# **UC Berkeley**

# **Theses**

### Title

Picturing the Disease of the Tropics: Conventions of Clinical Photography and the Display of Race

### **Permalink**

https://escholarship.org/uc/item/9ww5f85f

### **Author**

Mitsuishi, Fumi

### **Publication Date**

2005-04-01

# **Copyright Information**

This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at https://creativecommons.org/licenses/by-nc-nd/4.0/

# Picturing the Disease of the Tropics: Conventions of Clinical Photography and the Display of Race

By

Fumi Mitsuishi

B.A. (University of California, Berkeley) 1998

A thesis submitted in partial satisfaction of the requirements for the degree of

Master of Science in

Health and Medical Sciences

in the

**GRADUATE DIVISION** 

of the

UNIVERSITY OF CALIFORNIA, BERKELEY

Committee in charge:
Professor Thomas W. Laqueur
Professor W. Thomas Boyce
Professor Guy Micco

Spring 2005

The thesis of Fumi Mitsuishi is approved:

1/12 h	May 16, 2005 Date)
Chair	Date
(AMIRCU)	5/18/05
	Date
Westlems Once	5/18/05
	Date

University of California, Berkeley

Spring 2005

Picturing the Disease of the Tropics: Conventions of Clinical Photography and the Display of Race

Copyright 2005

By Fumi Mitsuishi

# **DEDICATIONS**

To Sayo, Jess, and Paul.

Thank you, from the bottom of my heart.

### TABLE OF CONTENTS

	Dedications		· · · · · · · · · · · · · · · · · · i
	Table of Contents		ii
	List of Figures.		iii
	Acknowledgements		vi
Pictur	ring the Disease of the Tropics		
Figure	es	aranto mus a	38
Refere			

### LIST OF FIGURES

- Figure 1: "Fig. 462.—Alastrim. (After Ribas.)"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1109
- Figure 2: "Showing results of Amputation for perforating ulcers of the foot in Lepers. Photograph by Edward Horder, F.R.C.S.Edin"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Extra Plate, face page 268
- Figure 3: "Fig. 39. Elephantiasis of the Scrotum in a Chinaman. Photographer unknown"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate V, face page 410
- Figure 4: "Case of Sleeping Sickness. Photograph by Dr. Hans Ziemann, State Physician, Cameroon, German West Africa"; from Scheube, B.; *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Extra plate, face page 503
- Figure 5: "Fig. 40. Elephantiasis of the right labium pudenda and the sub-inguinal region in a Japanese woman"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate VI, face page 304
- Figure 6: "A Case of Leishmaniasis From S. America. Photograph by R. Mc Kay."; from the *Journal of the London School of Tropical Medicine*, Volume I. Plate III, 1912
- Figure 7: "Fig. 28, (1 & 3) Hindoo girls, (2) Hindoo woman with NODULAR LEPROSY, (The photograph was kindly given to the author by Prof. Stricker, Giessen.)"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate III, face page 248
- Figure 8: "Fig 29. (1) Hindoo with NERVE LEPROSY. (2) Hindoo boy with MIXED FORM. (The photograph was kindly given to the author by Prof. Stricker, Giessen.)"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate IV, face 252
- Figure 9: Accompanying caption reads: "Plate VII. Fig 1: General view of arrangement of a Venereal Treatment camp; below are seen lines of temporary huts for accommodation of sick. Fig 2: Nearer view of sick lines. Fig 3: An average morning attendance at Masaka. Fig 4: Chancre penis; commencing rash seen." From Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", Annals of Tropical Medicine and Parasitology, (6)1 pp77-86

- Figure 10: Accompanying caption reads: "Plate VIII. Fig 5: Case 230; on admission. Fig 6: Case 230; after two injections only. Fig 7 and 8: Secondary and congenital syphilis; on admission and after treatment. The woman and child in Fig 8 are the same as those on the left in Fig. 7. Fig. 8 is made from a photograph taken after the woman's head has been shaven."; from Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", Annals of Tropical Medicine and Parasitology, (6)1 pp77-86
- Figure 11: Accompanying caption reads: "Plate IX. Fig 9: Secondary syphilis. Fig 10: Secondary syphilis. Fig 11: Congenital syphilis. Fig 12: Dispenser, dresser, clerk and interpreter at Masaka. A typical healthy Muganda 'Boy'"; from Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", Annals of Tropical Medicine and Parasitology, (6)1 pp77-86
- Figure 12: "Fig 471.—Elephantiasis of the Legs"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1139
- Figure 13: "Fig 472.—Elephantiasis of the Legs"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1140
- Figure 14: "Young Woman with Syphilitic Skin Disease ('Vesiculosis'), 1867, by M.A. de Montmeja, M.D., Paris"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 24
- Figure 15: "Young Woman with Elephantiasis as a Result of Scarlet Fever, 1878, O.G. Mason, New York City"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 38
- Figure 16: "Abdominal Protrusion, 1895, Photographer unknown, Philadelphia"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 57
- Figure 17: "Man with a Functional Double Penis, c. 1867, Photographer unknown, Faro, Portugal"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 31
- Figure 18: "Four Brothers with Muscular Dystrophy, 1894, Dr. H. Cruschman, Leipzig, Germany"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 68

- Figure 19: "Cas de tératology, Anonyme, France, 1869, extrait de la Revue photographique des Hôpitaux de Paris, I, 1869"; from Gasser, Jacques, Photographies et Médecine, 1840-1880, Lausanne, Institut universitaire d'histoire de la médecine et de la santé publique, 1991, plate 63
- Figure 20: "Fig. 538. Goitre in a Sinhalese Woman"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1419
- Figure 21: "Beri Beri: Oedematous variety. Japanese immigrant in Fiji." And "Beri Beri: Atrophic variety, showing Muscular Atrophy and Drop-wrist. Japanese immigrant in Fiji. Photographs by Henry Noble Joynt, Labosa, Fiji. By kind permission of the Proprietors of 'The Journal of Tropical Medicine'"; from Scheube, B., The Diseases of Warm Countries, A Handbook for Medical Men, 1903, Extra plate, face p200
- Figure 22: "Plate XXII. Cases of sleeping sickness at Ikotobo showing: Fig. 11. Facial oedema. Fig. 12. Enlargement of the posterior cervical glands. Fig 13. Enlargement of the glands in the parotid regions giving the patient a mumps-like appearance. Fig 14. Slight prominence of the eyeballs. Fig 15. Oedema of the eyelids. Fig 16. The very healthy and happy appearance of many of the patients."; from Macfie, Scott and Gallagher, G.H., "Sleeping Sickness in the Eket District of Nigeria", Annals of Tropical Medicine and Parasitology, (8)1, pp379-438
- Figure 23: "Portion of the Foreshore at Old Calabar--the unused dug-out canoes are more or less full of water containing Anopheles larvae on the right is the factory of a European trading firm; the native huts are built close up to its walls"; from Annett, H.E, Everett Dutton, J., and Elliott, J.H., "Malaria Expedition to Nigeria", Liverpool School of Tropical Medicine Memoirs, 1902
- Figure 24: Seal of the Royal Society of Tropical Medicine and Hygiene; from the Society's website: http://www.rstmh.org/English/index.html

### **ACKNOWLEDGEMENTS**

I would like to acknowledge and thank the following people, without whom this thesis would never have been possible: Elizabeth Dungan, for her generosity, kindness, continued support and inspiration throughout this project, Guy Micco, without whom th's project would not have reached completion, Tom Laqueur, for his suggestion to work on these images, Tom Boyce, for his encouragement to do what I liked to do most, my friends and family, and the JMP Staff, particularly, Jessea Greenman, Susie Alward, and Nina Green, for their generous help every step of the way.

## PICTURING THE DISEASE OF THE TROPICS

My inquiry may have started with this image (see Fig. 1). It shows a woman breastfeeding. It would appear to be a peaceful image of motherhood, though such an interpretation is impossible. The woman's dark skin is covered in stridently raised vesicles, highlighted by their reflective quality. With closer inspection the child that she holds gingerly appears to be white. The crispness of the woman's clothes cut from a thick material stands in contrast to the child's soft lacey garment. The caption of the image reads, "Alastrim". Alastrim is also known as varioloid varicella, a mild form of smallpox, which, according to the accompanying text, is seen in Africa and the Americas.

Since this image is found in a textbook of tropical disease, we may safely say that it is considered a "tropical disease". But, why isn't it simply called variant of smallpox? I am led to wonder whether this image is clinically helpful or necessary—in other words, how is it different from the many images of smallpox encountered in the general pathology books? And what do we make of how this image chooses to show the disease? It is recognizable as an image of disease because of the very overt signs of the disease and from its location in a clinical textbook. Yet, after considering it with some attention, we are struck by the multiplicity of meanings that it generates. It is more than a medical illustration. This photograph implies domesticity, maternal care, and the intimate relations commonly established between the colonized and the colonizer. It is therefore not just an image of disease. In this sense, the conventions of the clinical photograph are not clearly there. A quick look at the other photographs found in this book reveals that

many of the images are similarly strangely constructed. The fact that they lack conventions imparts a sense of intimacy and immediacy. They often show the patient contextualized into an environment that is recognizably "tropical" or exotic. They use pictorial elements that highlight race. It is possible that the strangeness of these images comes as a result of technical limitations or simply because the conventionalized form has not yet been formulated this early in the history of the medical photograph. But if these observations are particular to the images of the tropical disease, there is a need to determine their purpose. This paper aims to answer these questions first by looking at how these images compare with the images of disease from metropolitan textbooks, and secondly by offering hypotheses that explain these findings.

The clinical photographs of tropical disease from the first two decades of the twentieth century stand on a complicated site of many intersections. They are the product of an Empire, which at this point claimed expanse and power unparalleled in the history of humankind. They stand on an already long history of colonial conquest, which raised issues of race, economic differences, and subjugation that still reverberate to this day. Indeed, the photographs of tropical diseases unquestionably owe their form partly to the photographs from ethnographic anthropology, which was concerned with the quantification of race. They are thus poised between the expression of a colonizing power, its civilizing mission and the promotion of science, and the purpose of medicine to improve the wellbeing of persons—though the skeptic may say, that colonial medicine's goal was to protect manpower for the Empire. At the more microscopic level, these images are produced and published by "medical men" with ambitions to establish

and legitimize a new discipline, which, I would argue, we see reflected in these images. Finally, they are the product of showing disease in a relatively new medium, invented just over a half-century ago. Since its invention in 1839, photography was hailed as a most appropriate tool of science. In fact, the advent of photography parallels and spurs a new belief in the necessity of a "mechanical objectivity" in science. In medicine, the earliest example of its use occurred within a few months of the announcement of its discovery. Subsequently, the use of photographs in medicine was, to list a few, extensively explored in cytology, psychiatry, neurology, dermatology, surgery, and in the depiction of death.

Within the corpus of the early photographs of disease, I am most interested in clinical photographs. When looking at the photographs of live patients, and in the process of thinking about their construction, we are faced with the question of how we come to represent disease. An inquiry of this nature may also reveal how we come to conceive disease. The earliest experimentations with clinical photography proved to be largely a disappointment. Technical limitations underlined the fact that photography was an imperfect tool for showing a number of pathologies, but particularly dermatologic conditions. Many technical manuals of medical photography discuss which photographic method is best used to convey color and texture given the limitations of black and white photography.<sup>4</sup> Though it seemed poised to spit out the image of truth, haphazardly pointing the camera toward the patient produced an image that offered too much information, such that the viewer was unsure what to look at. The result was a photograph with some artistic value, perhaps, but of little clinical use.<sup>5</sup> This difficulty of using the photograph was based on two factors. First the scientific eye was used to the

selective depiction of the illustrator, who focused the representation around the point of interest.<sup>6</sup> Secondly, it lacked the visual form or the constraints of visual conventions that would identify it as an image of science. Recognizing the type of the image is necessary for its legibility. Without this understanding, the viewer is unable to adopt the proper process of viewing. Thus, just as the anthropometric photograph, which struggled to make race visible, the photograph needed to be shaped in order to make illness visible. Solutions to this problem ranged from the very simple to the more subtle: focusing closely on the diseased part of the body, positioning the patient against a neutral background lacking objects that suggest a social context, or covering the eyes of the patients.<sup>7</sup> Considered together, these steps conspire to form the clinical image; these are the conventions of the clinical photograph.

