Primates and Population in Postcolonial India

by Tara Suri
Princeton University

Primates and Population in Postcolonial India

In May 1963, Dr. Sheldon Segal convened a meeting of reproductive biologists at the Population Council's offices in New York City. He had called them there to consider "the possibility of concentrating efforts to increase fertility control research by means of establishing a large primate center in India."[1] The proposal was an outgrowth of Segal's consultancy work for the Ford Foundation in New Delhi, and he was keen to pursue it. Segal regarded India – "a country with an abundant monkey supply" – as an ideal place to establish a cost-effective primate center for contraceptive research.[2]

But while the American researchers who had gathered on that May day "unanimously agreed" on the need for expanded access to primates, they expressed considerably less enthusiasm for a center located so far away from their Park Avenue meeting rooms.[3] It was important, in their opinion, to house this kind of center in a "scientifically advanced area of the world, preferably the U.S.," even if at greater expense. [4] As a memorandum from the meeting pithily summarized, rather than "taking the experts to the monkeys… there seemed to be agreement that it would be better to bring the monkeys to the scientists."[5]

The researchers' deliberations over a primate center point to the political economy of model organisms underpinning twentieth-century reproductive science. My dissertation project examines this political economy by tracing the socio-legal life of the rhesus macaque over the century. Between 1925 and 1978, India was the world's largest exporter of rhesus monkeys. The non-human primate became a requisite model organism for research ranging from polio vaccine production to spaceflight testing, from infant attachment studies to biowarfare experiments, and from yellow fever research to contraceptive development. In the process, the macaque also became subject to regulatory contests over ethics, economics, and geopolitics. Colonial bureaucrats, anti-colonial leaders, scientists, foreign diplomats, animal dealers, foundation officials, feminist health activists, and animal welfare advocates, among others,

often possessed conflicting visions for the governance of the macaque trade. And monkeys themselves often eluded and reshaped human agendas. My project charts how the resulting socio-legal conflicts unevenly transformed monkey life into a biomedical commodity. In tracking this transformation, I ask: if imperial ideologies relied on a racialized slippage between native and beast, how was the border between human and non-human remade over decolonization? Inspired by the interventions of feminist science and technology studies scholars, I am particularly interested in how research on non-human primate bodies generated knowledge about human primate bodies.

To this end, the material I examined at the Rockefeller Archive Center foregrounds how the politics of monkey export shaped the production of knowledge about reproductive bodies in the era of global population control. The preliminary proposal considered at the Population Council certainly emphasized the centrality of non-human primates to the future of such knowledge. While "it is certainly true that fundamental principles applicable to humans can be elucidated through research with laboratory rodents," the proposal explained, "in the field of fertility control…applied research is frequently impossible unless an animal with menstrual cycles similar to the human is employed."[6] The rhesus macaque had emerged as reproductive scientists' research animal of choice earlier in the century. Elizabeth Hanson and Emily K Wilson have shown how establishment of a breeding colony at the Carnegie Institution of Washington's Department of Embryology in the 1920s entrenched the non-human primate as a model in reproductive biology. Hanson has argued that the knowledge produced by the colony shaped the broader investment in the macaque in biomedical research.[7]

Scientists' access to this model organism crucially depended on the geopolitics of empire. In the field-transforming *Primate Visions* (1989), Donna Haraway situated the emergence of non-human primate research as "part of the system of unequal exchange of extractive colonialism."[8] In addition to establishing research centers in European colonies (where native populations were often racialized through comparison to non-human animals), Western governments and foundations began facilitating the export of non-human primates. Anita Guerrini and Neel Ahuja have shown how the American search for a polio vaccine resulted

in the export of many thousands of rhesus monkeys from India between the 1930s and 1950s.[9] Against the backdrop of decolonization and the global Cold War, American anxieties about access to primates – particularly macaques from newly postcolonial India – led the government to fund a network of regional primate centers over the 1960s.[10] American anxieties were further magnified by an overdetermined understanding of the monkey as sacred to Hindus.

