Borrowing, Adapting, and Learning the Practices of Smallpox: Notes from Colonial Goa

CRISTIANA BASTOS

SUMMARY: In this article I will address colonial state policies toward smallpox in nineteenth-century Goa. The picture that emerges from the analysis of health services documents suggests a broad variety of coexisting practices. While the actions of some of the Portuguese head physicians epitomized the conflict between state-sponsored vaccination policies and local preferences for smallpox inoculation, others showed sympathy for and developed arguments in favor of inoculation as practiced by indigenous experts. Still others observed the existence among the population of hybrid practices combining elements of vaccination and inoculation. The diversity of Goan combinations along the violence/collaboration continuum should be interpreted within the context of current trends in the analysis of smallpox in British India—which replace the paradigm of vaccination :: variolation :: state violence :: native resistance with a more nuanced understanding of a variety of combinations throughout the subcontinent in the nineteenth century.

KEYWORDS: smallpox, vaccines, inoculation, Goa, India, Portuguese colonialism, hybrids

An earlier version of this paper was delivered at the conference, “Local Transmutations of Global Phenomena: An Historical Reassessment of Smallpox Prevention, Vaccination and the State,” London, The Wellcome Trust Centre for the History of Medicine at University College London, 30 June–1 July 2006. I am thankful to Sanjoy Bhattacharya and other organizers and discussants for their useful remarks, extended to the many interlocutors that helped in earlier phases of maturation of this work, at Casa de Oswaldo Cruz in Rio de Janeiro, at the Wellcome Center in London, and at the Social Sciences Institute in Lisbon. Research was funded by projects POCTI/PLUS/ANT/15157/1999, Tropical Medicine and Colonial Administration: A Study of Empire after the Medical School of Goa, and POCTI/ANT/41075/2001, Colonial Medicine, Imperial Structures and Post-Colonial Lives, both supported by Fundação para a Ciência e Tecnologia. None of this would be possible without the kind support of the staff of the Overseas Historical Archives in Lisbon (Arquivo Histórico Ultramarino) and the Central Library of Panaji, Goa. I am also thankful for the early discussion with the small research team that included students Ricardo Roque and Monica Saavedra, who skillfully transcribed the documents and produced their own works. Final thanks go to the anonymous reviewers of the Bulletin for their comments and to Mike Kirkwood for his copyediting.

Vaccination and Variolation

The coexistence of Jennerian vaccines and variolation practices in colonial India is the subject of a still-growing body of innovative historical and anthropological analyses that involve theoretical debates on the nature of empire, agency, power, and knowledge.\(^1\) At the risk of oversimplifying, one may suggest that the 1990s literature took the opposition between vaccination and variolation as a double for that between colonizers and colonized; along those lines, public health appeared as the field of colonial biopower, and vaccination emerged as a tool of empire, leaving little room for local agency other than as resistance to such imposition.\(^2\) More recent work has introduced nuances into that model, arguing that not everyone in India revered the smallpox goddess Sitala and opposed vaccination, and that the state-sponsored vaccination campaigns did not face universal resistance.\(^3\) Sometimes, the population asked for vaccines. At other times, the authorities negotiated and adopted the traditional methods of inoculation.\(^4\) Within a picture that delineates increasing variation as our understanding of colonial South Asia emerges, it may be interesting to ask—and so begin to sketch in—what we know regarding those practices in Goa, whose colonial record has been treated in separate bodies of work.\(^5\)


2. Arnold, Colonizing; Apffel-Marglin, “Smallpox” (n. 1).

3. Bathacharya, Harrison, and Worboys, Fractured States (n. 1); Brimnes, “Variolation” (n. 1).


5. The language of the colonial archives limited the access to Goan sources. Partly as a consequence, Goan scholarship has not always interacted with broader discussions within the mostly Anglophone South Asian literature and, for a long time, was clustered in rela-
In this article I introduce data from Goa that will further increase the complexity of the picture of smallpox prevention in nineteenth-century India. In Goa, together with a general antagonism between state-sponsored vaccination programs and a seemingly widespread preference for variolation, there was room for idiosyncrasy. Some authorities clearly sympathized with variolation and considered it as good as vaccination; their attitudes toward smallpox prevention varied throughout the nineteenth century.6