These conventions act to distance the individual depicted from the specifics of his or her life. For example the neutral white or black background and the space devoid of any personal item removes the subjects from their social and intimate context. The background controlled in this manner reduces the person depicted into a specimen, thus generating a scrutinizing gaze onto the person. At the same time, the patient is protected from being associated with the disease, since it is no longer a person pictured but a disease that has taken residence in a person. This is a process of objectification, which raises another set of issues in terms of clinical care, but also of protection. The neutral background is also a simple representational technique that brings to focus the feature of interest. The composition conspires with it to lead the eye onto the proper clinical aspect; the patient is posed such that the pathology is at the center of the image. The background

and the composition give the image a weighty purposefulness and a timeless quality, in contrast to the immediacy of a snapshot. In addition, the eyes of the patient are blacked out. There are two reasons for this. First, it removes the personhood of the patient pictured; once devoid of the capacity to return the gaze, the patient is reduced to a body, or to push it further, just a medical case. Secondly, the obliteration of the gaze, serves to protect patient confidentiality. Anonymity can also preserved by picturing only the part of the body most emblematic of the pathologic process, thus excluding the face. However, fragmentation leads to further objectification, as the patient's body is now visually mutilated. These conventions hence operate dually: they objectify the patient, but protect the person. In a way, physicians developed conventions in order to detach the clinical image from its voyeuristic potential and impart it instead with a clearly clinical purpose. These conventions consequently give the image the visual attributes that make them instantaneously recognizable as images of medicine, and divorce them from the exhibitionism of the freak show. They act to legitimize the picturing.

The clinical photograph needed to be sanctioned because it risked to be seen as feeding a interest of a prurient sort. This does not come as a surprise given that many of the photographs of medicine tend to be pathologically spectacular. Considering that the purpose of clinical photography was to show rare cases for medical education, <sup>10</sup> the depiction of the spectacular is not entirely out of line. However, people who have nothing to do the practice of medicine access medical books. This is not to say that persons who are not trained in medicine should not look at these images, or for that matter that members of the medical community are never prey to voyeuristic impulses. I

mean to say that because these images are consumed by a larger public, they have a role in shaping the social conception of illness and medicine. In addition, the practice of flipping through a book of pathology to only look at images is not unusual, which means that the photographs have a weight beyond accompaniment to text. They are text in their own right. Yet, despite the clinical photograph's potential as source material and the fact they have an important role in building a conception of the body and disease, they have not been considered with a thorough critical and historical approach. This neglect has been attributed first to the unpleasantness and difficulty of looking at images of disease, and secondly to the fact that the photograph is sheathed in its "aura of the real". 11 Indeed, the photograph is problematic because it hides behind its pretense to mimesis, when in fact it is a heavily constructed plane. This "aura of the real" is a product of our slavish belief in "mechanical objectivity", a phenomenon that has informed scientific thinking since the mid-nineteenth century. 12 Interestingly, "mechanical objectivity" was a product of a moralistic regulation of human impulse toward subjectivity; for fear that it would impose meaning and mar impartial observation. As scholars of history and consumers, it is likely that we fall pray to a belief that there is a "mechanical objectivity" in scientific photography, just as the scientists who believed in it in the latter half of the nineteenth century. The only way to get around this belief is to consider how scientific photography is constructed, and how that construction depends on the history of medicine, and vice versa. This requires a more critical approach to these images; one that deals with images as text rather than illustration, and thus strives to pay close attention to the formal quality of these images. My purpose here is to approach the photographs of tropical disease in a

systematic manner, with the eventual goal of understanding how images build knowledge, or better yet, how we trust that it shows knowledge.

As intimated above, the topic of the clinical photograph of tropical disease encompasses a set of heterogenous but not exclusive intersections: colonial power and medicine, science in the metropole and science in the periphery, the white photographer/physician and the native subject/patient, and lastly, science and the visual (images and representations). Although I am mostly concerned with the latter topic, it cannot be considered fully divorced from all the other interstices. In fact, the way these images take shape, in their conventionalized form or lack thereof, is a reflection of the condition of their production. In addition, it is important to remember that these images belong to the larger visual body found in the literature of tropical medicine. In fact, we should extend the field and consider how they belong to the visual body of the literature of medicine in general. Medical textbooks contain text, but rely heavily on illustrations. As mentioned above, these images are often left to stand on their own, because of the viewing practices of some, but also because they are frequently not discussed in the text. They therefore form a pictorial corpus, which acts independently from the text. This is definitely seen in the textbooks of tropical diseases, which tend to be heavily illustrated. A typical textbook of tropical diseases, have contain a variety of illustrations. These include maps, entomologic drawings, diagrams that chart meteorologic data, photomicrographs of the infectious agents, photographs of landscapes, and lastly clinical photographs. Although this paper is mainly interested in the clinical photographs of live patients, we need to remember that in order to fully understand the operation of the

clinical photographs all these images need to be considered as a pictorial body in conjunction with the text.

As mentioned in the opening paragraph, a careful look at the clinical photographs of the tropical disease literature yields some interesting results. They may be organized into two large topics. The first is concerned with the conventions of the medical image. I am making the broad claim here that one salient feature of these photographs is a lack of conventions. In order to establish this, I will be extracting observations about the formal qualities of the image from the analyses and consider first whether they follow conventions but also discuss findings from the general pathology texts to see if these conventions are observed. The second topic centers on the depiction of race. It may not be surprising that these photographs represent individuals who are non-whites. However, I believe that these images do not simply show disease in non-whites, they are interested in showing non-whites who are diseased. In other words, these photographs intend to display race just as much as disease. I will finish with a discussion of miscellaneous particularities of these images. These are features that I have found distinguishes the tropical disease photographs from clinical images from general pathology or clinical textbooks, which did not fit in the first two topics.

From the images examined, the photographs of the tropical disease literature do not adopt consistent and conventionalized showing. The photograph of the Chinese lepers showing their surgically resected limbs (see Fig. 2) is memorable because the attempt at keeping the background of the image neutral failed when the passerby was

inadvertently recorded on the right side. Why was this image not taken in a more controlled setting, instead of a street corner? Was it simply due to not having access to the proper facilities? It is possible that the primary purpose of the image was not clinical—the photograph may have been a friendly commemorative group portrait. The photograph does in fact have a jovial quality, with the lepers appearing to show their stumps with pride. But given that the image was photographed by the physician who performed the procedures, and considering how the patients are posed in order to emphasize their affected limbs, this is unlikely. Elucidating why this image is structured the way it is remains speculative, but we can understand its effect; the awkwardness of the composition imparts a sense of immediacy. The deliberate nature of the conventionalized clinical image is replaced by serendipity, which implies that the disease of leprosy is common—a phenomenon one might encounter at any street corner, in this exotic place. The fact that patients are shown in large number reinforces the sense that the disease is widespread. Instead of focusing on the particularity of the lesions, the image communicates the frequency of its occurrence.

A similar effect is achieved in two other images found in Scheube (see Fig. 7 and 8). These images show "hindoo woman and girls" displaying signs of nodular leprosy in both their hands and face and "hindoo man and boy" with nerve leprosy. They are shown in what the viewer would image is their native environment, with palm trees visible in the background. The woman and two girls are pictured together as a group, thus showing the progression of disease. The man is shown with his arm draped over the boy's shoulder, indicating their connection. These poses and the fact that they are grouped under a racial

label, lead the viewer to imagine a familial relationship between the woman and the girls and the man and boy; the multiplicity of diseased bodies, as with the Chinese lepers (Fig. 2), suggests that the disease is common in this particular ethnic and geographic space. Consequently, the disease becomes deeply rooted in race. Like the Chinese lepers (Fig. 2) caught at a mundane street corner, the Indian lepers have been incidentally captured on film while the photographer was exploring the Indian countryside; they are thus situated in and connected to their environment. Scheube's manual includes a total of twelve photographs, each printed on a separate plate probably with photogravure. This printing technique yields images with more detail, tonal range, but is considerably more expensive than halftone, which can be printed within the body of the text, but tends to be grainier. The use of photogravure indicates that these images were considered to be important, even though they only yield information on the gross appearance of the lesions and very little detail. For example the photographs of the lepers show the crookedness of the hands, but yield little clinical information about the anatomic structures affected or the changes in quality of the skin. It is likely that the purpose here is not detailing the appearance of the disease, but rather to place disease in an environment. These photographs were important, since they were reproduced in other tropical medicine textbooks; the images of the "hindoo" women and men were reproduced in Mense's Handbuch der Tropenkrankheiten. 13

There are many other examples in the tropical medicine literature, in which clinical photographs show patients contextualized in "their" environment. An article on an anti-syphilis campaign in Uganda from 1911 is illustrated with three plates each with

four images (see Figs. 9, 10, 11). The first plate (Fig. 11) has three photographs of the location: the hospital with the temporary huts for the patients, a closer image of the huts, and the image of "an average morning attendance at Masaka". It is difficult to discern the purpose of these photographs. The hospital sits on the apex of a small hill. It looks solid, though significantly different from contemporary hospitals in England. The landscape seems expansive and undeveloped; this image is reminiscent of the midnineteenth century photography of the African landscape. James Ryan has argued that such photographs helped to visualize conquest and thus imparted a sense of control of the colonial space; they were thus essential to empire building.<sup>14</sup> The second image depicts the temporary housing built for the sick. It shows a row of small huts that recede far into the background. The third and last image of the setting shows the hospital, now in closer view, with a crowd posing at its feet. This photograph is utterly ineffectual as a group portrait since it is impossible to see the faces of the sitters. One can only get a sense of the number of people there, and given the caption, this may be the purpose of this image. The last image comes as a bit of a shock; it is the photograph of a man holding his chancrous penis. Needless to say, this is a strange way to cap this visual tour of the grounds. By traveling from the images of the landscape to that of the hospital, and finally centering on the syphilitic, the gaze is led to gradually converge on the diseased body. The eye thus hovers above the landscape and focuses onto the sickness, placing the disease within the land, but also incorporating the environment within its conception. This further evidences the environment's indelible connection to disease. The environment is certainly not underscored to this extent in the clinical photographs of contemporary general pathology textbooks. The images of the tropical medicine

literature describe the outward motion of the physician into the diseased environment, reflected literally in the exploratory impulse of the colonial physician. In contrast, the clinical photographs of metropolitan medicine demonstrate the movement of the patient out of their personal space into a medical space characterized by its ethos of focused inspection.

A focused analysis of compositional choices—or carelessness—shows that they conspire to yield a sense of immediacy. Similarly a close examination of the visual particularities of the images reveals that the patient is frequently shown in a space of intimacy. The image of the woman with elephantiasis of the pudenda (Fig. 5) transports the viewer into such a space because of the sexual nature of her gesture, but also because of pictorial details such as the rug beneath her feet. A similar space of intimacy is evoked in Figures 12 and 13. These photographs show elephantiasis of the legs in a young man using two different views. In the first frame, the whole patient is shown, posing coyly and gazing directly at the camera with a vague smile floating on his face. In the second photograph, the young man's pathologically swollen leg is shown, this time truncated from the rest of the body, but with an ornate rug visibly supporting the foot. The gaze intimates the patient's individuality, and despite the fragmentation of his body in the second image, the presence of the rug prevents the viewer from separating the leg from the specificity of the person, the moment, and the space. The image therefore cannot be eternalized and fixed into the depiction of a pathologic type.