Shaped by this context, the 1963 debate over an Indian primate center was further inflected with racialized anxieties about population growth.[11] Birth control and population control organizations had begun supporting reproductive research over the previous decades.[12] Transnational development organizations, in turn, considered funding research, including with primates, as part of their broader approach to population management. In April 1961, Dr. Douglas Ensminger, the Ford Foundation's representative in New Delhi, requested $2 million from the New York office to support research on human reproduction in Indian medical institutions. Positioning reproductive research as integral to the country's family planning efforts, Ensminger included funds for a primate colony at Lucknow's Central Drug Research Institute (CDRI) in his request.[13] Later that year, Segal evaluated reproductive research centers across the country in his capacity as consultant to the Ford Foundation. Segal's report detailed the research on rhesus monkeys conducted by scientists like Dr. A.B. Kar at the CDRI and Dr. B.K. Anand at the All India Institute of Medical Sciences. His recommendations for the development of various centers frequently focused on the expansion of animal facilities.[14]

These recommendations were a prelude to the 1963 proposal – initially put forth by the Ford Foundation's New Delhi office – for a primate research institute in India. The 1963 proposal envisioned an internationally-oriented hub, guided by American scientific expertise, for work on reproduction. "Indian science," the proposal opened, "has the unique opportunity to assume leadership in primate research." Foregrounding the availability of scientific labor and non-human primates, the proposal proclaimed that "this combination of essential factors is not to be found elsewhere in the world."[15]

American reproductive scientists at the Population Council meeting, however, treated this essential combination with skepticism. "The view was expressed," for example, "that although Indian scientists work very effectively at Western institutions, very little first-rate reproduction endocrinology is actually coming out of India."[16] More fundamentally, many were disinterested in supporting the country's scientific infrastructure. Over subsequent meetings and conferences, discussion shifted from the initial vision of supporting Indian science towards a vision that echoed the logics of colonial primate research initiatives. "The primary objective of the foreign laboratory," scientists and officials ultimately agreed, "is scientific research and training rather than a device to strengthen the scientific, educational, or economic resources of the host country."[17]

But as Ensminger and others pointed out in these meetings, the shift in approach ran counter to the postcolonial state's investment in science and development.[18] Wary of the Indian government's response to a proposal that was not "directed toward strengthening the Indian scientific community's research effort," organization officials decided to look elsewhere.[19] They "reluctantly eliminated" India "as a possible site for the center because the socio-scientific climate in this emerging and nationalistically sensitive country would not tolerate an enterprise founded on the above principles."[20]

The subsequent years saw an inconclusive search for an appropriate host country that was not so "nationalistically sensitive." In late 1965, a study committee led by Dr. Roy Greep and Dr. Ernst Knobil, who was researching the reproductive cycle in rhesus macaques at University of Pittsburgh, traveled through Japan, the Philippines, Malaysia, Singapore, and Thailand for this purpose. Other species of macaque were indigenous to these countries, but Greep and Knobil found that their populations were insufficient due to over-trapping. With India excluded from consideration, they determined that "the singular advantage of an Asian location, that of a nearby inexhaustible monkey supply" had "vanished."[21] Greep and Knobil included the need for primate conservation in their recommendations. But with respect to their committee mandate, they ultimately concluded on financial grounds that the Ford Foundation should establish a center within the United States. The American researchers at the 1963 meeting in favor of continuing to "bring the monkeys to the scientists" had won out.

In other words, the 1965 report reversed the logics that had led to the initial proposal. Tracing this process of reversal draws out the politicized relationship between geographies of laboratory science, development, and "natural resources." For a moment, the availability of rhesus macaques in India had put pressure on the idea that reproductive research was to be developed in the West and applied to the "population problem" of the non-West. The initial proposal, in a sense, acknowledged how such research was dependent on non-human primate life from India. But the Western experts who rejected the proposal dismissed India's existing scientific infrastructure and refused to envision support for its development. Reading along the archival grain shows how the pursuit of reproductive science further consolidated global divisions in the era of population control. [22] The pursuit of reproductive science also further entrenched understanding of rhesus monkeys as extractable commodities that could model human reproductive life. This understanding would not go uncontested in the years that followed.

*****

I thank the Rockefeller Archive Center's Research Stipend Program for the financial support to conduct research integral to my dissertation project. I am grateful to the RAC archivists who made this research possible and oriented me to the collections, especially Bethany J. Antos.

