed local “soybean-red papules” and was subsequently put to death (Tasaki 1936, 785-815). In 1937, Tasaki received his doctorate from the MMC for his research on inguinal lymphogranulomatosis. At the time, research on sexually transmitted

diseases such as syphilis and lymphogranuloma inguinale that reduce the strength of soldiers was attracting attention, and Tasaki wrote 38 papers on them (Kumada, M., ed. 1978, 237). After the war he opened a dermatology clinic in Miyazaki and became the first president of the Rotary Club there (Rotary Club of Miyazaki Nishi 2000, 71). These cases show practices of experimentation on the condemned. As the papers in medical journals suggest, information on “bio-anatomy” and human experiments on “bandits” in Manchuria were neither denounced nor even kept strictly secret; rather, the information was distributed to and known by the Japanese medical community.

Vivisection in the anatomy class

In the case of anatomy studies, in which experiments on living bodies resulted in death, descriptions became more ambiguous and were sometimes concealed, as medical staff became aware of the possibility of negative consequences. It was however possible to conduct such experiments in Manchuguo. The facilities and confidentiality of information made it more convenient to conduct research on MMC premises. The army was happy to cooperate in transporting “subjects” to the college. These descriptions of vivisection in the college were conducted at the height of the Sino-Japan War and the face of the anti-Japanese resistance.

On five occasions from the fall of 1942 to the spring of 1943, military police escorted men in their 30s and 40s to the college during the night. Each group consisted of between two and twelve men, with a total of about twenty-five people. Military police installed a warning system around the anatomy room. Zhang Biqing張丕卿, a laboratory clerk in the anatomy classes, testified that vivisection was performed in the anatomy room. Suzuki Naokichi鈴木直吉, a professor of anatomy, provided technical guidance, and Terui (Seinin) 照井 (精任),

Nishimura 西村, and Bando (Kenji) 坂東 (健二), all classroom staff, were said to have conducted the vivisection. The next day, Zhang was responsible for clearing away dead bodies from which brains and viscera had been removed (Central Archives 1991, 19-22).

There is both physical and published evidence that Zhang’s testimony is highly credible. First, the Archive of the Chinese Medical College contains brain specimens that were received from the school building at MMC. These specimens were made at this very dissection, and the study was signed by the researcher Ohno Kenji大野 憲司. In 2006, physiologist Karita Keishiro刘田 啓史郎observed a specimen of neurons in the human cerebral cortex stained with silver paint under a microscope at the archive. The purpose of Karita’s research was to find out if what was written in the anatomy journal articles was true. The specimens are wonderfully beautiful, which is a telling fact. Brain tissue usually does not produce clean specimens due to the rapid degeneration of neurons. However, since there was no such degeneration in these specimens, it can be assumed that these specimens were prepared immediately, probably within 15 minutes after death (Karita 2010, 53-54). In other words, the timing of the preparation suggests the person did not die a natural death.

In addition, research papers published by members of the Anatomical School included, or omitted, telling details: “The North Chinese adult brain is healthy and does not have a history of psychiatric illness” (Ohno 1942, 4); “I was able to collect the brains of a very fresh, psychosis-free northern Chinese” (Takenaka竹中義一1943, 2). Although scientific papers were required to state the cause of death, these articles, published in the prestigious *Anatomical Journal of Japan*, contained no notes regarding the origin of the dissection material. It is probable that the authors chose to exclude this information to avoid potential and punitive consequences. It is revealing that

the authors were allowed to omit this information.

Other accounts attest to the practice of vivisections. Shen Kuei 沈魁, who was born in 1919 in Changtu 昌圖, Liaoning Province 遼寧省, and entered MMC in 1939, recounted that when he was a student there, he heard a leather manufacturer tell of drugs he was buying from a staff member. The staff member had stolen from the anatomy department, which the leather manufacturer described as having a “living anatomy” class. Shen also said that there was a rumor among Chinese students about the vivisection.

Based on all this information, it is likely that the histological studies of the brain published by the anatomy class were written based on specimens derived from “bio-anatomy” and that the men the military police brought to the MMC were the victims of vivisection.

Manchuria and Unit 731

This environment of medical exploitation of the human body attracted the military's germ warfare research organization, Unit 731. Ishii Shiro 石井四郎, the commander of Unit 731, became an instructor at a military medical school in 1929 and insisted that the army study germ warfare. He must have had specific reasons for choosing this location for the lab as well. His proposition was accepted by some influential military officers.