The consistent presence of the patient's gaze in the photographs of tropical medicine also leads to a sense of intimacy. As discussed above, the removal of the gaze also involves ethical concerns of confidentiality. In the early photographs from the tropical disease literature, little effort is made to conceal the identity of the patient. Even in situations where a fragmented view of the body, such as extremities or genitals affected by elephantiasis, or a syphilitic chancre would have given greater clinically viability, the entire body is shown. Given that cropping is a relatively effortless procedure, this trend appears to be deliberate. This may be attributed to a matter of conventions or awareness, since images from the late 1940s<sup>15</sup> make an effort to conceal the identity of the patient. However, it is important to note that the example here was found in a French textbook for general clinical practice and not in a publication intended solely for the treatment of tropical diseases. In addition, amid published material from the late nineteenth century to the 1920s, French publications tend to be more systematic about excluding the face when the pathology of interest is seated elsewhere with the use of cropping (see Fig. 14)<sup>16</sup> or by hiding the face with a piece of cloth. Similar strategies are used in photographs from the United States (see Figs. 15 & 16) and from the British medical literature. 17 Interestingly, and perhaps not surprisingly, anonymity seems to be particularly important in the depiction of female patients, though there are examples in the depiction of male patients. The most notable case is the depiction of Jean Baptista des Santos, an exhibitionist and famous medical case. Des Santos was born with three lower limbs and a functional double penis. 18 The most famous photograph of des Santos was taken in Portugal in 1867 (Fig. 17). Des Santos is shown standing nude, with a cape and an ornate cap cocked on his head. His right foot is propped on a stool covered with a cloth with a flowery pattern with long fringes dangling off of it. This image was printed in the 1869 volume of de Montmeja and Rengade's Revue<sup>19</sup> though it is enlarged and cropped such that it is focused on the lower half of the body. In addition, the right margin is cut out as well, such that the stool is no longer visible. Also, because the original image is highly contrasted the enlargement of the image, as found in the Revue, most likely produced a mediocre image, lacking detail. To overcome this, the image in the Revue has been touched up: the double penis is drawn on the photograph. Here the authors of the medical publication made a resolute decision to remove the face of the patient (although antithetically his name is noted in the caption, perhaps emphasizing the fact that this is a famous case) as well as indicators of an intimate space and concentrate on the signs of pathology. The freakish image has been medicalized.

There are exceptions to the general tendency to make efforts to protect the anonymity of the patient in the *Revue* as well as other metropolitan textbooks. First, images of children usually include the face even when it does not inform the case. For example, images that illustrate muscular dystrophy show young boys from head to toe (see Fig. 18). Secondly, cases of congenital malformation or variation also tend to include the face. This point is well illustrated by another photograph from the *Revue*. This image accompanies the description of a ten-year-old who was born with a third leg growing out of her perineal area (see Fig. 18). The young girl is shown nude except for a few items, which like in the image of the Chinese man with elephantiasis of the scrotum in Scheube (Fig. 3) push the image into the realm of exhibitionism. She wears a cap, garlanded with small rose buds, a pearl necklace around the neck, and long socks with

small boots on each of her three feet. The boots conceal her feet, which is surprising given the attention lavished on them in the case history. All those items of clothing have been carefully drawn on the photograph, indicating their importance. It is difficult to know why these items were considered to be so important. They give the image a very pornographic allure, but given that the image was taken at the Hôpital St Louis, it makes little sense. Perhaps it was a compromise between appeasing a child or parent weary of having yet another medical intrusion, and having a somewhat meaningful clinical image. This image is definitely not the norm among the medical photographs of the metropolitan literature on pathology. It resembles the clinical portraits of the tropical disease literature. It constructs an intimate space and hints at a sense of immediacy, by the way the legs of the girl dangle off the chair. But its interest resides in the spectacular nature of the patient's condition.

A review of the images of general pathology indicates that there are images that show a similar disregard for conventions, though this is more infrequent than in the literature of tropical medicine. It is therefore possible that these conventions were not clearly delineated in the first two decades of the 20<sup>th</sup> century—particularly with regards to the issue of patient confidentiality. It may be necessary to trace when these conventions become formalized. According to Christopher Amirault, the interest in the medical community in the use of photography was explosive through the latter half of the nineteenth century. The number of published articles, the first from 1856, the same year as Diamond's article, that discuss this topic is extensive. The fact that a prominent journal such as the Journal of the American Medical Association had published an article

on this subject matter is also indicative of the fervor surrounding the potentials of the medium.<sup>21</sup> It is uncertain, however, whether these articles discussed the importance of conventionalized showing or the formal qualities necessary in a medical photograph. A. Burais' Applications de la photographie à la médecine, published in 1896, 22 is a small manual that offers an overview of the uses of photography in medicine, and the practical considerations to set up of a photographic studio in a hospital. The bulk of the manual is concerned with giving technical advice for perfecting varied types of medical photographs—the three types of diseases that are described as appropriate for photography are psychiatric diseases, musculoskeletal or neurological pathologies, and dermatologic conditions. There is no mention of how one should pose the patient, except to say that when working with a photographer inexperienced in medical photography, the physician in charge should be present to direct the poses.<sup>23</sup> The manual also indicates that expenditures for heating the space for the patient's comfort should be incorporated in the budget when setting up such a studio. But nowhere in the manual is there guidance on how to impart the image with a clinical look (although Burais does say that the clinical image is different from general portraiture<sup>24</sup>). There seems to be a belief that with the proper developing process and some supervision to isolate the relevant clinical signs, the photograph will speak for itself.

In contrast an equivalent treatise from 1960,<sup>25</sup> discusses in detail how the patient needs to be prepared, the precise background necessary for different afflictions, and techniques to help protect the patient's modesty. For instance, the manual advises the use of pubic and breast binders when taking a full-length view of a patient and recommends the presence of a chaperone if a female patient needs to be disrobed. Comparing a

publication from 1896 to one published in 1960 is not particularly revealing, except to point to the obvious fact that ethical standards have changed and photographic techniques have become more advanced and precisely formulated. Given that technical manuals on medical photography start to appear in greater number in the 1940s, and that the earliest journal dedicated to medical photography and other illustration, Medical and Biological Illustrations, was first issued in 1951, it seems that the conscious formulation of the conventions of clinical photography occurred later than the period of interest for this paper. Nevertheless, it is important to note that the frequency to which full-length poses and unnecessary nudity is more rampant in the tropical disease literature than elsewhere. Also, the trope of the freakish body that incites a pornographic gaze is found more commonly in the depiction of tropical diseases. It is likely that the inclusion of the environment in the background, which gives the image a sense of the incidental is simply a by-product of not having an appropriately equipped studio space. However, its effect on the viewership in implicating the environment as an etiologic factor, and giving the pathology an exotic character is undeniable. The fact that the clinical images were shown frequently in association with photographic landscapes supports this point.

As evidenced from the discussion on the photographs of the Indian women with leprosy (Fig. 7), characterization of race is a feature essential in visualizing tropical disease. Pictorially speaking, the patients of tropical medical photography are shown with ethnic markers displayed prominently. The Chinese man with the elephantiasis of the scrotum (Fig. 3) is outfitted such that the minimal amount of clothing left on his body,

both emphasize his denuded state and become accentuated as isolated elements contrasted against his otherwise naked body. This is not commonly found in medical photographs from the metropole. In most of these images, clothing around the pathology is removed; we do not get the sense that some items have been left on purposefully. For example, examining figure 15, which shows a young woman with elephantiasis of the legs, the patient is not shown with jewelry or outfitted with a hat. In the image of the woman with syphilitic skin disease, figure 14, the choker around the neck acts in fact much in the same way as the ethnic markers on the Chinese man. However, the depiction of syphilitics is loaded with judgment, which we need to keep in consideration. It is likely that figure 14 implies that we are looking at a fille de joie or at least intimates that her sexuality is causal factor in her disease. We could argue that figure 16, which shows a case of "abdominal protrusion", also shows the patient with something left on the body. The patient is wearing knee high socks. Yet, because the socks tend to blend into the darkness of the background they do not accentuate her nudity, unlike the choker of the syphilitic or the hat of the Chinese man. The hat on the Chinese man may best be equated to the cap that Des Santos wears (Fig. 17), or to the stockings that are rolled down to the knee in a photograph of a hermaphrodite. These items outfit the patient; they highlight the anomalous freakish body, and in the case of the Chinese man they have a distinct ethnic flavor.

In the photograph of the Japanese woman with elephantiasis of the pudenda (Fig. 5), the opposite process from what is seen in the photograph of the Chinese man occurs.

She is fully clothed in her kimono, which much like the Chinese man marks her ethnicity.

However, in this image the clothing opens up to the pathology in her groin, thus emphasizes a breach in the hermetic quality of her outfit. This puts greater emphasis on her clothing and therefore her foreignness. Ethnic markers are an important part of tropical disease photographs. There are photographs where this is done with subtlety but effectively. For example in a photograph of a man with yaws, the subject is shown from the back; he is completely nude except for a thin band on his head, which is decorated with a feather. It is possible that these subjects felt uncomfortable removing all their clothes in order to be photographed. These items may therefore have been left on the patient in order to accommodate them. However, these images have many other features that indicate a generalized preoccupation with showing race and the expression of disease in each racial grouping. For example, the caption of many of these images read such disease in a person of a particular ethnicity: "Elephantiasis of the scrotum in a Chinaman" (Fig. 3), "Elephantiasis of the right pudenda [...] in a Japanese woman" (Fig. 5), or "Goitre in a Sinhalese Woman" (Fig. 20). Alternately, some images simply specify the ethnicity of the patient in the caption, as though it were part of the diagnosis. The captions of two images of patients with beri beri describe the disease and note "Japanese immigrant in Fiji" (Fig. 21). Because these two photographs show one disease displaying strikingly different signs, it is possible that the mention that they are both of the same ethnicity validates a comparison—a reflection of the worry that symptomatology of a disease differs according to race. Some textbooks explain that certain diseases do in fact express themselves in radically different ways in other races. This is the case in McCallum's Text-book of Pathology, an American textbook of pathology. McCallum's contains very few clinical photographs four of which show African syphilitics.<sup>26</sup>

Generally, however, there is little mention of why race is such an important dimension in understanding these diseases. When showing white patients, the ethnicity of the patient is never inserted in the caption or anywhere else in the text. The white patient is the standard body and therefore does not need any more specification.

As discussed earlier, the clinical photographs of tropical disease are characterized by an insistent lack of respect for the patient's anonymity. This may be due to carelessness, lack of ethical standards, or technical difficulties in focusing on the pathology concerned, in other words a lack of concern for the patient's privacy.

However, it may also be due to a positive impulse to show the patient. The photograph of the young man with elephantiasis of the legs in Castellani (Fig 12 and 13) makes a strong case for the latter interpretation. The young man is first shown in full-length; a second image printed on the following page shows only his affected legs. This image indicates that there were no technical limitations to showing just the legs; it seems that something else is at play. The first photograph, in fact, serves to situate the second photograph; it acts as a road map to the gaze, which recognizes that the pathology is embedded in the body of the other. This person is both type, because he is instantly recognized as other, and individual, because of the sense of intimacy that permeates the image; he is thus all the more real.