---

[1] Charles McVicker, "May 20 Meeting on Primate Center." May 21, 1963. Ford Foundation Records, Projects, Reel P-1037, D-971: Government of India – Primate research institute, 1963, Rockefeller Archive Center (RAC).
[2] Ernst Knobil and Roy O. Greep. "Report of Study Committee for an Overseas Primate Center," p. 1, December 1965. Ford Foundation Records, Catalogued Reports, Reports 000453, 1965, RAC.
[3] McVicker, "May 20 Meeting on Primate Center."
[4] Knobil and Greep, "Report of Study Committee for an Overseas Primate Center," p. 2.
[5] McVicker, "May 20 Meeting on Primate Center."
[6] "Proposal for Primate Research Institute," p. 1. April 17, 1963. Ford Foundation Records, Projects, Reel P-1037, D-971: Government of India – Primate research institute, 1963, RAC.
[7] Elizabeth Hanson, "How Rhesus Monkeys Became Laboratory Animals" in eds. Jane Maienschein, Marie Glitz and Garland E. Washington, *Centennial History of the Carnegie Institution of Washington, Vol. 5: The Department of Embryology* (Cambridge:

Cambridge University Press, 2004), 63-81. Emily K. Wilson, "Modeling Man: The Monkey Colony at the Carnegie Institution of Washington's Department of Embryology, 1925–1971." *Journal of the History of Biology* 45, no. 2 (2012): 213-251.

[8] Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989), 19.

[9] Anita Guerrini, "Polio and Primates," in *Experimenting with Humans and Animals: from Galen to Animal Rights*, (Baltimore: Johns Hopkins University Press, 2003), 114-137. Neel Ahuja, "Macaques and Biomedicine: Notes on Decolonization, Polio, and Changing Representations of Indian Rhesus in the United States, 1930–1960," in eds. Sindhu Radhakrishna, Michael Huffman and Anindya Sinha, *The Macaque Connection: Cooperation and Conflict Between Humans and Macaques* (New York: Springer, 2013), 71-91. See also Liza Piper," Chapter 6: Domesticating Poliovirus: Laboratory Monkeys and Vaccine Production" in ed. Tina Adcock, *Landscapes of Science,* (Toronto: Network in Canadian History and Environment, 2018), 55-67.

[10] See both Haraway and Neel Ahuja, *Bioinsecurities: Disease Interventions, Empire, and the Government of Species* (Durham: Duke University Press, 2016).

[11] See among many others, Sanjam Ahluwalia, *Reproductive Restraints: Birth Control in India, 1877-1947* (Urbana, IL: University of Illinois Press, 2010). Matthew James Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge, MA: Harvard University Press, 2009). Michelle Murphy, *The Economization of Life*. (Durham, NC: Duke University Press, 2017). On population control and the making of reproductive technology, see Gabriela Soto Laveaga,. *Jungle Laboratories: Mexican Peasants, National Projects, and the Making of the Pill*. (Durham, NC: Duke University Press, 2009). Nelly Oudshoorn, *The Male Pill: A Biography of a Technology in the Making*. (Durham, NC: Duke University Press, 2003). Chikako Takeshita, *The Global Biopolitics of the IUD: How Science Constructs Contraceptive Users and Women's Bodies* (Cambridge, MA: MIT Press, 2012).

[12] On the complex relationship between birth control and family planning advocates and reproductive scientists, see Adele Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and "The Problems of Sex"* (Berkeley, CA: University of California Press, 1998).

[13] Douglas Ensminger to George Gant, "Subject: Allocation of funds for research on human reproduction in India," April 24 1961. Population Council Records, Central Files, Accession 2, RG 2, Series 2, Box 84, Folder 802, RAC.

[14] Sheldon J. Segal, "Summary of Observations on Medical and Biological Research Centers in India," August 2, 1961. Population Council Records, Central Files, Accession 2, RG 2, Series 2, Box 85, Folder 807, RAC.

[15] "Proposal for Primate Research Institute," p. 1. April 17, 1963.

[16] "Summary and Conclusions of Primate Research Discussion Group," p. 7. May 20, 1963. Ford Foundation Records, Catalogued Reports, Reports 000453, 1965, RAC.

[17] Knobil and Greep, "Report of Study Committee for an Overseas Primate Center," p. 5.

[18] There is a ranging literature on investments in science in the postcolonial state. See among others, Gyan Prakash, *Another Reason: Science and the Imagination of Modern India* (Princeton, NJ: Princeton University Press, 1999). See also Banu Subramaniam, *Holy Science: The Biopolitics of Hindu Nationalism* (Seattle: University of Washington Press, 2019).

[19] "Summary of Conference on Primate Research," p. 2. September 22, 1964. Ford Foundation Records, Catalogued Reports, Reports 000453, 1965, RAC.

[20] Knobil and Greep, "Report of Study Committee for an Overseas Primate Center," p. 5.

[21] Idem, p. 22.

[22] Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, NJ: Princeton University Press, 2010).