Ishii's intentions can be seen in the testimony during the Khabarovsk war crimes trials, by his subordinate, Major General of Military Medicine, Kawashima Kiyoshi 川島 清. He was asked why Unit 731 had been set up in Manchuria and why it was necessary to establish a bacterial warfare base near the border in preparation for an attack against the Soviet Union. Kawashima listed the advantages as follows: (1) The effectiveness of bacterial

weapons could be studied under the same climatic conditions as the attack target area; (2) it allowed bacterial experiments to be conducted on large numbers of non-Japanese subjects; (Public Trial Record 1982, 158-159).

The second reason given in his testimony means that Unit 731 was created in Manchuria to target colonized bodies that were outside the scope of the mainland regulations. Koizumi Chikahiko 小泉 親彦, a Military Medical School Professor, Director of Military Doctors, and Director of the Army Medical Affairs Bureau, supported Ishii Shiro's concept of bacterial warfare. He made a proposal to move to Manchuria due to the key features of military medical schools shortly after the Mukden Incident, although this proved premature and could not be realized in 1931 (Kitajima 1936, 148). Koizumi's suggestion did, however, result in the creation of the Togo Unit 東郷部隊, the predecessor of Unit 731. Perhaps it was the enthusiasm and constant campaigning of Ishii and Koizumi that made it possible.

In the fall of 1933, the Togo Unit began bacterial weapons research, which included human body experiments, in Beiyinhe 背陰河, Heilongjiang Province 黑龍江省. Next to this unit was a detention camp for insurgents (Tsuneishi 1999, 306). At this time that Professor Kubo at MMC began to dissect large numbers of “bandits.” Both military bacterial warfare researchers and civilian medical researchers made use of these readily available bodies.

In Manchuria, where Koizumi insisted that the military medical school be relocated, a precedent already existed for colonial medicine to unilaterally impose the risks of human experimentation on local populations. Vivisection and biological experimentation pushed the existing practices regarding the use of the human body for medical research purposes far past legitimate limits. The expropriation of human bodies in the practice

of colonial medicine in Manchuria thus set the historical precedent for Unit 731. The key point is that inhumane experimentation such as vivisection is not a war-related problem limited to military research by military organizations. Rather, it a problem of colonial rule.

The culture of violence surrounding the bodies of those seized under imperial rule made was the foundation for the establishment of Unit 731. It goes without saying that such colonial medicine utilized not only direct violence, but also the underlying structural violence of the colony with economic exploitation, poverty, inequality, political oppression, and discrimination. For example, between 1934 and 1945, 7,805,609 Chinese were mobilized from North China to work in the coal mines and construction sites of Japanese companies in Manchuria, according to official records alone (Central Archives of China, et al. 2005, 26). This number is probably just the tip of the iceberg (Aoki S. 2017,1-2).

Not only were many exploited through forced labor, but they were also subjected to unbelievable abuse. A Japanese who worked at the construction site testified after the war:

What surprised me the most was the treatment of the Chinese laborers, or coolies. [...] They were brought in in units of 500 or 1,000 at a time and left in the fields without huts or fires to keep them warm. [...] The temperature was 20 or 25 degrees below zero, and as soon as a cold wave hit, it would be 30 degrees below zero. [...] The Chinese would sit hugging each other, trying to get into the human circle as much as possible, but those on the outside would freeze to death. The next morning, the boss would come and look around, and he would have the corpses carried downstream a kilometer or two away and dump more and more of them. Then those who survived sent to

work (Okamoto T. et al. 1990, 53).

Needless to say, one of the characteristics of colonialism is a violent and thorough exploitation of labor and useful resources. The dignity of the lives of Chinese laborers was trampled. Added to that, colonialism creates a system where reckless and irresponsible experiments were conducted that could not be done in the imperial homeland.

Colonies provided convenient testing grounds. For example, to develop vaccines and drugs, in most cases it is necessary to start with animal experiments and then carefully move on to human experiments while ensuring safety, but the colony reduced time and costs by starting with humans. In this case, the home country that enjoys the results, and it is the colony that bears the burden.

As the Japanese occupation spread to Southeast Asia, unsafe laboratories were set up there as well. In the Dutch East Indies, 900 Indonesian laborers (the so-called “*romusha*”) became the victims of experiments with a tetanus toxoid vaccine made by the Japanese – a vaccine supposedly developed to protect the lives of Japanese soldiers (Baird, K. & Marzuki, S. 2015, Baird K. 2016).

The violent of treatment of the human body as a laboratory animal originated in the powerful colonial structure of Manchuria, and eventually spread through the occupied territories with the expansion of the Asia-Pacific War.