Another interesting pictorial anomaly in the tropical disease literature is the fact that healthy individuals are depicted with diseased ones. The last frame in the series of photographs on the anti-syphilis campaign in Uganda (Fig. 11) shows a "typical healthy

Muganda 'Boy'" who is a "dispenser, dresser, clerk, and interpreter". He is shown wearing a tall black hat, and a European suit, with a watch chain hanging from his collar to his left breast pocket. He stands erect, and his face with a gaze projecting far beyond the camera, breathes of certainty, promise and potential. The light reflects off of his forehead, as though it were illuminated, further pointing to the power of his intellect. He is framed by fuzzy trees that recede in the background, and what looks like manicured lawns, crisscrossed by a careful network of pathways, straight and planned. This image is juxtaposed to the photograph on the left of a woman who is rather inadequately described as "Congenital syphilis". She stands confronting the camera with a hole penetrating her face. The "boy" is also the last person imaged in this series, which shows syphilitics, mostly women, with the disease or showing the possibility of cure with a twoweek-long treatment with Lambskin's mercury (Fig. 10). The pre-treatment photographs are on the left, contrasted to post-treatment photographs on the right. We may note the fact that diseased patients are shown with disrobed with unruly thatch in the background and the patients cured are clothed, and have straight reeds behind them.<sup>27</sup> Similarly, an article on "Sleeping Sickness in the Eket District of Nigeria" by Scott MacFie, which is illustrated with photographs of cases of sleeping sickness shows a healthy person.<sup>28</sup> There are six photographs arranged on a single plate showing young children with facial edema or enlarged salivary glands. The last photograph, however, shows "the very health and happy appearance of many of the patients" (Fig. 22). What is the purpose of these images? It is likely that they are meant to suffuse these reports with the imperative of a call to action. The report on the anti-syphilis campaign is clearly aligned with such an interpretation. The 'boy' represents the possibility of the Baganda people, an

"unquestionably [...] most superior race" who have been referred to as the "Japanese of Africa".<sup>29</sup> The spread of syphilis was first noted by the high incidence of sterility and miscarriage in the Baganda women, and thus it is the preservation of this race that is at stake in this campaign. The healthy 'boy' hence acts a poster person for this much worthwhile cause. However, beyond the practical issues of inciting interest in a humanitarian campaign, these images shape an understanding of race. They establish a norm within the abnormal. This is to say that in relation to the white readership, the patients of the tropical disease literature are doubly other. Their disease misaligns them from the norm and additionally, their racial otherness acts to reinforce this status. These images of the healthy among the diseased allow a better visual understanding of sickness by eliciting a comparison between them. The photographs of the healthy show race, serving an anthropological interest, whereas those of patients show disease on race. The strange practice of showing the healthy is an acknowledgement of the utter otherness of those pictured; it strongly indicates that race is a key concern in these depictions.

Race is also heavily implied in the clinical photographs because of an absence; the dearth of images of white patients is striking. A look at more than one hundred and twenty images from the tropical disease literature has revealed only four images of white patients. One of them, "Case of Leishmaniasis from South America" (Fig. 5), is a very close-angled photograph of a white man who has developed two large lesions on the face. The man is well dressed and groomed; he sports a trimmed moustache, and looks away into the distance rather pensively, which imparts to the image the look of a portrait rather than that of a clinical photograph. His left hand supports his face, presenting it to the

camera. Unlike the diseased natives, the man is fully clothed and appears to be posing, rather than being posed. This image is striking because it steers away from the convention of the clinical photograph, but by adopting the form of a portrait, it gives the patient agency. This image was first printed in an issue of the Journal of Tropical Medicine, and is found in a few other books and journals. It seems that something about this image was considered to be of use or at least interesting enough to merit such attention. Did it reassure the readership that even in the face of a dreadful disease the white man did not lose his civilized stance? Or perhaps this image was about inciting fear by indicating that the white man was in fact vulnerable? After all, looking at the scarcity of photographs of diseased white persons, one might wonder if Europeans ever contracted tropical diseases. However, it is possible that the most spectacular and most imaged diseases, such as leprosy and elephantiasis, did not affect European colonials at as much as the natives. Since these diseases, are the ones pictured, Europeans were less likely to be shown. Both leprosy and elephantiasis are known to have long incubation periods and require extended intervals of exposure to the causative organism in order to become symptomatic. There are images of patients in the metropole with elephantiasis, though they are most likely not due to an infection with Wuscheria bancrofti (though they may be due to syphilis, which the French call elephantiasis des Grecs as opposed to elephantiasis des Arabes, which is caused by the filiarial parasite) since any cause of lymphatic blockage, such as a tumor, may lead to it. 30 However, as indicated by August Hirsch<sup>31</sup> and Patrick Manson,<sup>32</sup> the rates of elephantiasis among whites in the colonies were minimal compared to the degree to which the natives were affected. Similarly, leprosy is noted to occur in much lower rates among whites, even though there are small

pockets in Norway, Russia, Portugal and parts of the Mediterranean region. It is therefore likely that there weren't enough white patients affected by these conditions to be pictured. It may be surprising however, that there are no images of other tropical diseases, to which whites were certainly not immune. There are many case histories described in both the *Journal of the London School of Tropical Medicine* and the *Annals of Tropical Medicine* and *Parasitology*, though none of them are accompanied with photographs. It may have simply been easier to obtain photographs of diseased natives than of white colonials. Most patients photographed in the metropole were institutionalized or impoverished. The fact that natives generally lacked political and social agency may be a simple explanation for why there are more photographs of natives compared to whites. Regardless of the limitations in either finding white patients or in picturing them, it is impossible to ignore the effect of these images in strongly associating race to the diseases of the tropics. In addition, the spectacular nature of these diseases has a charge in intensifying this connection.

Looking at the photographs, tropical medicine literature appears to be preoccupied with the expression of disease in various races. Furthermore, it is concerned with how race dictates disease susceptibility. This is dissonant, however, with the fact that the new Mansonian medicine of the tropics dissociated itself from earlier tropical medicine by identifying infection as its main etiologic frame—specifically infection with parasitic as opposed to other microbial agents.<sup>33</sup> Accordingly, an examination of the text that accompanies these images reveals that race was not considered to be an innate determinant of vulnerability to disease. Even in textbooks of geographical medicine,

which implies an interest in the distribution of diseases over the globe, race is not considered to be the determining factor. August Hirsch's Handbook of Geographical and Historical Pathology,<sup>34</sup> from 1883 discusses the epidemiology of elephantiasis. He asserts that "[a]lthough no family of mankind, and no nationality, enjoys perfect immunity from elephantiasis, it is the coloured races and mestizzos, above all the negroes, that are subject to it to an infinitely greater extent than the white men of European or American birth". However, he writes that he believes these differences are not due to physiologic particularities that are protective or make one vulnerable, but rather because this group comprised of "coloured" older age male, represents the bulk of hard labor, which predisposes one to disease, because such individuals are more likely exposed to harmful weather and tend to have poor hygiene, and incur trauma to the skin. Also, Hirsch explains that elephantiasis is a disease with slow progression and which requires longer exposure to the disease agent in order for traces of pathology to appear. This explains why older individuals are more likely to be affected and why European immigrants to regions where elephantiasis is endemic do not generally show signs of the disease until they have been there for many years. Another interesting example is found in the third chapter of Castellani's Manual of Tropical Medicine 36 on "Tropical Races". Although Castellani recognizes the temporary nature of these classifications, he identifies four divisions in the human races, the Caucasic, the Mongolic, the Ethiopic and the Amerind. For each of these races, he describes the character, including the temperament, which in the Caucasic "is active, enterprising, and imaginative". The Ethiopic man tends to be "indolent, sensuous, passionate, and cruel"38, whereas the Mongoloid is "sullen, reserved, and apathetic in the Mongols, industrious in the Chinese and indolent in

the Malays" and he adds "they are all gamblers". <sup>39</sup> Besides character, the chapter discusses migration pattern, and further classification within each division. This chapter is therefore not interested in linking disease with particular races, which raises questions on the purpose of devoting an entire chapter on describing racial types. In response to this question, Castellani notes that the practitioner may benefit from having some basic knowledge of the "origin and relationships of the people among whom he is to work" <sup>40</sup>. Castellani's book is divided into two large sections. The first discusses the infectious agents and the second is concerned with the diseases. Castellani's book is therefore ensconced in the optimistic belief that every tropical disease will be one day matched to its infectious cause, championing the Mansonian dictum. The fact that the book is dedicated to Patrick Manson, "the founder of scientific tropical medicine", leaves little doubt as to Castellani's theoretical allegiance.

To return to an earlier point, in speaking about these images, it is important to pay attention to the spectacular nature of the diseases, or rather to the fact that the diseases pictured tend to be particularly spectacular. Patrick Manson's seminal textbook, *Tropical Disease: A Manual of the Disease of Warm Climates*, devotes an entire chapter to filariasis. This is not surprising, given that Manson's claim to fame was his research in establishing the role of the mosquito as the disease vector. Despite the fact that malaria was considered to be the quintessential tropical disease, <sup>41</sup> with its enormous disease burden, it certainly could not be pictured with the effect of elephantiasis. I believe that while malaria was the disease to be conquered, elephantiasis was the prototypic tropical disease, because its images evoked vivid feelings of horror. Manson's *Manual*,

accompanies the chapter on elephantiasis with a disproportionate number of images. Out of a total of twelve photographs of patients in the entire volume, seven show elephantiasis. Similarly, the literature of tropical medicine demonstrates a striking degree of pictorial attention to elephantiasis. Castellani's Manual of Tropical Medicine contains nine images of elephantiasis, and Scheube's The Diseases of Warm Countries, which has only twelve plates, devotes three on showing elephantiasis. Some of these images are canonical, not only because they are visually spectacular, and therefore reverberate, but also because the same images are repeatedly printed in different editions and even in entirely different publications—some images cross over into textbooks of general pathology from different countries. Scheube included many images from the British Journal of Tropical Medicine, in his The Diseases of Warm Countries. As mentioned above, Mense's Handbuch Der Tropenkrankheiten, from 1905 contains an image originally published in Scheube's The Diseases.... In addition, Jeanselme's Cours de Dermatologie Exotique contains an image first printed in Manson's Manual. Ruge and Mühlens' Krankeiten und Hygiene der Warmen Länden, displays photographs from Castellani's Manual of Tropical Medicine, as well as from the Journal of the London School of Tropical Medicine. Images in Stitt's Diagnostics and treatment of tropical diseases of 1914 overlap images in Ruge and Mühlens, Mayer's Exotiche Krankheiten, and Olpp, G.'s Tropenheilkunde Leitfaden fur die Praxis. 42 A survey of the images of general pathology textbooks yields a striking trend: images of tropical diseases more than other diseases. McCallum's A Text-Book of Pathology from 1920 contains very few clinical photographs except for five photographs of patients with leprosy from Kuala Lumpur and four photographs of African syphilitics. 43 Similarly, Adami and McGrae's

The Text-Book of Pathology for Students of Medicine, has total of seven clinical photographs of which four represent patients with "tropical diseases" such as nodular leprosy, framboesia, tropical sores, and sleeping sickness.<sup>44</sup> It seems that tropical diseases lend themselves to pictorial representation. The authors of medical textbooks show these diseases with a fervor that borders on the obsessive—and there is significance that the more spectacular diseases tend to get the limelight. Nancy Stepan has argued that the compulsive depiction of elephantiasis is due to the involvement of the genitalia, which reached into the "deep if unconscious connection made in the European imagination between blackness, sexuality and pathology". 45 Tropical medicine is undoubtedly the perfect arena to make potent connections between race, sexuality, and disease. The obsessive depiction of certain pathologically spectacular diseases and the repetitive reprinting of the same images probably had a powerful grip on the colonial unconscious. In addition, these images functioned in establishing tropical diseases as a unique category of diseases, by linking the spectacular with race. As a general rule, the textbooks of tropical diseases tend to be more heavily illustrated with clinical photographs than general pathology textbooks. This indicates that tropical diseases were either deemed to be more photogenic, or that their visualization and display was important in understanding tropical diseases.