Asking how and why those attitudes varied raises points interesting enough to bring Goa into the wider discussions about smallpox. But there are further peculiarities in Goa that will necessarily expand the discussion about smallpox prevention in colonial India, such as the curiously independent streams of interest, either around the economy and culture of the spice trade in the context of Portuguese colonial expansion or, in a later moment, in subjects that better highlighted resistance to colonial domination. To name just a few titles in English, there are the conventional historiographic works of Charles Boxer, Portuguese Society in the Tropics (Madison: University of Wisconsin Press, 1965) and M. N. Pearson, The Portuguese in India (Cambridge: Cambridge University Press, 1987), and the more recent works that emphasize local agency and increasingly engage with ongoing debates within South Asian studies, such as Pratima Kamat, Farar Far (Crossfire): Local Resistance to Colonial Hegemony in Goa, 1510–1912 (Panaji, Goa: Instituto Menezes Bragança, 1999); Paul Axelrod and Michelle A. Fuerch, “Flight of the Deities: Hindu Resistance in Portuguese Goa,” Mod. Asian Stud., 1996, 30: 387–421; Alexander Henn, “The Becoming of Goa: Space and Culture in the Emergence of a Multicultural Lifeworld,” Lusotopie, 2000: 333–39; Robert S. Newman, Of Umbrellas, Goddesses and Dreams: Essays on Goan Culture and Society (Mapuça, Goa: Other India Press, 2001); and Rochelle Pinto, Between Empires: Print and Politics in Goa (Oxford: Oxford University Press, 2007).

6. Attitudes toward smallpox in Goa have been treated thoroughly in Mónica Saavedra, “Percursos da Vacina na Índia Portuguesa—Séculos XIX e XX,” Hist. Cienc. Saude-Manguinhos, 2004, 11: 165–82, and Ricardo Roque, “Sementes contra a Varíola: Joaquim Vás e a Tradução Científica das Pevides de Bananeira Brava em Goa, Índia (1894–1950),” Hist. Cienc. Saude-Manguinhos, 2004, 11: 183–222, produced in the scope of the projects Medicina Tropical and Medicina Colonial (see acknowledgments). Although sharing with those articles the territory and period of reference, as well as primary sources and some of the interpretive guidelines of the research projects, the current article overlaps only marginally with the former. My current analysis is anchored in the 1850s through the narrated experiences of some of the key social actors in colonial Goa, starting with the head physician Eduardo Freitas e Almeida; my point is to show that the tensions and contradictions in the wide range of smallpox prevention practices and related systems of knowledge were not only lived as oppositional conflicts but that they were often—and, most of all, also—lived in combined and hybrid forms. I hope that this view of a particular configuration of colonialism—as lived in Goa—contributes to wider discussions on medicine and empire, as well as agency, representation, and power within colonialism; rather than being restricted to Goan history or Portuguese colonial historiography, analysis of Goan society may contribute to the complex picture of diversity within South Asian historiography.
ous combination—hybridization, in contemporary jargon—of vaccination and variolation elements. According to some health reports, there were individuals in the outlying provinces who promoted immunization by using elements of both techniques. The dearth of references to those practices in most literature on smallpox in India reinforces the need to describe and discuss what we know of them for Goa.

My central source of reference will be the 1857 health report for the Estado da Índia, the Portuguese colony in South Asia comprising the western coastal enclaves of Goa, Daman, and Diu. The document was addressed to the representative of the navy ministry, Manoel Rodrigues Bastos, who supervised colonial affairs, and was signed by the Portuguese head physician, Eduardo Freitas e Almeida.7

This was the year of the Indian Mutiny, but Head Physician Almeida did not seem apprehensive about the transborder effects of “the war in English India,” as he referred to the insurrection next door. The only impact that he found worthy of note was the need to use prisoners, instead of soldiers, for the cleansing of Angediva Island, as the troops were all stationed at the border.8 Others in Goa might have wished to address the issues that caused the mutiny;9 Almeida, apparently, did not. His concern was the governance of public health and the promotion of smallpox prevention via vaccination.10

