NGOs, Disease Control, and Development:
The Rockefeller Foundation and Wellcome Trust in Colonial Africa

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Africa, with only three percent of the global health workforce, bears approximately twenty-five percent of the world's disease burden.[1] Missionaries, colonizers, and—most recently—a growing number of non-governmental organizations (NGOs) have attempted to reduce this disparity and to fight disease. Considerable literature exists on missionary and colonial efforts to improve African health, but NGOs and related organizations generally fail to keep detailed records, do not make documents publicly available, and typically have a very short track record. [2] Only a few of the oldest and largest non-profits that aim to improve human health, including the World Health Organization (WHO), Oxfam, and UNICEF, date back to the 1940s and have undertaken significant initiatives in Africa.[3] Notable exceptions to all of these limitations are the Rockefeller Foundation (RF) and Wellcome Trust.

The RF was established in 1913, by businessman-philanthropist John D. Rockefeller, Sr. (JDR) (1839-1937), to improve "the well-being of mankind (later 'humanity') throughout the world." The RF was the first U.S. foundation to engage in extensive health work in Africa and the sole one to do so before WW II, the advent of the World Bank, and the era of Official Development Assistance. The RF is one of the only U.S. foundations to make its records publicly

available and prior to WHO's 1948 founding, the RF's International Health Division (IHD) was "the *world's* most important agency of public health work."[4]

The Wellcome Bureau of Scientific Research was established in 1913 by the drug manufacturer-businessman, Henry Solomon Wellcome (1853-1936); it became the Wellcome Foundation in 1924, and the Wellcome Trust in 1936. The Wellcome Trust is the largest charitable organization in the United Kingdom, its records are publicly available via the Wellcome Library in London, and its mission is similar to the RF's. It seeks to: "achieve extraordinary improvements in human and animal health" and "support the brightest minds in biomedical research and the medical humanities."[5] Like the RF, Wellcome sought to understand neglected and tropical diseases in Europe, Asia, Latin America, and Africa, including hookworm, malaria, yellow fever, and sleeping sickness.

Dr. Andrew Balfour, the first Director of the Wellcome Tropical Research Laboratories in Khartoum, Sudan, led sanitary campaigns that banished the malarial mosquito from the city and corresponded with IHD members that made similarly impressive advances through their RF-supported virus research laboratories in Entebbe, Uganda, and Yaba (Lagos), Nigeria. Balfour's successor, Albert John Chalmers, corresponded with Dr. Simon Flexner at the Rockefeller Institute for Medical Research (RIMR), and like many in the IHD in Africa, was a prolific author of professional papers.[6] Both the RF (in collaboration with the RIMR) and the Wellcome Trust, developed vaccines for yellow fever and contributed substantially to important institutes for medical research and education in Africa.[7]

Although the RF and the Wellcome Trust are rather unique NGOs, due to their early founding dates and desire to improve human well-being through a research-based approach to development, their histories in Africa remain largely untold.[8] Former Assistant Director of the

Rockefeller Archive Center (RAC), Kenneth W. Rose, in his *Survey of Sources at the Rockefeller Archive Center for the Study of 20th Century Africa* (2003), described the Center's 20th Century Africa holdings as a "rich and largely untapped source of primary material," likely because all of Africa received only three percent of the IHD's budget in the first half of the 20th century. [9]

For colonial Africa, the history of the RF is largely identical to that of the IHD, because the RF undertook few non-health related initiatives.[10] Although the RF engaged in some degree of activity in dozens of now independent African countries, my research examines the RF's efforts to build public health infrastructure and the IHD's efforts to control disease in three countries that were key to the RF's African initiatives in the first half of the 20th century (Egypt, Nigeria, and Uganda) and a few others in which significant research or disease control campaigns were enacted (including the Gold Coast, Mauritius, Seychelles, and the Sudan).[11] The RAC holdings will allow for my writing of what I believe will be the first comprehensive analysis of a U.S. foundation's activities in Africa in the first half of the twentieth century. The work will contribute to the limited research on early NGOs' health work in Africa.