How can we explain these findings? As discussed earlier, the conventionalized scientific image may not have been solidly established in the first few decades of the twentieth century. Technical difficulties must have had a role in the haphazard construction of these images. Without the studio space easily accessible in the

metropolitan hospital, physicians in the periphery did not have the luxury of carefully composing the image or excluding the environment out of the background of the photograph. It is also likely that these photographs were therefore considered to be quite precious, which may explain why so many of the photographs were touched up with part of the patient's body drawn on the photograph. The reproduction of the same images in different textbooks is also likely due to the fact that these images were unique and difficult to obtain. However, the fact that some pathologies, such as elephantiasis are obsessively photographed and reproduced, thus occupying an inordinate amount of space in the visual iconography of tropical diseases is not an artifact. The fact that these diseases are spectacular and heavily sexual has import especially considering the racial nature of picturing. Here are several possible explanations to these findings.

The first involves a psychological consideration. These images are a reflection of the anxiety of white colonials about their own vulnerabilities in the face of the disfigured, malformed, pathologic body. The images of these bodies, by placing emphasis on their otherness act as a receptacle for these anxieties. A similar process occurs in the viewing of freakish bodies. It is therefore not surprising that the trope of the image of the freakish body, with its exhibitionist impulse, is also seen in the photographs of tropical disease. In the photographs of tropical images elements of otherness, race and disease are layered in such a way that they reinforce each other, making these images all the more potent as strategies of dissociating from possibility of danger. This may have been an important tactic since the colonial experience was fraught with a variety of anxieties around bodies in addition to the to the fears of loss and mortality that are a

normal part of the experience of looking at disease. The loss of a clear European identity due to the realities of miscegenation and cultural mixing generated rhetoric, and mandated social restrictions. Ann Stoler shows that these anxieties were produced largely from the small frictions present in the intimacy of the domestic space. Although these anxieties were partly constructed it is important to remember that they were based in the realities of dangerous—and frequently new—diseases in unfamiliar environments in conjunction with necessarily hostile relations. In addition, to managing anxieties, these images reflect a sense of incredulity in the face of the absurd and monstrous transformations of bodies. This may be accompanied with developmentalist judgment, which promotes the feelings of superiority by proving the power of European technology and science and infantalizes the colonial other. The fact that there are diseases, such as leprosy, which were conquered by hygiene and advances in medicine in Europe, but were still present in the colonies strongly indicates of the inferiority of those colonized.

The photographs also reflect a curiosity about the natural course of the disease. Some of these diseases were already "conquered" in industrialized Europe. The tropical space in some ways was a visit to a pathological past and a warning to anyone who conceived of straying from modern healing. In this sense, the textbooks act as catalogues of medical fauna. This may explain why they are so heavily illustrated (although the excessive and "unnecessary" use of photography was common in the early history of medical photography<sup>49</sup>). There is also a curiosity with how a disease may look in another race. As noted in some textbooks there are concerns that syphilis unfolds itself differently in an African body. This explains why syphilis, which is not a particularly

visible disease is heavily represented in the tropical medicine literature. Curiosity toward disease is bound to curiosity toward place. The work of the tropical medical physician was bound to exploration. In this sense, these books could be seen as travelogues. These photographs act as visual evidence of a journey. Most appropriate for this hypothesis are the memoirs published by the Liverpool School and the London School of Tropical Medicine. These books display the scientific findings but also are concerned with the exploratory process of these medical expeditions, such as the trajectory of the journey, the day-to-day activity of the scientists, and the happenings that peppered the trip. They also tend to be luxuriously illustrated with maps, that give a visual sense of the trajectory and photographs of landscapes, which are supposedly inserted for a clinical purpose but tend to be strange and illegible. For example, there may be a photograph of a small puddle of water in a clearing, with the caption ominously noting that anopheles larvae were found there (see Fig. 24). These travelogues reveal an intrepid and masculine physician/scientist, who dispassionately makes remarks about this dangerous and chaotic environment.

However, it is my contention that these images also served an important role in establishing the notion of the "tropical disease" and with it the new branch of modern tropical medicine. The first English book on tropical medicine written is Thomas Trapham's *A Discourse on the State of Health of in the Island of Jamaica* from 1679.<sup>50</sup> In the eighteenth century, though there is no specific mention of a medicine of the tropics, works on medicine of "warm climates" or "torrid zones" are abundant<sup>51</sup> especially in the East and West Indies.<sup>52</sup> However, the institutionalization of tropical

medicine most definitely occurs in the late 1890s, specifically with the foundation of the London School of Tropical Medicine by Patrick Manson in 1899 after receiving backing from Joseph Chamberlain, the Secretary of State for the Colonies.<sup>53</sup> In a speech delivered at St. George's Hospital in 1897, Manson declares that there are two reasons that necessitate a medical education in the medicine of the tropics. First, the fact that Britain has transformed into the center of a tropical empire; and secondly the fact that tropical diseases are largely different from those of the temperate zone.<sup>54</sup> However, the specialty of tropical medicine is based on questionable grounds. It is a specialty that applies to the tropical zone, which lies between the Tropics of Cancer and Capricorn, but as shown by Anne Marie Moulin, the lines that enclose the tropical zone were redrawn based on political necessities.<sup>55</sup> It is also anomalous in medicine because it is a medicine of a place, not of a particular type of disease or an organ system. In fact, a look at textbooks of pathology published at around the same time as the photographs examined show that the rubric of "tropical medicine" does not exist. All the diseases that are considered to be tropical diseases in the tropical medicine literature are classified as under the chapter on infectious diseases. 56 Manson himself admits that the label "tropical disease" is actually one of convenience, because very few diseases are actually confined in the geographic zone strictly defined as tropical.<sup>57</sup> Andrew Balfour in an article published 1925 in the Transactions of the Royal Society of Tropical Medicine and Hygiene, comments that there is no such thing as tropical medicine.<sup>58</sup>

Despite these attacks, tropical medicine became heavily institutionalized.

Between 1899 and 1913 as many as eight schools or departments of tropical medicine

were established in Europe and North America.<sup>59</sup> In addition, the opening of institutions in the colonies, such as the Calcutta School of Tropical Medicine, as well as professional societies such as the Society of Tropical Medicine and Hygiene of Britain indicate that the movement was widespread. This movement may be explained in several ways. As Manson claimed in his speech from 1897, the necessities of the Empire are an important factor. The fact that parts of Africa were considered to be the "white man's grave" due to the high incidence of malaria, and that the widespread use of quinine after 1850 allowed the exploration and settlement into Africa<sup>60</sup> illustrate the devastating effect of tropical diseases on imperial ambitions. Manson's rhetoric in promoting this new field was heavily steeped in a nationalistic pride; tropical medicine needed to be recognized as a branch of medicine for the advancement of science, but it was also important for England. However, as Douglas Haynes has argued in Imperial Medicine, physicians trained in Britain (especially those trained outside of London), such as Patrick Manson, had little opportunity for research, publishing or even clinical work in the metropole due to a saturation of the health care market. 61 The colonies thus offered a perfect space with new opportunities—and "new" diseases—and the possibility for advancement in the scientific world. However, in order to be able to assert the research findings in the colonies and not be subsumed by metropolitan medical institutions, Manson and his colleagues needed to establish a field of medicine devoted to these diseases. Ronald Ross' memoir on the discovery of the mosquito as the vector of Plasmodium falciparum vividly portrays the difficulties that Ross and Manson encountered in both their scientific activities and negotiations with the metropolitan scientific body to gain recognition for their work. 62

In addition to these practical reasons, advances in science in bacteriology and parasitology and the parallel progress in microscopy and immunology, supported the belief that these diseases shared an infectious etiology. Since afflictions in the colonies had been attributed to climate and miasmatic formations, the discovery of specific causative agents and vectors promoted hope that these diseases may some day be conquered. As Michael Worboys has argued, the focus on germs was instrumental to establishing a medicine of the tropics.<sup>63</sup> But in order for this new branch of medicine to formulate a unique identity the focus was turned to the decidedly tropical infectious agent, the parasite. The model tropical germ has a complex life cycle and requires a vector, which is dependent on the environment. The fact of the anopheles mosquito is inserted in the seal of the Royal Society of Tropical Medicine and Hygiene demonstrates the importance of the vector (Fig. 24). Thus the inclusion of the environment was, I believe, important in founding the discipline of tropical medicine. As underscored by its very name, tropical disease depends on geographic parameters and, as a result, indicates a particular environment. Despite the fact that the new medicine of tropics claimed that its etiology was based on germs, by keeping the term "tropical", it did not divorce itself from the claim that the tropical environment with its distinctly other races was also profoundly implicated. Images of tropical medicine reflect and act to promote this understanding. They are an assembly of different types of visual data: maps, landscapes, entomologic drawings, diagrams that chart climate variables, photomicrographs of the offending organisms, and finally the clinical photographs. Together they vividly portray the different elements that constitute a modern medicine of the tropics. An examination

of the clinical photographs shows that these elements are actually incorporated in their formal qualities. The conventions of the clinical images are ignored to give a sense of immediacy, which makes it look as if the patient was captured in his or her native state and showcases the environment. In addition, by showing multiple examples of a disease in a single frame, the photographs become about the portrayal populations. As can be seen in the mission statements of both the Liverpool School of Tropical Medicine and the London School of Tropical Medicine, it is clear that preventive work at the population level is important. Lastly, by emphasizing race and associating spectacular pathologies with it, the photographs of tropical medicine shocked the viewer in shaping a mental image of the discipline as that of the other.

To summarize, the fact that the photographs of the tropical disease literature lack the conventions of the scientific image leading to a sense of immediacy and intimacy may be due to the fact that medical photographs were generally not conventionalized. I would argue, however, that there are more examples of images that lack conventions in the tropical disease literature than in the general pathology literature. Often, there are similarities between how tropical diseases are shown, particularly elephantiasis, and the way congenital deformities and other medical curiosities are depicted in the metropolitan literature. These images reflect a greater interest in freakish bodies than gaining clinical insight. In addition, the images of tropical disease tend to adopt a full-length view of the patient, even when it does not help to better understand the clinical picture. These photographs are interested in showing patients in their environment, and therefore lead to a linkage between disease, person, and place. In contrast, the environment is almost

never shown in the metropolitan photographs of pathology. By linking disease to place, these images connect disease to race as well. The emphasis placed on racial markers, the dearth of images of white patients, and the inclusion of the healthy among the sick indicate that depiction of race is just as important as showing disease.

These findings may be explained in several ways. They may be a reflection of the colonial anxiety in the face of the very real danger of contagion and other physical vulnerabilities, as well as the imagined fear of the unknown mysterious other. They may also be a product of a scientific or clinical interest. The tropical space could thus be considered as a cabinet of various oddities. In the same vein, these photographs can be interpreted as equivalents to the travel photographs in a travelogue that illustrate the exploratory process, but also colonial exotica. I believe, however, that in addition to these purposes, these images were important in building a conception of the "disease of the tropics", whether or not they were produced with that particular intention in mind. They showed disease linked to race and thus hurled it into the realm of the other. By depicting visually bewildering diseases these images gave the "disease of the tropics" a position of its own, distinct from that of other pathologies. This was an important process because there were questions about the uniqueness of these diseases, and a question therefore about the necessity of an entire field of medical study dedicated to the tropical space. I believe that the field of tropical medicine managed to claim its raison d'être by showing, with the help of these photographs, that it was uniquely poised at an interdisciplinary juncture. It claimed a harmonious melding of public health concerns, with preventative measures and population-based thinking, an etiology based on parasitic

infections, and a continued focus on the tropical environmental. Although linking environment to disease reflected an older form of tropical disease, one that had preceded the "scientific medicine of the tropics", it was a dimension that distinguished these diseases unique relative to pathologies of the temperate world. The diseases of the tropics were thus conceptualized as occurring in both the body of the other and in an other place.