Appointed in 1853 as head physician (físico-mór) of Estado da Índia and arriving there the following year, Eduardo de Freitas e Almeida was still adjusting to India and its mores in 1857. His writings reveal the awe felt by the newcomer, moved neither by a patronizing enchantment with the “Orient” nor an openly displayed disdain for native backwardness—the contrasting attitudes most frequently struck by Europeans in the East. Most of all, Almeida was appalled by the incomprehensible maze of local politics and by his own powerlessness to implement what he considered to be right. He thought he had come to Goa to run the health services, but he found no means with which to accomplish this mission. There

8. Ibid.
9. As Teotónio de Souza noted in Goa to Me (New Delhi: Concept, 1994), some of the effects of the mutiny were discussed in the Goan records much later; these retrospective accounts included Cunha Rivara’s analysis of the early nationalist movement, “Conspiração dos Pintos”; see J. Heliodoro da Cunha Rivara, A Conjuração de 1787 em Goa e Várias Cousas Desse Tempo: Memória Histórica (Nova Goa: Imprensa Nacional, 1875).
10. AHU, SSI, sala 12, março 1987, Relatorio pertencente ao anno de 1857, Eduardo de Freitas e Almeida.
were obstacles everywhere and, worse, nobody seemed to care whether he
carried out his tasks. More than once he noted that the local authorities,
on whom he was supposed to rely, seemed more engaged in blocking his
work than in promoting it and that this negativity extended to the delicate
issue of smallpox prevention.\textsuperscript{11}

Almeida’s comments seem to exemplify one of the ways in which the
smallpox conflicts epitomize the tensions and dissent in colonial societies.
He tried everything within his means to stop the obsolete “inoculation
with smallpox.” While he tried to promote the Jennerian cowpox vaccine,
variolation pervaded everywhere. That happened especially in the “New
Conquests”—the territories that, a century earlier, had been annexed to
Portuguese-administered Goa—where inoculation was performed by the
Bôtos (pandits) whom Almeida referred to as “gentile priests.” But vari-
olation was also practiced at the very core of the long Christianized Old
Conquests, in the capital, right under the eyes of the Portuguese admin-
istration. To Eduardo Almeida that seemed even more shocking than the
popularity of the practice in the outer, “newer” territories.\textsuperscript{12}

We appear to be considering one more illustration of the conflict
between state-sponsored vaccination and a deeply rooted preference for
variolation. Goa’s particularity emerges here in the indulgence shown by
the local authorities toward people’s preferences. To the despair of Head
Physician Eduardo Almeida, local authorities did not abide by colonial
policy in such matters— they went with the people. This noncompliance
with colonial administrators, so recurrent in nineteenth-century Goa and
so rare in mainstream depictions of the Raj, might be used to reinforce
arguments that refer to Portuguese colonialism as feeble when contrasted
with its British counterpart—but it might also be used as an indicator of
wider processes shared by the entire subcontinent. I will return to this
point at the end of the article. For now, I will examine how far the head
physician’s notes on smallpox deepen and nuance our understanding of
medicine under empire.

Borrowing and Mixing

Drawing on the writings of Almeida and other head physicians, I argue
that the study of smallpox prevention in colonial India reveals more than
tensions, violence, and resistance within empire: it also brings up a whole
other set of practices that involve borrowing, combining, mixing, and

\textsuperscript{11} Ibid.
\textsuperscript{12} AHU, SSI, maço 1987, Oficio de 17/6/1857, from Eduardo de Freitas e Almeida,
fisico-mór, to Manoel Maria Rodrigues de Bastos, presidente do Conselho da Saude Naval
e Ultramar.
hybridizing. The supposedly antagonistic techniques of vaccination and variolation were sometimes combined in idiosyncratic forms. Eduardo de Freitas e Almeida reported on some of them.