Conclusion

In this paper, I have shown that the academic patent system, the procurement of cadavers, and experiments on living bodies are in fact all part of the same system of colonial exploitation. By presenting data such as published papers on

medical experiments to document omissions of required data on the cause of death from academic papers, I show that the medical exploitation of Manchuria was not simply an aberration that occurred during war-time.

Prior to the Mukden Incident, the SMMC/MMC was largely dependent on the bodies of local people for medical research purposes in Manchuria. Compared to mainland Japan, the rules and procedures regarding the use of the human body were laxer, and there was limited regulation, monitoring, and criticism of the experiments. It was a form of cultural violence that justified the disposable use of Chinese bodies almost like a natural resource. This violence was routinized and habitual in the colonial medical education community and academia.

The lower the ethical bar, the higher the hazards of experimentation. In peacetime, medical research relied on the seizure of dead bodies and Chinese patients for academic use but these were subsequently replaced by the bodies of living war prisoners classified as "bandits." Civilian researchers jumped at the opportunities presented by military dominance to relax ethical standards.

The exploitation of the human body was a part of the larger violence of colonial rule. Under the Japanese military regime, medical scientists viewed the bodies of bandits, coolies, and *romushas* as laboratory animals that could be tested without fear of failure; they used those bodies to serve the interests of the empire as well as their own professional careers. Japan did not consider it necessary to request access to these bodies for research purposes, nor did it compensate either those tested while alive or family members of the dead at the time; it continues to refuse to confront this history today.

The relationship between the colonization and the exploitation of the colonized body was mainly one of exploiting the bodies of

"worthless lives" and monopolizing the fruits of the research for Imperial Japan.

But it is also true that this exploitation of the body is not a unique incident in modern Japan. Modern power infiltrated the health care system through medical colleges, hospitals, and research institutions. It was the doctor and researchers who held power there. The concept of "bio-politics" that has permeated the modern world was originally proposed by Michel Foucault. Modern power has monopolized the right to the "take life or let live." Bio-politics is the power to manage and control life, to exert administrative control and overall coordination over life. The distinction between "life worth living" and "life unworthy of living" is the core problem of bio-politics (Foucault, M. 1976). Building upon this, Giorgio Agamben called life that is exposed to what he called the structure of exception which constitutes modern bio-power "bare life." This is the logic of the first stage, in which "something is divided, excluded, and excluded at the root," and then at the second stage, that which was excluded earlier "is included as the origin and basis through this exclusion." He insists that this view of human life is what made the Nazi camps possible (Agamben, G. 1988). Bio-politics sheds light not only on the idea of the so-called civilizing mission of imperial medicine in the colonies, which conscripted people into the academic patient system, it also illuminates the army's willingness to exercise its power over life and death to supply the medical school with "bandits" and executed bodies.

In exploiting the body, medicine targeted "naked lives," or those of a particular ethnic group, nationality, or creed who were discriminated against: blacks in Tuskegee, locals on the African continent, and Jews, Roma, and communists in the Nazi camps. And in colonial Manchuria, as we have seen in this paper, bare lives, thrown out naked without legal protection, were expropriated and exploited in the medical system as bodies in

service to the Japanese Empire.

Bodies in the Service of the Japanese Empire: Colonial Medicine in Manchuria

Bilingual Glossary of names, places, laws, and terms

Beiyinhe 背陰河

Bando Kenji 坂東健二

Changtu 昌圖

Daijokan rules 太政官布達

Furuta Keisuke 古田 敬助

Gotō Shinpei 後藤 新平

Hayashi Mitsuo 林三夫

Hashimoto Takashi 橋本 喬

Heilongjiang Province 黑龍江省.

Hizoku 匪賊

Hokuryo 北陵

Horie Kenji 堀江 憲治

Ishigami Toru 石神 亨

Ishii Shiro 石井四郎

Jilin Province 吉林省

Karita Keishiro 刈田 啓史郎

Kawashima Kiyoshi 川島 清

Koizumi Chikahiko 小泉 親彦

Koganei Yoshikiyo 小金井 良精

Kanokō Takashi 鹿子生 嵩

Kubo Hisao 久保 久雄

Liaoning Province 遼寧省

Manjin 滿人

Mori Oto 森 於菟

Nagahara Oriharu 永原 織治

Nishimura 西村

Nongan 農安

Oguma Mamoru 小熊 捍

“Provisional Disciplinary Rebellion Law 暫行懲治叛徒法 ”

“Provisional Disciplinary Theft Law 暫行懲治盜匪法

Rehe Province 熱河省

Shen Kuei 沈魁

Suzuki Naokichi 鈴木 直吉

Takamori Tokio 高森 時雄

Terui 照井

Togo Unit 東郷部隊

Yamada Motoi 山田基

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