Currently, the medical community in the United States uses an etiologic frame to classify diseases. The term "tropical medicine" is rarely used; rather as observed in the textbooks of pathology from the early twentieth century, "infectious disease" is the umbrella term under for these diseases. There are a few professional groups and publications that still use the term "tropical medicine" in its title in the United States. Most notably, the American Society of Tropical Medicine and Hygiene, the American Journal of Tropical Medicine and Hygiene, and Tulane University has a department of tropical medicine. Similarly, the National Institute of Health's Center for Disease Control and World Health Organization discuss these diseases under the rubrics of infectious diseases, international health, and traveler's health or more specifically under the activity, such as quarantine, for which the prevention and control of diseases call. In England and Germany, however, the term is still very much in use. The Liverpool School of Tropical Medicine, founded in 1898, is still active; and the Royal Society of Tropical Medicine and Hygiene, established by Patrick Manson in 1907, is also still extant. It is likely that "tropical medicine" has survived in England because its history is deeply seated there. It is my

belief that the images of tropical medicine had, and continues to have, a role in establishing a distinct category for these diseases.

Looking at the images on the website of the Liverpool School of Tropical Medicine we may gain insight into the continued the role of these images. There are three photographs that accompany short paragraphs that describe the history of the School. The first is the photograph of a mosquito gorging itself on some unsuspecting victim. Below we find the photograph of Ronald Ross. The writing next to the photograph explains that Ross was recognized with a Nobel Prize for his contribution to medicine by elucidating the role of the anopheles mosquito in the transmission and life cycle of the malarial parasite, *Plasmodium falciparum*. The third image completes this triptych. It shows an African patient presumably with sleeping sickness. Only the patient's face is depicted. She is struggling to keep the eyes open, her eyes rolling back in her head and her sclerae prominently visible. The patient is contrasted to Ross and is somehow linked to the mosquito above. She represents the manifestation of the disease, which is characterized with incapacity, whereas he is the healer with an abled mind, and the mosquito is the offender. Together they tell a story of a disease of people from a certain place; this disease is cured by people distinct from those affected, and is perpetrated by pesky arthropods, who link the story back to that certain place.

## **FIGURES**

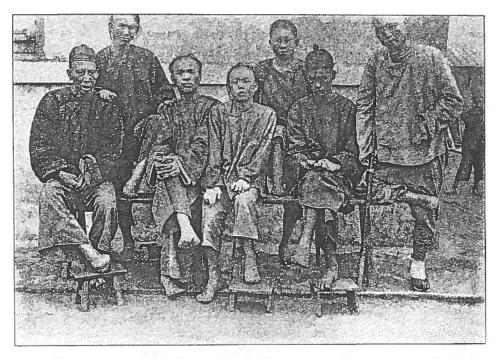
Figure 1: "Fig. 462—Alastrim"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1109



Fig. 462.—Alastrim. (After Ribas.)

Figure 2: "Showing results of Amputation for perforating ulcers of the foot in Lepers Photograph by Edward Horder, F.R.C.S.Edin. By kind permission of the Proprietors of *The Journal of Tropical Medicine*"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Extra plate, face p208

EXTRA PLATE.



Showing results of Amputation for perforating ulear of the foot in Legers. Photograph by Enwann Honner, F.R.C.S.Edin.

The kind permission of the Preprietors of "The Journal of Tropical Medicine."

Fact page 268,

Figure 3: "Fig. 39. Elephantiasis of the Scrotum in a Chinaman"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate V, face page 410; Photographer unknown

PLATE V.

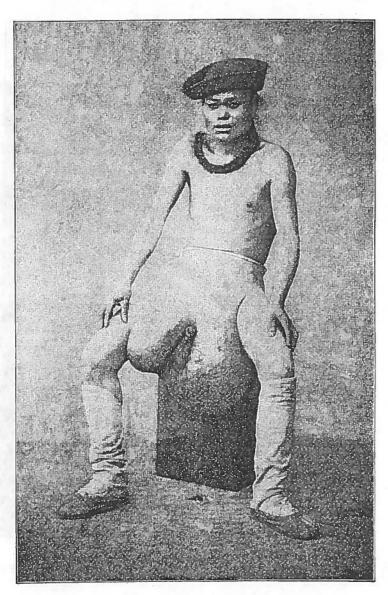
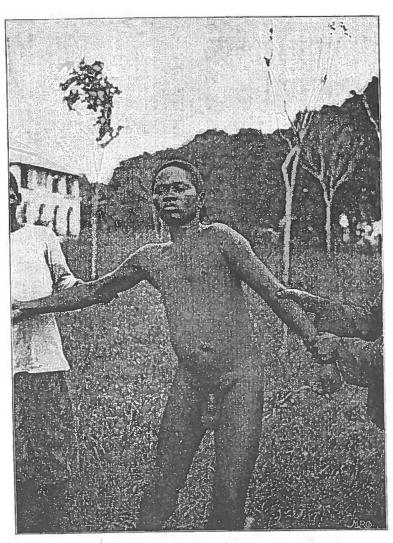


Fig. 39.
ELEPHANTIASIS OF THE SCROTUM in a Chinaman.

Face page 410.

Figure 4: "Case of Sleeping Sickness"; Extra plate, face page 503; Photograph by Dr. Hans Ziemann, State Physician, Cameroon, German West Africa; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Extra plate, face p530

EXTRA PLATE.

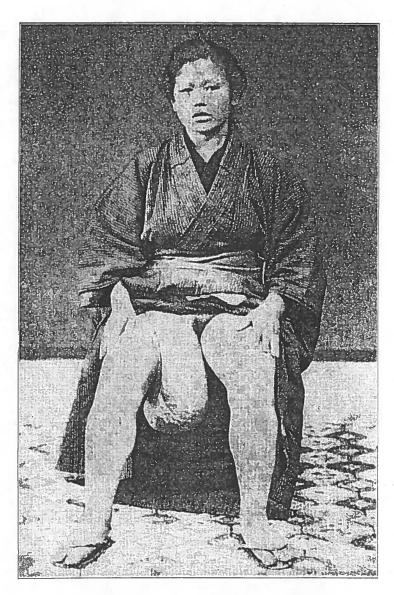


CASE OF SLEEPING SICKNESS.
From the photograph by Dr. Hans Ziemann, State Physician, Cameroon, German West Africa.

Fuce раде 509.

Figure 5: "Elephantiasis of the right labium pudenda and the sub-inguinal region in a Japanese woman"; From Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Plate VI

PLATE VI.



 ${\rm Fig.~40}.$  Elephantiasis of the Right Larium Pudendi and the Sub-Inguinal Region in a Japanese woman.

Face page 394.

Figure 6: "A Case of Leishmaniasis From S. America", Plate III, Photograph by R. Mc Kay; From the *Journal of the London School of Tropical Medicine*; Vol. I, Plate III, 1912

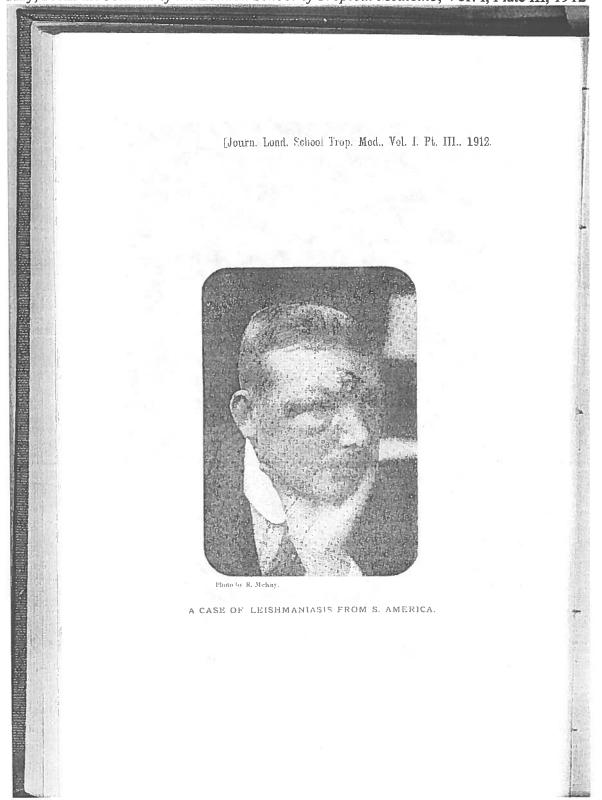


Figure 7: "Fig. 28, (1 & 3) Hindoo girls, (2) Hindoo woman with NODULAR LEPROSY, (The photograph was kindly given to the author by Prof. Stricker, Giessen.)", from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903

PLATE III.



Fig. 28.
(1 and 3) Hindoo girls, (2) Hindoo woman with Nodular Leprosy.
(The photograph was kindly given to the author by Prof. Sticker, Giessen.)

Face page 248.

Figure 8: "Fig 29. (1) Hindoo with NERVE LEPROSY. (2) Hindoo boy with MIXED FORM. (The photograph was kindly given to the author by Prof. Stricker, Giessen.)"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903

PLATE IV.

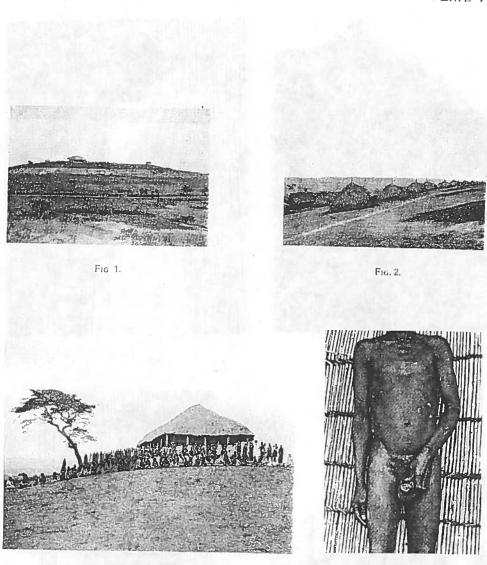


Fig. 29.

(a) Hindoo with Nerve Lerrosy. (b) Hindoo boy with Mixed Form.
(The photograph was kindly given to the author by Prof. Sticker, Giessen.)

Figure 9: Accompanying caption reads: "Plate VII. Fig 1: General view of arrangement of a Venereal Treatment camp; below are seen lines of temporary huts for accommodation of sick. Fig 2: Nearer view of sick lines. Fig 3: An average morning attendance at Masaka. Fig 4: Chancre penis; commencing rash seen." From Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", *Annals of Tropical Medicine and Parasitology*, (6)1 pp77-86

PLATE 1'11



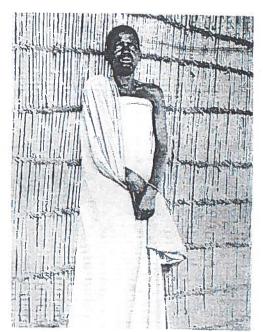
(P. P. Peas, Imp.

Fig. 3.

Figure 10: Accompanying caption reads: "Plate VIII. Fig 5: Case 230; on admission. Fig 6: Case 230; after two injections only. Fig 7 and 8: Secondary and congenital syphilis; on admission and after treatment. The woman and child in Fig 8 are the same as those on the left in Fig. 7. Fig. 8 is made from a photograph taken after the woman's head has been shaven."; from Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", Annals of Tropical Medicine and Parasitology, (6)1 pp77-86

PLATE VIII





F1G. 5.









Fig. 8.