During the 1857 outburst of smallpox, the head physician was visited by a few inoculators who asked him for vaccine supplies. He taught them the techniques of vaccination but later learned that they had combined these techniques with elements of variolation. Commenting on that, Eduardo Freitas e Almeida recalled an earlier encounter with another strategy of combining the two opposed forms of prevention: one in which smallpox from human pustules was inoculated into a cow’s nose, and the new “vaccine” was extracted from her teats. The method had been reported to him by a vaccinator/variolator he had met just outside the border. The man claimed to have learned this form of prevention from the British themselves, who were practicing it as they acknowledged the failure of conventional vaccines.13

The head physician had never heard of this method before, but he considered the possibility of investigating its merits through experimentation; unhappily, we do not know whether he ever tried to do so. Nor do we know if it came to his knowledge afterward, via a more official source, that this procedure was considered a form of inducing the vaccine that was occasionally practiced under the British administration. The difference between \textit{vaccinia} in the stricter sense and this sort of vaccine, and the advantages and disadvantages of each, were to feed discussions for many years afterward, albeit in restricted circles. For example, in a lecture in Auckland, New Zealand, in 1891, the British doctor R. H. Bakewell, former vaccinator-general of Trinidad, distinguished “two kinds of vaccination—the one derived from a disease which appears to be a natural disease of the cow and horse—the true Jennerian vaccinia—and the other derived from the inoculation of human small-pox into the heifer or cow”; from those two, he clearly preferred the second as a better prevention device.14

What I would like to stress is that in spite of his engagement with Jennerian vaccination and his explicit rejection of traditional variolation, Eduardo Freitas e Almeida was surrounded by, and had to open his mind to, practices that combined the two methods with the purpose of obtaining the best results.

Background and Sources

At this point, I will provide an overview of the introduction of Jennerian vaccines in Goa and try to understand both the material and political contexts of that process. The scarcity of analytical work means that much must still be drawn from primary sources and from imaginative interpretation of the health service documents.\(^\text{15}\)

The primary sources I use here consist of the health reports sent to the Portuguese administration by the head physicians in charge of Goa. No mere bureaucratic documents, they are rich in detail and provide a commentary on what the colonial regime was and was not, and on what the physicians thought it should and should not be. They sent messages to the Portuguese government about the difficulties experienced by its official representatives in the most basic, task-related aspects of their jobs: they spoke of the absence of resources and lack of support from Lisbon to the distant colonies and of the ambivalence—or, often, plain opposition—shown by local authorities in response to colonial directives on public health.

Perhaps not surprisingly, throughout the first half of the nineteenth century, head physicians expressed a desire to return to Portugal within a couple of years of arrival. For lengthy intervals, the post of head physician was vacant. There were few qualified people willing to take it, and when there was one he found only obstacles instead of incentives. Colonial authority seemed in many instances elusive, something whose existence on paper did not have an actual counterpart on the ground. In a parallel analysis of the workings of the Medical School of Goa, I arrived at a similar interpretation of otherwise incomprehensible ups and downs.\(^\text{16}\)

When not complaining about the lack of resources, health directors did get around to appraising local techniques. Laudatory remarks on variolation were ventured by the head surgeon José António de Oliveira in 1853 and in the 1900 official government report on health written by

---


Vaccine in the Early Years: Optimism, Resistance, and Deception

The introduction of the Jennerian vaccine in Goa reportedly took place in 1802, under the supervision of the recently arrived Portuguese Head Physician António José de Miranda e Almeida and with the assistance of a British East India Company doctor from Bombay, where the vaccine had just been introduced. In 1805, there were testimonies to the efforts of Miranda e Almeida to implement this form of smallpox prevention in his area of jurisdiction. Miranda e Almeida was optimistic regarding the adoption of the Jennerian vaccine by the local population; in spite

17. AHU, SSI, sala 12, maço 1987, Relatório do estado das Repartições de Saúde do Estado da Índia, 11/6/1853, from José António d’Oliveira, presidente da Junta de Saúde, to Ignacio da Fonseca Benevides, Conselho da Saúde Naval e Ultramar; Governo Geral do Estado da Índia, Rafael António Pereira, Relatorio do Serviço de Saúde, Referido aos Anos de 1897–99, 2.ª Parte Epidemia de Variola; Ataque Infeccioso; Defesa Organica e Immunidades (Bastorá, Goa: Rangel, 1900).