In addition to filling gaps in the historical record on the IHD and NGOs in Africa, I intend for my study to contribute to the ongoing assessment of best practices for NGOs engaging in long-term disease control efforts and health-sector development, by examining decades of the earliest such work undertaken. The RF and Wellcome Trust are somewhat unique among NGOs in that generally they have been, with some exceptions, opposed to giving short-term humanitarian aid. The RF and IHD sought to be "a partner, not a patron."[12]

NGOs' failure to improve African health has been attributed to their replication of the shortcomings of colonial and missionary medical activities on the continent, including: unequal

power relations, the use of curative approaches that lack full disclosure and do not give sufficient attention to cultural norms, and the championing of scientific medicine that neglects and undermines local holistic and preventative measures.[13] These charges suggest that outsiders objectified Africans and treated them as different, "the Other," and that biomedicine had the effect of removing health and illness from the social context in which they were produced.[14] Similar criticisms have been leveled at the RF in specific Asian and Latin American countries.[15] My study, in addition to providing a history of RF's and IHD's activities in Africa in the first half of the 20th century, will examine the extent to which such criticism of the RF holds true in Africa. Did RF officers and researchers recognize alternative "non-scientific" ways of explaining illness? When articulated, how did they explain and treat Africans' "difference"? To what extent did the RF, whose founder had both strong capitalist and Godly interests, replicate or avoid the shortcomings of colonizers and missionaries in the realm of African health?

The following RAC resources were especially helpful with respect to beginning to answer the aforementioned and related questions:

1. Online and print RF Annual Reports—these offered a general overview of the RF's work and placed African initiatives in a global context.[16]
2. The photographic collection—there are at least five boxes worth for health work in early to mid-20th century Africa that help to illustrate the RF's vision and ideals. Images are generally crisp, black and white, and organized by location. Photographs that appear in the RF Annual Reports are not cataloged separately and represent ten percent or less of the images available. Unfortunately, many of the photographs are marred by ink that bled onto them from ink stamps on other photos' backs.[17]

3. IHD special and routine reports—provided detailed information on hookworm control in Egypt, Mauritius, and Seychelles (more than sixty folders) and included quarterly and annual reports on yellow fever research and the types of experiments undertaken at laboratories in Entebbe, Uganda and Yaba, Nigeria (more than thirty folders); a dozen folders on malaria control and medical education in Egypt provided information on modifications to approaches used in each realm over time.
4. IHD field staff's diaries and general correspondence—with the New York City headquarters, colonial officials, and researchers at other labs and elsewhere, provided insight into the progress and needs of those working with sanitation programs, rural health demonstration units, and medical schools.[18] This rich volume of materials is largely from those stationed in Mauritius, Seychelles, Egypt, Nigeria, Uganda, and Gold Coast, and includes mostly typed formal letters, but also some handwritten ones (often from official travels or while on leave), substantial diaries, postcards (generally informal), and telegrams (formal and often more urgent, and with some encrypted, with decoding provided). Although many letters are one paragraph requests for journal reprints, repayment for materials purchased, or confirmations of travel itineraries, others are multi-page descriptions of procedures used and studies undertaken for disease control and even longer diaries. There are also occasional confidential letters (now publicly available) that address professional concerns and disputes with IHD colleagues and local colonial officials. Approximately eighty percent of the correspondence is from IHD doctors, but there is some from other field staffs with higher level positions. The correspondence, which can be found across more than eighty folders, helped me gain insight into day to day activities and concerns and gauge the degree of involvement of the

New York headquarters with programs, projects, and field staff in Africa—especially with Dr. Claude H. Barlow for bilharzias control in Egypt, J. Allen Scott for hookworm control in Egypt, Dr. J. Austin Kerr, and Dr. Fred L. Soper for malaria control in Egypt, Dr. Henry Beeuwkes for yellow fever control in Nigeria, Dr. George G. Hampton and Dr. Clark H. Yeager for hookworm control in Mauritius, Dr. John F. Kendrick for hookworm control in Seychelles, and Dr. Kenneth C. Smithburn, Dr. Alexander F. Mahaffy, and Dr. Alexander J. Haddow for yellow fever and other virus control in Uganda.