P. P. Press, Imp.

Figure 11: Accompanying caption reads: "Plate IX. Fig 9: Secondary syphilis. Fig 10: Secondary syphilis. Fig 11: Congenital syphilis. Fig 12: Dispenser, dresser, clerk and interpreter at Masaka. A typical healthy Muganda 'Boy'"; from Keane, G.J., "A Note on Anti-Syphilis Measures in Uganda", *Annals of Tropical Medicine and Parasitology*, (6)1 pp77-86

PLATE IX



Frg. 9.



Fig. 10.



Fig. 11.



Fig. 12.

 $P_{i}/P_{i}/Press_{i}/Im\dot{p}_{i}$ 

Figure 12: "Fig. 471.—Elephantiasis of the Legs"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1139



Fig. 471.—Elephantiasis' of the Legs.

Elephantiasis of the Leg.

Figure 13: "Fig. 472.—Elephantiasis of the Legs"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillère, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1140

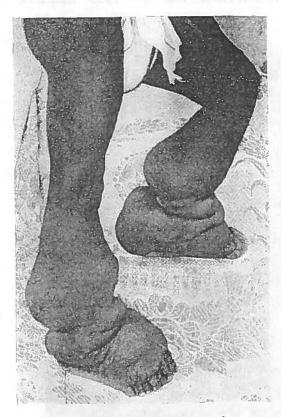


Fig. 472.—Elephantiasis of the Legs.

Figure 14: "Young Woman with Syphilitic Skin Disease ('Vesiculosis'), 1867, by M.A. de Montmeja, M.D., Paris; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 24

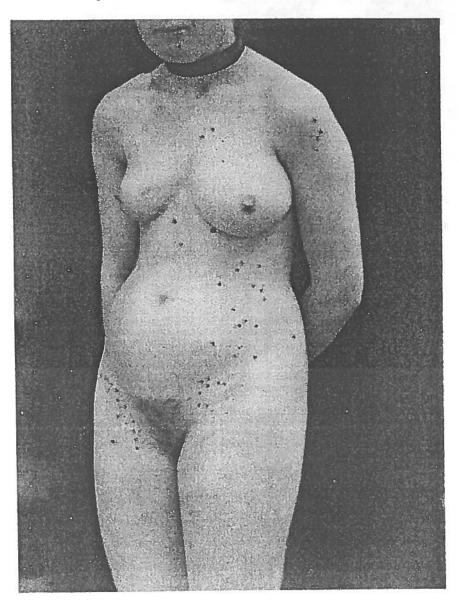


Figure 15: "Young Woman with Elephantiasis as a Result of Scarlet Fever, 1878, O.G. Mason, New York City"; from Burns, Stanley, *A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939.* Santa Fe, Twin Palms Publishers, 1998, plate 38

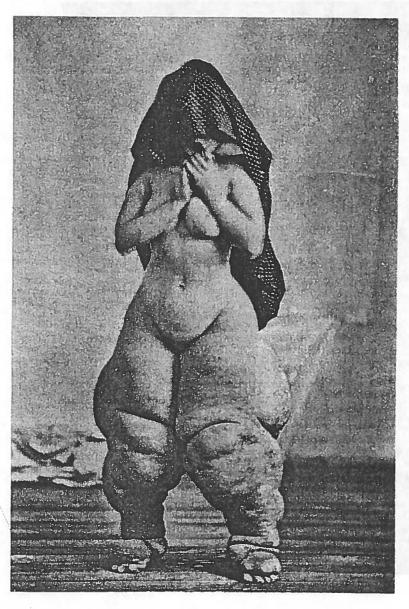


Figure 16: "Abdominal Protrusion, 1895, Photographer unknown, Philadelphia"; from Burns, Stanley, *A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939.* Santa Fe, Twin Palms Publishers, 1998, plate 57

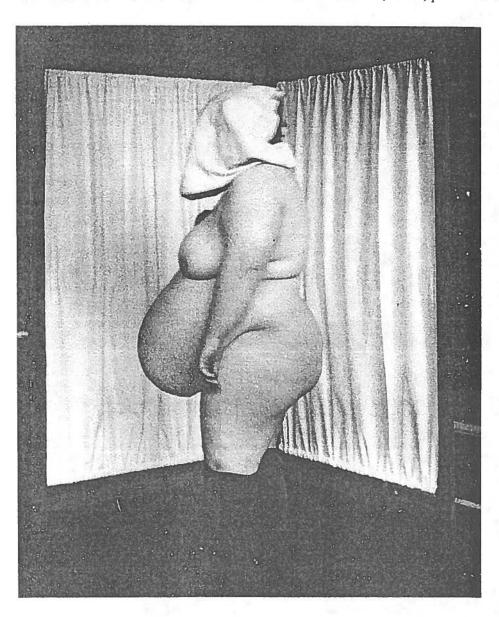


Figure 17: "Man with a Functional Double Penis, c. 1867, Photographer unknown, Faro, Portugal"; from Burns, Stanley, A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939. Santa Fe, Twin Palms Publishers, 1998, plate 31



Figure 18: "Four Brothers with Muscular Dystrophy, 1894, Dr. H. Cruschman, Leipzig, Germany"; from Burns, Stanley, *A Morning's Work. Medical Photographs from The Burns Archive and Collection. 1843-1939.* Santa Fe, Twin Palms Publishers, 1998, plate 68

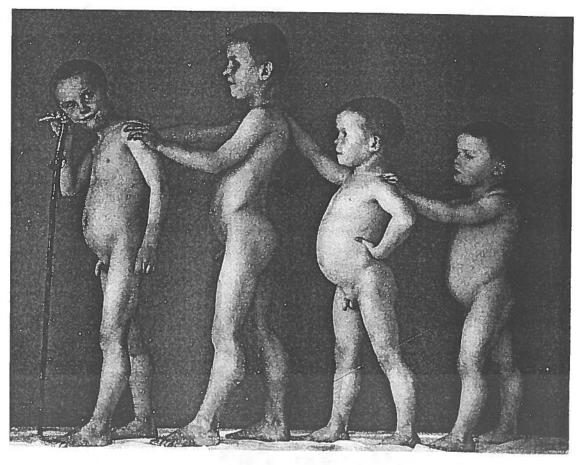


Figure 19: "Cas de tératology, Anonyme, France, 1869, extrait de la Revue photographique des Hopitaux de Paris, I, 1869"; from Gasser, Jacques, Photographies et Médecine, 1840-1880, Lausanne, Institut universitaire d'histoire de la médecine et de la santé publique, 1991, plate 63

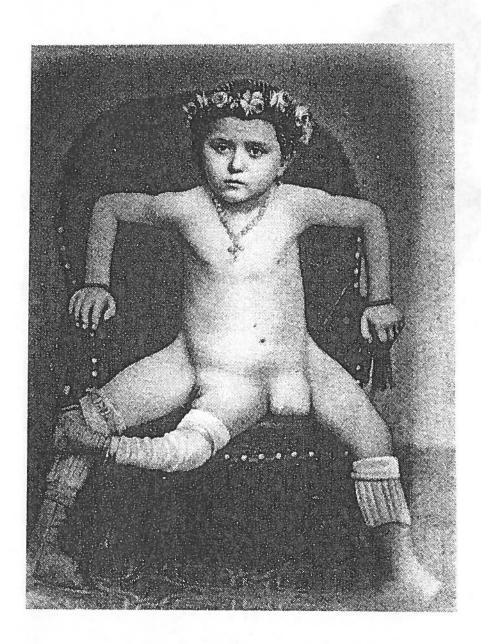


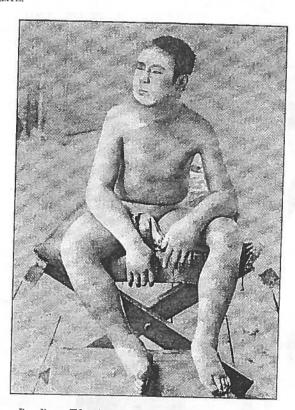
Figure 20: "Fig. 538. Goitre in a Sinhalese Woman"; from Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillere, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p1419



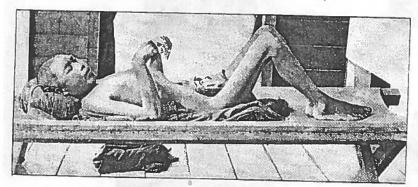
Fig. 538.—Goitre in a Sinhalese Woman.

Figure 21: "Beri Beri: Oedematous variety. Japanese immigrant in Fiji." And "Beri Beri: Atrophic variety, showing Muscular Atrophy and Drop-wrist. Japanese immigrant in Fiji. Photographs by Henry Noble Joynt, Labosa, Fiji. By kind permission of the Proprietors of 'The Journal of Tropical Medicine'"; from Scheube, B., *The Diseases of Warm Countries, A Handbook for Medical Men*, 1903, Extra plate, face p200

EXTRA PLATE.



Bert-Bert: Œdematous variety. Japanese immigrant in Fiji.



Beri-Beri; Atrophic variety, showing Muscular Atrophy and Drop.wrist.

Japanese immigrant in Fiji. Photographs by Henry Noble Joynt, Labosa, Fiji.

By kind permission of the Proprietors of "The Journal of Tropical Medicine."

Fac: puor 200

Figure 24: "Plate XXII. Cases of sleeping sickness at Ikotobo showing: Fig. 11. Facial oedema. Fig. 12. Enlargement of the posterior cervical glands. Fig 13. Enlargement of the glands in the parotid regions giving the patient a mumps-like appearance. Fig 14. Slight prominence of the eyeballs. Fig 15. Oedema of the eyelids. Fig 16. The very healthy and happy appearance of many of the patients."; from Macfie, Scott and Gallagher, G.H., "Sleeping Sickness in the Eket District of Nigeria", *Annals of Tropical Medicine and Parasitology*, (8)1, pp379-438

Annals Trop. Med. & Parasitel., Vol. VIII

PLATE XXII



F16. 11



FIG. 12



Fig. 13



Fig. 14

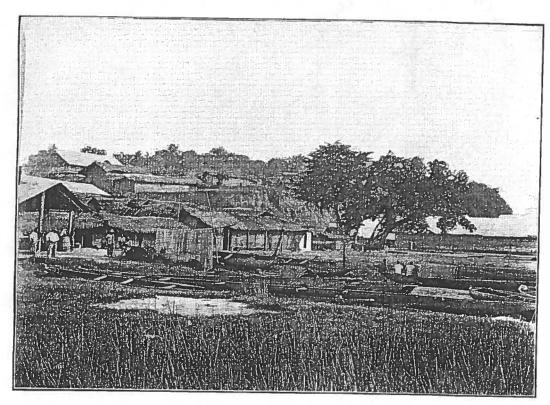


Fig. 15



Fig. 16

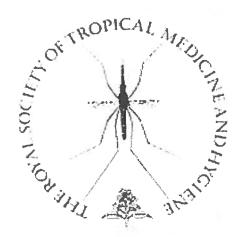
Figure 25: "Portion of the Foreshore at Old Calabar--the unused dug-out canoes are more or less full of water containing Anopheles larvae on the right is the factory of a European trading firm; the native huts are built close up to its walls"; from Malaria Expedition to Nigeria, Liverpool School of Tropical Medicine Memoirs, 1902, by H.E. Annett, J. Everett Dutton, and J.H. Elliott



PORTION OF THE FORESHORE AT OLD CALABAR

THE UNUSED DUG-OUT CANGES ARE MORE OR LESS FULL OF WATER CONTAINING Anopheles Larvae on the right is the factory of a European trading firm; the native huts are built close up to its walls

Figure 24: Seal of the Royal Society of Tropical Medicine and Hygiene, from the Society's website: <a href="http://www.rstmh.org/English/index.html">http://www.rstmh.org/English/index.html</a>



<sup>1</sup> Daston, Lorraine & Galison, Peter, "The Image of Objectivity", Representations (40), Autumn 1992, pp81-128

The first recorded use of photography in medicine is attributed to A. Donné, chief of clinic at the Hôpital de la Charité de Paris, who photographed a cadaver using a daguerreotype within a few months after the announcement of the Niépce and Daguerre's discovery at the Académie des Sciences in 1839.