19. Pinto, Between Empires (n. 5).

20. AHU, 1.ª Secção. Índia, caixa 409 (1803–1807), Ofício de 15-03-1804, from António da Veiga Cabral to Visconde de Anadia.

of possible adverse effects, its success rate and its convenience had, in his words, persuaded most people to be inoculated by the new product. But his predictions proved to be entirely wrong. He did not win the expected popular approval of vaccines. For years to come, health reports were filled with complaints regarding the difficulties of implementing the procedure.

Miranda, a former lecturer at the University of Coimbra, was one of the most qualified Portuguese head physicians that Goa ever had. However, he had not exactly chosen to go there; he had had to go somewhere to escape a personal scandal back home, and India became a likely destination. He seemed to know little or nothing about the place. His broad predictions about the general acceptance of vaccination were unrealistic and inadequate. His attempts to develop a western-style medical teaching program, aimed at training local students, were also doomed to failure. He started teaching a class at the hospital but did not manage much more than a prelude. In 1804–5, he was already asking his superiors for permission to return to Coimbra, arguing that he was the breadwinner for no fewer than six unmarried sisters there. His demands were not met for many years. Only in 1815 was he allowed to leave.

Against Miranda’s early judgment, variolation was practiced widely for decades to come. The Portuguese authorities expressed their attitudes to that practice in different ways, often—but not exclusively—condemning it. In 1841, the first draft of the rules for a vaccine institute referred to natural inoculation as a despicable technique that could cause death and should not be tolerated by local authorities, under penalty of severe punishment.

A More Benign Look at Variolation

In spite of the derogatory depiction of variolation in the early draft of the rules, three years later, in 1844, the health council described the procedure in objective terms, as “a few inch-length incisions in the skin followed

22. António José de Miranda e Almeida, “Conta do physico mór” (n. 21).
by the introduction of a string soaked in smallpox matter, wrapped for two or three days."26 The document was signed by Dr. Francisco Maria da Silva Torres, the newly appointed head physician. Francisco Torres had arrived in Goa the year before. Like others before and after him, he started his job full of enthusiastic energy and soon abandoned it, bending to the immensity of the obstacles in his way. He sailed back to Portugal in 1849.

After Torres’s departure, and in the absence of an appointed head physician, the Surgeon-General José António de Oliveira took on the interim coordination of the health services and authored a few reports. He had already been involved in the establishment of a permanent bill of rules regarding vaccines. The bill, dated 1846, delegated to the local administrators the task of repressing the popular practice of variolation; local authorities (regedores) should determine the sanctions to be applied to those who violated the law and should also take initiatives to ensure the successful accomplishment of vaccination. Oliveira reported instances in which local authorities were themselves the main obstacle to the success of vaccination campaigns. Their own justification for lack of compliance was that they were not provided with the means with which to achieve their goals. The vaccine institutes of Daman and Diu, for instance, had no serum, while that of Pernem had no physician. But there was also explicit resistance on the part of some local authorities, and not only in the outer New Conquests like Pondá and Bicholim—places where there was little hope that any vaccine campaign imposed by the Portuguese could be successful. Even in the city of Mapuçá, capital of Bardez in the Old Conquests, opponents of the process could be found.27

A few years later, in 1853, still serving as interim head of the health services, José António Oliveira numbered a few factors that contributed to the failure of vaccine implementation in Goa. He underlined the fragilities of local sanitary vigilance; like others, he referred to the lack of administrative and material support. One example was that the physicians in charge of overseeing the outer provinces, which had no resident physicians of their own, were offered a fee that did not even cover their travel expenses.28

26. Francisco Maria da Silva Torres, José António de Oliveira, António José da Gama, João Frederico Teixeira de Pinho, António Caetano do Rosário Afonso Dantas and António José Cardoso, Boletim do Governo do Estado da India, 1844, 13: 2.
In other words, those in charge did not seem to care much whether the system worked. The vaccine commissions that existed across the territory did not work well, either. At best, most people would take the vaccine at their homes, and they would do so only when they feared the proximity of an epidemic outbreak. Some of the official vaccinators had nothing to do beyond keeping the vaccine active in case popular fear of a new epidemic should increase the demand. The vaccine was very slow to gain credibility among the people; “the inoculation with variolic virus” was far more popular.²⁹