5. RF project and grant files—helped to clarify the expenses related to running labs, distributing yellow fever vaccine, and specific control experiments for yellow fever, hookworm, and malaria (over thirty folders).
6. The papers of Dr. Louise Pearce from the Rockefeller Institute for Medical Research—although officially separate from the IHD and the RF, they were also of interest because Dr. Pearce had considerable success with the clinical trials of tryparsamide for sleeping sickness control in the Congo (she was decorated by the Beligan Government in 1921 and again more than thirty years later with the Royal Order of the Lion), and was one of very few female doctors who worked on disease control in early 20th century Africa.[19]
7. The RAC archivists and staff—were able to provide a beautiful, comfortable research setting. The RAC's friendly staff is a model of efficiency; they are generally able to provide researchers with requested items within fifteen to twenty minutes or less. Tuesday lunches allow for the sharing of ideas with researchers from around the world. I offer my deepest thanks to everyone that assisted in pulling or recommending documents, processing receipts, sharing their expertise and ideas, via email, at researcher lunches, and otherwise. I could not have undertaken this work without you. Special thanks to

Kenneth W. Rose, who sadly passed away a few months before my first RAC visit in 2011; his compilation of 20th Century Africa resources at the RAC proved invaluable.[20]

8. Members of the RF Centennial Project staff—whose regular visits to the RAC during 2012 and 2013 helped give me a sense of potential overlap between my project and the two RF Centennial books most relevant to my work: *Beyond Charity* (already available at http://centennial.rockefellerfoundation.org/publications), and *The Voices of Africa* (forthcoming on the same site).[21]

A Few Caveats for those using the RAC's Africa Collection

Researchers should note that the letters and diaries written by IHD field staff based in Africa vary considerably in tone, number, volume, and by individual and by their posting—for some, such as Barlow, extensive, but relatively succinct records of his decades of field work exist, whereas others documented virtually every train boarded, meal eaten, and meeting attended. Beeuwkes, head of the West Africa Yellow Fever Commission, numbered his approximately two thousand letters and frequently wrote several in a single day. Kerr's diary contains over two hundred seventy single-spaced, type written pages, from his first six months as head of the anti-malaria campaign in Egypt, but he is only mentioned in others' letters while he was general IHD staff in Nigeria. Field staff engaged in hookworm control in Egypt, Mauritius, and the Seychelles and in virus studies at the Bwamba field station in Uganda, were more likely to describe their surroundings, including physical terrain and relations with local officials and other IHD staff, than those based at virus labs in Yaba or Entebbe, whose writings generally had a more scientific tone.

Correspondence files post-1927 are not listed in Rose's *Survey of Sources at the Rockefeller Archive Center for the Study of Twentieth-Century Africa,* and must be identified by

searching under country codes by year in binders in the Reading Rooms. There is also far less material in the correspondence files for colonial Africa post-1927. This is perhaps due to fewer large-scale, multi-country surveys being undertaken, financial cutbacks during the depression, and the disruption of WW II.

In addition, at times there is a poor fit between places and campaigns mentioned in the RF Annual Reports and books on the RF and materials available at the RAC; a prime example of this is repeat mention of typhus control efforts in Algeria, such as in 1944 to 1947 in books and Annual Reports, but very little documentation of these efforts. It appears that Algeria receives such mention because efforts there were used as a model for highly successful disease control in Italy. Another case is that of hookworm in Egypt—although hookworm work was undertaken in Egypt, many folders labeled "Hookworm" contain information on efforts to control bilharzias.

The Positive Side

On the plus side, overall there is considerable consistency across IHD African disease control campaigns in that the RF only operated where governments had invited them, used field methods for disease control similar to those they used elsewhere in the world, and generally enforced strict financial regulations on field staff.[22] There was excellent collaboration for the most part, such that advances made in disease control in other world regions, both informal and via publications, were quickly shared with those stationed in Africa, and vice versa. Although many stationed by the RF in Africa had no experience there, several benefitted from IHD posts in other lands. For example, Dr. J.A. Kerr was transferred from Brazil to Egypt to the U.S. South and the Caribbean. His mosquito work in Brazil informed that in Egypt; similarly Barlow's work on bilharzias in Egypt was informed by his research in China with snails.[23] Having served in China and learned some Chinese, Barlow also recognized the benefit of learning Arabic almost

immediately upon his arrival in Egypt. He obtained payment from the RF via special request for his Arabic language lessons, and those of his wife, Grace (whose correspondence can also be found in the C.H. Barlow Papers).