<sup>3</sup> See Donné, Alfred, Cours de microscopie complémentaire des études médicales, anatomie microscopique et physiologie des fluides de l'économie. 1 volume and atlas. Paris, J.-B. Baillière, 1844-1845; Gasser, Jacques, Photographie et Médecine 1840-1880, Catalogue de l'exposition au Musée Suisse de l'appareil photographique à Vevey, Lausanne, Institut universitaire d'histoire de la médicine et de la santé publique, 1991; Gilman, Sander L., The Face of Insanity: Hugh W. Diamond and the origin of psychiatric photography, New York, Brunner/Mazel, 1976; Burns, Stanley, Early medical Photography in America, 1839-1883, The Burns Archive, New York, 1883

<sup>4</sup> Burais, A., "Application à la photographie en médecine", Thèse de doctorat en médecine, Paris, Gauthier-Villars et fils, 1896

<sup>5</sup> Amirault, Christopher, "Posing the Subject of Early Medical Photography", *Discourse*, 16(Winter 1993-94), pp55-76

<sup>6</sup> Ibid, p57; Daston, Lorraine & Galison, Peter, "The Image of Objectivity", Representations (40), Autumn 1992, pp81-128

<sup>7</sup> Stepan, Nancy L., Picturing Tropical Nature, Ithaca, Cornell University Press, 2001, p152

- Stepan, Nancy L., *Picturing Tropical Nature*, Ithaca, Cornell University Press, 2001, p150; Amirault,
   Christopher, "Posing the Subject of Early Medical Photography", *Discourse*, 16(Winter 1993-94), pp55-76
   Stepan, Nancy L., *Picturing Tropical Nature*, Ithaca, Cornell University Press, 2001, p152
- de Montmeja, A., Rengade, J., Revue Photographique des Hopitaux de Paris, Bulletin Medical publie sous le patronage de l'administration de l'assitance publique, Paris, Adrien Delahaye, 1869-1874

  11 Stepan, Nancy L., Picturing Tropical Nature, Ithaca, Cornell University Press, 2001, p151

<sup>12</sup> Daston, Lorraine & Galison, Peter, "The Image of Objectivity", Representations (40), Autumn 1992, pp81-128

pp81-128

13 Mense, Carl A., Handbuch der tropenkrankheiten unter mitwirkung von prof. Dr. A. Baelz..., Leipzig, J.A. Barth, 1905

<sup>14</sup> Ryan, James R., Picturing Empire: photography and the visualization of the British Empire, London, Reaktion Books, 1997

<sup>15</sup> The photograph of an African patient (exact country not noted) with leprosy has his eyes whited out with thin white lines in Ravine, A. and Patel, J., *Traite de Médecine, Tome II, Maladies Infectieuses et Maladies Parasitaires*, Paris, Masson & Cie, 1948

<sup>16</sup> Despite the fact that her anonymity is preserved, the woman depicted here with syphilitic skin disease, is shown with a black choker, a detail that sexualizes her. This may be an indication that she is a *fille de joie*, which adds weight to her disease.

<sup>17</sup> See for example Bouchard, Ch., *Traité de Pathologie Génerale*, Paris, G. Masson Editeur, 1896, where the more than half of the images of female patients have either their face blacked out unless the pathologic signs are in the face, such as in pseudobulbar pals with facial ataxia or signs of psychologic disturbances that are present in the physiognomy of the patient. There are certainly exceptions to this pattern. The case of teratology

<sup>18</sup> Burns, Stanley, A Morning's Work. Medical Photographs from the Burns' Archive and Collection, 1843-1939, Santa Fe, Twin Palms Publishers, 1998, explanation to plate 31

de Montmeja, A., Rengade, J., Revue Photographique des Hopitaux de Paris, Bulletin Medical publie sous le patronage de l'administration de l'assitance publique, Paris, Adrien Delahaye, 1869-1874
 To name a few, "On Photography Applied to the Phenomena of Insanity", Journal of Photographic Society of London, 44, 1856; Wright H., "On medical Uses of Photography", The Photographic Journal, 9, 1867; Broadman, Reed, "Why Physicians should cultivate Photography", Medical Record, 36, 1889
 Ellerslie, Wallace, "Photography in Medicine", JAMA 28, 1897

<sup>22</sup> Burais, A., "Application à la photographie en médecine", Thèse de doctorat en médecine, Paris, Gauthier-Villars et fils, 1896

<sup>23</sup> Ibid, p46

<sup>24</sup> Ibid, p3

<sup>25</sup> Smialowski, Arthur, *Photography in Medicine*, Springfield, Charles C Thomas, 1960

<sup>26</sup> McCallum, W.G., A Text-Book of Pathology, Philadelphia, W.B. Saunders Company, 2<sup>nd</sup> Ed., 1922

<sup>27</sup> Keane, G. J., "A Note on Anti-syphilis Measures in Uganda", Annals of Tropical Medicine and Parasitology, 6(1), March 29, 1912, pp77-86

<sup>28</sup> Macafie, J.W. Scott, & Gallagher, G.H., "Sleeping Sickness in the Eket District of Nigeria", Annals of Tropical Medicine and Parasitology, 8(1), April 21, 1914, pp379-438

<sup>29</sup> Keane, G. J., "A Note on Anti-syphilis Measures in Uganda", *Annals of Tropical Medicine and Parasitology*, 6(1), March 29, 1912, pp77

<sup>30</sup> The first volume of the *Revue photographique des Hopitaux de Paris*, has three photographs of elephantiasis.

<sup>31</sup> Hirsch, August, *Handbook of Geographical and Historical Pathology*, trans. Creighton, Charles, London, New Sydenham Society, 1883-1886, p725

<sup>32</sup> Manson, Patrick, *Tropical Disease: A Manual of the Disease of Warm Climates*, London, Cassell and Co., 1905

<sup>33</sup> Worboys, Michael, "Germ, Malaria, and the Invention of Mansonian Tropical Medicine. From Diseases in the Tropics to Tropical Medicine", David Arnold Ed., Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996

<sup>34</sup> Hirsch, August, *Handbook of Geographical and Historical Pathology*, trans. Creighton, Charles, London, New Sydenham Society, 1883-1886

35 Ibid, p725

- <sup>36</sup> Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillere, Tindall and Cox, 2<sup>nd</sup> Ed., 1913, p 59
- <sup>37</sup> Ibid, p62
- <sup>38</sup> Ibid, p68
- <sup>39</sup> Ibid, p71
- <sup>40</sup> Ibid, p61

Worboys, Michael, "Germ, Malaria, and the Invention of Mansonian Tropical Medicine. From Diseases in the Tropics to Tropical Medicine", David Arnold Ed., Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996

<sup>42</sup> Mense, Carl, *Handbuch der Tropenkrankheiten*, Leipzig, Johan Ambrosius Barth, 1905; Scheube, B., *The Diseases of Warm Countries*, 1903; Jeanselme, E., *Cours de Dermatologie Exotique*, Paris, Masson et Cie, 1904; Manson, Patrick, *Tropical Disease: A Manual of the Disease of Warm Climates*, London, Cassell and Co., 1905; Ruge, Reinhold Friedrich, *Krankeiten und Hygiene der Warmen Landen*, Leipzig, Georg Thieme, 1930; Castellani, Aldo & Chalmers, Albert, *Manual of Tropical Medicine*, London, Baillere, Tindall and Cox, 2<sup>nd</sup> Ed., 1913; Stitt, Edward, *The diagnostics and treatment of tropical diseases*, Philadelphia, P. Blakison sons and Co, 1914; Mayer, Martin, *Exotische Krankheiten*, Berlin, J. Sprinter, 1929; Olpp, Gottlieb, *Tropenheilkunde. Leitfaden fur die Praxis*, Stuttgart, Evang. Missionsverlag, 1930 McCallum, W.G., *A Text-Book of Pathology*, Philadelphia, W.B. Saunders Co, 2<sup>nd</sup> Ed., 1922

<sup>44</sup> Adami, J. George, A Text-Book of Pathology for Students of Medicine, Philadelphia, Lea and Febiger, 1912

45 Stepan, Nancy L., Picturing Tropical Nature, Ithaca, Cornell University Press, 2001, p177

46 Bewell, Alan, Romanticism and Colonial Disease, Baltimore, Johns Hopkins U.P., 1999; Gilman, Sander L., Disease and Representation, London, 1988; Gilman, Sander L., Difference and Pathology: Stereotypes of Sexuality, Race and Madness, Ithaca, 1985

of Sexuality, Race and Madness, Ithaca, 1985

<sup>47</sup> Fiedler, L, Freaks: Myths and Images of the Secret Self, New York, Simon and Schuster, 1978; Garland Thomson, Rosemarie, Ed., Freakery: Cultural Spectacles of the Extraordinary Body, New York, New York University Press, 1996

<sup>48</sup> Stoler, Ann, Carnal Knowledge and Imperial Power: Race and the Intimate in Colonial Rule, Berkeley, University of California Press, 2001

<sup>49</sup> Amirault, Christopher, "Posing the Subject of Early Medical Photography", *Discourse*, 16(Winter 1993-94), pp55-76

50 Bewell, Alan, Romanticism and Colonial Disease, Baltimore, Johns Hopkins U.P., 1999, p317

52 Bewell, Alan, Romanticism and Colonial Disease, Baltimore, Johns Hopkins U.P., 1999, p35

Moulin, Anne Marie, "Tropical without the Tropics: The Turning-Point of Pastorian Medicine in North Africa", in Arnold, David, Ed., Warm Climates and Western Medicine: The Emergency of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996

Medicine, 1500-1900, Amsterdam, Rodopi, 1996

56 see Rindfleisch, Edward, Textbook of Pathological Histology, Philadelphia, Lindsay and Blakiston, 1872; Coplin, W.M. Late, Manual of Pathology, Philadelphia, P. Blakiston's Son and Co, 3<sup>rd</sup> Ed., 1900; Delafield, Francis, A Textbook of Pathology, New York, William Wood and Co., 8<sup>th</sup> Ed., 1909; Bouchard, Ch., Traité de Pathologie Générale, 1896; Adami and Nichols, Principles of Pathology, Vol. II, Systemic Pathology, Philadelphia, Lea & Febiger, 1909.

<sup>57</sup> Manson, Patrick, *Tropical Diseases: A Manual of the Diseases of Hot Climates*, London, Cassell, 4<sup>th</sup> Ed., 1907

58 Bewell, Alan, Romanticism and Colonial Disease, Baltimore, Johns Hopkins U.P., 1999, p35

<sup>61</sup> Haynes, Douglas, *Imperial Medicin: Patrick Manson and the conquest of tropical disease*, Philadelphia, University of Pennsylvania Press, 2001

<sup>62</sup> Ross, Ronald, Memoirs with a full account of the great malaria problem and its solution, London, J. Murray, 1923

<sup>63</sup> Worboys, Michael, "Germs, Malaria and the Invention of Mansonian Tropical Medicine", Arnold, David, Ed., Warm Climates and Western Medicine: The Emergency of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996

<sup>&</sup>lt;sup>51</sup> Arnold, David, Ed., Warm Climates and Western Medicine: The Emergency of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996, Introduction, p5

Arnold, David, Ed., Warm Climates and Western Medicine: The Emergency of Tropical Medicine, 1500-1900, Amsterdam, Rodopi, 1996, Introduction, p1
 Ibid. p3

Worboys, Michael, "Tropical Diseases" in Bynum, W.F., and Porter, R., Companion Encyclopedia of the History of Medicine, London, Routledge, 1993
 Ibid. p9