Oliveira offers us a glimpse of admiration for traditional inoculation: explaining that “the Gates inoculators use it as a prevention method, mixed with other substances, most often milk,” and that it “produces some pustules and fever with no further accident,” he suggests that “were it not for the fear of causing an epidemic,” which he doubts would ever happen, “those inoculators might be tolerated.”³⁰ He did not see inoculation as a backward, atavistic procedure, but as one not entirely different from what science and medicine supported. His view leaves open the possibility that, were it not for the politics that invoked the interest of public health—as in the concern over a human-induced epidemic—the inoculation procedures might well have been adopted as standard. His ambivalence was to be reproduced, in waves, by some of his successors, although others were more absolute in their rejection of these procedures.

Eduardo Freitas e Almeida: 
Trying to Make Sense of Contradictions

In 1854, the new head physician, Eduardo de Freitas e Almeida, whom we met earlier, arrived in Goa. A summa cum laude graduate of the University of Coimbra, he had practiced in several places and showed himself to be an engaged clinician, a keen observer, and a prolific writer on social topics. He was also a firm believer in the power of the Jennerian vaccine as a means with which to prevent smallpox.

Almeida’s policies aimed to implement the technique and to fight the local preference for the direct inoculation of smallpox. This sounds like the familiar colonial tale in which the head physician, representing imperial power and western biomedicine, tries to curb, either by persuasion or force, a native population attached to its own traditions, rituals, and beliefs. In his 1856 report, Almeida suggested that “persuasion” could

²⁹. Ibid.
³⁰. Ibid.
be a means with which to obtain local acceptance of vaccine, but he also suggested that “energetic measures” should be taken. Violence had actually been used earlier that year, with the help of the governor, in order to “vaccinate an immense number of people, including some Gentios and Boiás,” whom Almeida reported as the most involved in inoculation practices, “either by their religious beliefs or by their limited knowledge.” 31

In his words,

We will start right away with the diffusion of the vaccine, and we have been assisted in this job by the General Governor with his best will, because there has been the need of making use of violence in order to vaccinate this people, to which procedure only some of the Luso-descendants subject themselves.32

But the opposition between the might of the state and a resisting population was not clear cut, for at very heart of the state there were opponents to its policy: “our delegates, and those from the government, are the first supporters of inoculation,” wrote Almeida the following year.33

The head physician had to face not only a population that preferred its own techniques but also an entire bureaucracy that pretended to accomplish his orders while in fact passively and permissively supporting the local ways. Much of that bureaucracy was composed of local Catholics involved for many generations with the Portuguese administration, culture, and religion, from whom all sorts of loyalties were expected. However, on vaccine matters, even some of the health administrators who preceded Eduardo had been more sympathetic to local custom than to the European-style application of the vaccine.

Almeida was open-minded enough to keep an eye on the practices he was supposed to combat and to listen to those who chose to use them. That enabled him to learn that some practitioners from the outer provinces had come out with creative hybrid forms for the prevention of smallpox. In 1857 the físico-mór was visited by some gentios (gentiles, or Hindus) from the New Conquests who asked him for immunization supplies. He had taught them the techniques of vaccination, only to learn not too long afterward that they had mixed smallpox scrap with the vaccine serum

31. AHU, SSI, maço 1987, Ofício de 24/11/ 1856, from Eduardo Freitas d’Almeida, físico-mór, to Ignacio da Fonseca Benevides, presidente do Conselho da Saúde Naval e Ultramar. “Gentios” is here a generic term for non-Christians, whereas “Boiás” implies low caste; it is used in Konkani to designate those who have the task of carrying people: Sebastião Rodolfo Dalgado, Glossário Luso-Asiático (Delhi: Asian Educational Services, 1988 [1919]), p. 134.
32. AHU, SSI, maço 1987, Ofício de 24/11/ 1856, from Eduardo Freitas d’Almeida.
33. AHU, SSI, maço 1987, Relatório pertencente ao ano de 1857, by Eduardo de Freitas e Almeida.
or with cow’s milk, inducing the outbreak of benign smallpox among those who received the “vaccine.” Local administrators had reported with enthusiasm the successful pursuit of the vaccination campaign in the New Conquests. Now, Eduardo Almeida wondered whether they had really been vaccination campaigns or just the introduction of some borrowed vaccine elements into the more entrenched practice of smallpox inoculation (variolation). The question was whether the newly appointed vaccinators were merely practicing the old prevention method under the label of the officially sponsored vaccination, or whether they had invented something completely new.