Researching the IHD's activities in Africa at the RAC resulted in encounters with documents that mentioned numerous organizations and entities with whom the RF corresponded or collaborated: the Wellcome Trust, the U.S. Public Health Service, U.S. Navy, U.S. Army, the British Colonial Office and Foreign Office, the French Colonial Office, Pasteur Institutes (Paris, Dakar, and Algiers), the London School of Tropical Hygiene and Medicine, and others. It was through such mention of Wellcome that I determined to add the Wellcome Trust to my study.

Diaries and other documents examined also gave useful leads to resources available outside the RAC. For example, Kerr mentions in his early 1945 diary from Egypt that he saw Disney's 1943 short educational film "The Winged Scourge" and contrasted it with the RF's ten-minute silent film "Unhooking the Hookworm" from 1920. Viewing these and related public health films on YouTube can help a researcher save valuable time at the RAC.[24] Books on disease control and medical education in the RAC libraries that can be found inexpensively via Amazon.com or another provider are also excellent starting points for RF-related research that can be conducted outside the RAC.[25]

Initial Findings: Including Documentation of Overall Trends

Generally IHD doctors and other staff stationed in Africa had comfortable accommodations, ate imported foods from canned sardines to treats like marshmallows and maple syrup, had access to motor vehicles, and support staff to type their diaries, post letters, and otherwise assist them. Most were abroad without their families (Barlow was a notable exception) or even their spouses, and experienced a degree of isolation broken on occasion by visits from an

IHD Director or Regional Director, or other doctors and scientists from the USA or Europe. Those in Nigeria, Ghana, Egypt, and Uganda were stationed with others from the IHD and could enjoy a game of tennis or meeting over a meal. In island Africa the situation differed—a doctor stationed in Mauritius or Seychelles was often the only IHD field staff, had less extravagant accommodations, and a language barrier, finding the need to learn Creole, even though the islands had officially passed from French to British hands.

Many field staff, although medical doctors, experienced health problems ranging from painful carbuncles and boils, to oral and dental malaise, to bouts with malaria and yellow fever. Several cases of yellow fever in West Africa proved fatal; notable losses included Dr. Adrian Stokes (1887-1927) and Dr. Hideyo Noguchi (1876-1928), as well as others on or associated with the West Africa Yellow Fever Commission, including Dr. A. Maurice Wakeman and Dr. Theodore Hayne.[26]

There was a routine to most of the field staff's days, whether it was capturing, dissecting, and experimenting upon mosquitoes, organizing for the removal of weeds that harbored snails to be cleared from canals, or teaching assistants the correct amount of Paris green or DDT to spray on ponds or the walls of homes. Other than illness, drama in IHD staff people's lives was often related to professional issues, such as whose name should go first on a publication, or frustration with IHD staff without an MD not correcting local people that referred to them as doctor and with local officials who did not keep to agreed upon schedules or work plans. In Egypt, on more than one occasion Navy personnel were found to have taken IHD staff people's work and published it without their knowledge or properly acknowledging them.[27]

Conclusion

The similarity of Wellcome's mission and history with that of the RF, and that I will be based in London in the fall of 2013, made it the logical choice for a book-length work that will use a comparative approach akin to what I have used in nearly a half dozen scholarly articles on Africa that rely heavily on primary source materials.[28] The questions to be answered about the Wellcome Trust's operations in Africa and its connections to its founder are very similar to those I am examining for the RF and its founder. Both John D. Rockefeller, Sr. and Henry S. Wellcome were determined, somewhat eccentric men, who had their philanthropy questioned by cynics who saw them as attempting to buy goodwill with tainted funds—Rockefeller for having made his fortune in part by putting others out of business and Wellcome by profiting from disease through patents on vaccines and the sale of pharmaceuticals.[29]

Although I anticipate research and writing to continue through 2014 or 2015, my initial findings beyond trends observed in IHD staff correspondence, diaries, and reports, include that the RF used innovative approaches to development, many of which would be considered 'best practices' in the present day. As such, it is my hope that my work will help to fill the scholarly void on the mere six percent of U.S. foundations engaged in non-U.S. giving, as well as be a substantial contribution to the largely pessimistic literature on African development, in which benchmarks of the RF approach, such as collaboration and targeted investment, are more often rhetoric than reality.[30]

Although little has been published on the RF in Africa, [31] approximately one quarter or more of the material in the RAC's Africa collection from the IHD's period will *not* be meaningfully mentioned in my writing—namely financial materials (including expense reports and exchanges regarding charges and reimbursement for goods not received, damaged, or lost in

transit) and the more technical bio-medical material including autopsy reports and the detailed notes and final publications related to laboratory procedures and scientific studies that were conducted by IHD staff using mosquitoes, monkeys, and other animals. It is my hope that someone with a background in epidemiology, pathology, or related field will make use of the latter holdings.

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Rockefeller Archive Center Research Reports Online is a periodic publication of the Rockefeller Archive Center. Edited by Erwin Levold, Research Reports Online is intended to foster the network of scholarship in the history of philanthropy and to highlight the diverse range of materials and subjects covered in the collections at the Rockefeller Archive Center. The reports are drawn from essays submitted by researchers who have visited the Archive Center, many of whom have received grants from the Archive Center to support their research.

The ideas and opinions expressed in this report are those of the author and are not intended to represent the Rockefeller Archive Center.

ENDNOTES:

[1] World Health Organization (WHO) World Health Report: Working Together for Health, 2006. Available: http://www.who.int/whr/2006/en/index.html

[2] Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness*. San Jose, California: Stanford University Press, 1991; Joel L. Fleishman, *The Foundation: A Great American Secret*. New York: Public Affairs, 2007.

[3] The American Red Cross was established in 1881, but it did not have much of a presence in Africa in the first half of the twentieth century.

[4] John Farley, *To Cast out Disease: A History of the International Health Division of the Rockefeller Foundation (1913-1951).* Oxford, U.K.: Oxford University Press, 2004, p. 2.

[5] The Wellcome Trust web pages under Our Vision offer quotes about the aims of the Trust, available at: http://www.wellcome.ac.uk/Our-vision/index.htm. On the Wellcome Trust's 75th Anniversary web page (http://www.wellcome.ac.uk/About-us/75th-anniversary/index.htm), in a short video on the Trust's history, Henry S. Wellcome is credited with desiring "the advancement of medical and scientific research to improve mankind's wellbeing," a sentiment very similar to the founding motto of the RF. Note: Although the Wellcome Library and affiliated holdings are vast, some of the Wellcome records "were destroyed by enemy action in 1941, but exactly which records were lost in the bombing is unknown." (Teresa Doherty and Adrian Steel, "Wellcome Home to the Wellcome Foundation Archive" *Medical History* 48 (2004), pp. 95-111.

[6] According to Ahmed A. Abdel-Hameed's "The Wellcome Tropical Research Laboratories in Khartoum (1903-1934): An Experiment in Development," *Medical History* 41: 1 (January 1997), pp. 30-58, Balfour was praised by Theodore Roosevelt in the *Daily Mail* (1910) for sanitary work in Khartoum, but unlike other Wellcome Laboratories Directors, made few lasting contributions to research via publication.

[7] The RF-supported labs in Yaba, Nigeria and Entebbe, Uganda continue, as do medical education programs nurtured with Rockefeller Foundation (RF) support at the University of Ibadan, Nigeria and Makerere University, Uganda. In addition to the Wellcome labs in Sudan, which served as the basis of the University of Khartoum's School of Medicine, Wellcome created a unit to study hookworm disease, anemia, and malaria in Nairobi, Kenya, and later Kilifi, Kenya, that continues to this day as the KEMRI Wellcome Trust Research Program. Both the RF and Wellcome have supported fellowship programs, and institution building, and have also taken on new initiatives in Africa in recent decades, including anti-HIV/AIDS programs: (http://wellcometrust.wordpress.com/2012/01/17/neglected-tropical-diseases-the-wellcome-connection/).

[8] There is more on Wellcome in Africa than the RF in Africa: There is a chapter on the Wellcome Laboratories in: Heather Bell, *Frontiers of Medicine in the Anglo-Egyptian Sudan, 1899-1940*. Oxford, U.K.: Oxford University Press, 1999; Patrick F. D'Arcy, *Laboratory on the Nile: A History of the Wellcome Tropical Research Laboratories*. Binghamton, New York: Haworth Press, 1999. A few articles on the same subject have been published. Bell's book makes occasional mention of the RF, as well, and is really the only one of the works that places events in historical context.

[9] The most comprehensive histories of the RF's International Health Division (IHD) to date: John Farley, *To Cast out Disease* and Greer Williams, *The Plague Killers*. New York: Scribner, 1969, make relatively little mention of Africa. Early histories of the RF that cover the years of the IHD's operation (1913-1951), such as: Raymond Fosdick, *The Story of the Rockefeller Foundation.* New York: Harper & Brothers, 1952; Robert Shaplen, *Toward the Well-Being of Mankind: Fifty Years of the Rockefeller Foundation.* New York: Doubleday, 1964, similarly make sparing mention of Africa.

[10] RF Annual Reports reveal that Africa-related RF initiatives generally supported the growth of the scholars of Africa, most from outside of Africa, or African Studies programs in institutions outside of Africa. Programs that remain leaders in the field were financially supported by the RF in the 1930s and the 1940s including: African Studies at the University of Pennsylvania, the International Institute of African Languages and Cultures at the London School of Economics, and African Linguistics at the School of Oriental Studies at the University of London. There were also smaller programs beginning in the 1920s, such as grants for library materials for African universities, a grant to W1XAL in Boston that allowed for educational broadcasting that reached South Africa, funds for a telescope in South Africa, and occasional support for archeological excavation work in North Africa (such as via the University of Chicago's Oriental Institute). Larger, longer term, non-health initiatives, such as those in agriculture, did not begin until the 1950s. Wellcome also supported archeological work in Sudan, according to: Tony Gould, *Cures and Curiosities: Inside the Wellcome Library*. London, England: Profile Books, 2009.

[11] Although colonies and independent country boundaries do not always coincide, the RF had some level of activity in at least thirty-six of the fifty-five present-day African countries. Activity included, but was not limited to: written and on-the-ground surveys, distribution of publications and yellow fever vaccine, collaboration with universities and governments to create departments and programs, and the creation of field stations and laboratories.

[12] The RF made some exceptions during the World Wars to its general refusal to fund humanitarian activities. The RF's founder, John D. Rockefeller, Sr. and Wickliffe Rose, the IHD's first Director, repeatedly made the distinction between development assistance and aid/charity. Specific mention of this aim of the RF to serve as "a partner not a patron," seeking long-term solutions, not short-term fixes in the field of health, can be found in the President's Review of the RF's 1926 Annual Report, p. 14, and in Robert Shaplen, *Toward the Well-Being of Mankind*, the entire book section on Wickliffe Rose's Philosophy, which begins on page 21, is entitled, "A Partner, Not a Patron."

[13] Steven Feierman and John M. Janzen, editors, *The Social Basis of Health and Healing in Africa*. Berkeley: University of California Press, 1992.

[14] Helen Tilley, *Africa as Living Laboratory: Empire, Development and the Problem of Scientific Knowledge, 1870-1950*. Illinois: University of Chicago Press, 2011.

[15] Marcos Cueto, editor, *Missionaries of Science: The Rockefeller Foundation in Latin America*, Bloomington: Indiana University Press, 1994.

[16] Digital versions of RF Annual Reports online (http://www.rockefellerfoundation.org/about-us/annual-reports) do not contain the photographic images present in the print version, but allowed for considerable work to be conducted from home. Many thanks to whoever undertook the tremendous project of scanning the many pages involved (the early decades of the Annual Reports averaged four hundred seventy pages each). The Wellcome Trust issues Reports that are available online from 1937, but they often cover several years in a single report (the First Report covers the years 1937-1956!); by 1990 the Reports began to approach being true Annual Reports: http://www.wellcome.ac.uk/About-us/Publications/Annual-review/Previous/index.htm.

[17] Nonetheless, high quality digital scans of individual RAC photographs can be ordered for ten dollars each, and it might be possible to remove some of the unwanted markings via Photoshop. Wellcome also has an extensive photographic collection from the first half of the 20th century, including images of overseas premises and staff. Some have been scanned and are available online at: (http://wellcomeimages.org/).

[18] Correspondence with New York was generally with the IHD Directors Wickliffe Rose, Dr. Frederick Russell, Dr. Wilbur Sawyer (who was based in West Africa in the 1920s), Dr. George K. Strode, and Regional Director "for the East" (which included Egypt, Mauritius and Seychelles) Dr. Victor Heiser, and with support staff (for receipts and statistical assistance for research papers).

[19] Marion Fay, "Obituary for Louis Pearce (March 5, 1885 to August 9, 1959). In *Journal of Pathology and Bacteriology*. 82 (October 1961), pp. 542-551.
[20] The RAC staff is impressive. Although Kenneth W. Rose was a U.S. historian with secondary expertise in Asia (http://rockarch.org/about/kenrose.php), he created an incredibly helpful guide to the Rockefeller Archive Center's (RAC) Africa resources. Unlike many archives around the world, where retrievals can take hours or even a day or more, documents, photographs, microfilm, diaries, and other requested items are pulled rapidly during weekdays 9:00 a.m.-11:30a.m. and 2:30 p.m.-5:00 p.m. for up to eleven diverse on-site RAC researchers. During my seven weeks at the RAC I encountered researchers, the majority of whom were dissertators, from Canada, China, Germany, Ireland, Japan, Mexico, Switzerland, USA, United Kingdom, and beyond.
[21] Wellcome created similar publications: Gilbert MacDonald, *The Hundred Years Wellcome 1880-1980: In Pursuit of Excellence*. London, England: Welcome Foundation, Ltd, 1980; (published for the centennial of the pharmaceutical firm Burroughs Wellcome & Co.) John Symons, *Wellcome Institute for the History of Medicine.* London, England: Wellcome Trust, 1993.
[22] One notable exception is that of Dr. Hideyo Noguchi, who somehow managed to obtain additional funds and supplies regularly from the normally frugal New York office.
[23] Similarly, Albert John Chalmers, second Director of the Wellcome Laboratories in Sudan had ten years of experience in Ceylon with the British Medical Association and Sir Robert Archibald, the Laboratories' third Director was part of Uganda's Sleeping Sickness Commission before being transferred to the Sudan.
[24] The RAC's "Unhooking the Hookworm" film can be found at: http://www.youtube.com/watch?v=aqBoT_DyOsI and Disney's "The Winged Scourge" at http://www.youtube.com/watch?v=y68F8YwLWdg. Also, potentially of interest: Disney's 1945 film "The Unseen Enemy" available at: http://www.youtube.com/watch?v=tzE0zHTVNso. Wellcome also made health-related films; several from the 1920s to 1950s can be viewed online at: http://wellcometrust.wordpress.com/tag/wellcome-film/.
[25] For example: Carol Sicherman, *Becoming an African University: Makerere 1922-2000*. Trenton, New Jersey: Africa World Press, 2004; Nancy Leys Stepan, *Eradication: Ridding the World of Diseases Forever?* Ithaca, New York: Cornell University Press, 2011; as well as several of the publications listed under the RAC's "Publications: Philanthropic Foundations and the Globalization of Scientific Medicine and Public Health" (available at: http://www.rockarch.org/publications/conferences/quinnipiac.php).
[26] James S. Porterfield. "Yellow Fever in West Africa: A Retrospective Glance." *British Medical Journal*, 1989, 299: pp. 1555-1557. Available at: http://pubmedcentralcanada.ca/pmcc/articles/PMC1838801/pdf/bmj00264-0017.pdf .
[27] See for example: Folder 13 of the Claude H. Barlow Papers, which covers the period 1947-1949.
[28] Heidi G. Frontani home page, Publications section, available at: http://facstaff.elon.edu/glaesel/pub.html.
[29] Ron Chernow, *Titan: The Life of John D. Rockefeller, Sr*., 2nd Edition, New York: Vintage, 2004.
[30] The six percent figure comes from Fleishman, *The Foundation, A Great American Secret*. New York: Public Affairs, 2007.
[31] See for example: A Bibliography of Scholarship at the Rockefeller Archive Center, 1975-2011; available: http://www.rockarch.org/publications/biblio/scholarship.pdf.