Almeida’s first reaction to these composite practices was dismissive. They seemed to be just another way of disguising the perpetuation of native preferences for variolation and of coping creatively with mandatory vaccination campaigns. But he nevertheless made a note of what had occurred for future reference. Moreover, he compared what he had learned with his recollection of a similar procedure that had come to his notice in an earlier trip to an area under British rule. In Salachigour, just outside Goa, Almeida had come across a number of local Christians who could speak some Portuguese and were willing to talk to him about several subjects. Among them there was a local vaccinator who held a license that had been issued in 1821. In that license, Almeida read references to vaccination and inoculation and concluded that the vaccinator had been using both techniques, and eventually combining them, for over three decades.34

Almeida’s informant was a culturally composite figure of multiple affiliations. He was a member of the Portuguese padroado and was also a British subject; he was both an official vaccinator and a traditional inoculator. The vaccinator’s fondness (afecto) for things Portuguese led him to share with Almeida the information that the British were reaching a compromise with local procedures of inoculation. Their motives were pragmatic: they acknowledged that their own vaccines often failed. The proof was that vaccination had failed to induce immunity in a number of the British soldiers who had died of smallpox.35

The composite technique described by Almeida’s unnamed informant in 1857 involved the inoculation of benign (or “discrete”) smallpox matter into a cow’s nose and the subsequent use of the pus resulting from the smallpox scars in the cow’s teats as the “vaccine matter”: cow-mediated smallpox, in other words, rather than cowpox strictly speaking. That,

34. Ibid.
35. Ibid.
according to the vaccinator, was the most reliable vaccine, one that was accepted by Hindus and Muslims and one that was truly efficient, for it produced a benign outburst of smallpox that created reliable immunity without killing its subjects.

Almeida took note of this and suspended his judgment until he could find further proof. In his view, if the technique proved to be efficient, it should be adopted by the health services. He would be the first of its supporters. Unfortunately, we do not have further information on this topic. Did Almeida ever try the technique? Did he explore sources of information from the British side? So far I have not been able to shed any light on these questions. His later writings suggest that he distanced himself from inoculation practices in general and increased his support of vaccination, even when it required the use of state violence. In fact, during his mandate, the number of individuals subjected to state-sponsored vaccination increased dramatically. Whereas between 1846 and 1854 there had been 2,125 vaccinated individuals in Ilhas (the capital), 1,725 in Salcete, 549 in Bardez, and none in the New Conquests, between 1855 and 1863 the numbers were 5,178 for Ilhas, 3,358 for Salcete, 2,189 for Bardez, and 613 for the New Conquests.

With time, Almeida became increasingly disillusioned; the prestige of the title of físico-mór had no equivalent power, and he had little support from the central government. His plans for smallpox might have been the pure form of the exercise of imperial power via the use of Western biomedical tools like vaccines—but all around him there were plots and networks that subverted his plans. In his view, everyone in Goa, including those who were supposed to guarantee the colonial order, acted in their own interests and with complete disregard for the rules they were supposed to live by. Even though he did not fully articulate his views into a systematic criticism of the way the Portuguese ran the colonies, the examples he provided in issues of public health suggest that colonial control over Goan society was quite limited. Local authorities were frequently the target of his indignation, but he complained much and in a very direct manner about other things as well, such as the appalling scarcity of resources—how would the Portuguese administration “expect $80,000 to be enough for the purchase of the instruments required to assess and measure the geographical and climatic elements the head physician was

36. AHU, SSI, Maço 1987, Ofício 1860, by Eduardo Freitas e Almeida.
37. AHU, SSI, Maço 1987, Ofício 1863, by Eduardo Freitas e Almeida; Almeida’s efforts to measure the impact of his actions provide a rare case of quantification, more noticeable as there are so few figures for most of the nineteenth-century health services. Another exception is provided in the records under the term of office of Fonseca Torrie, carefully analyzed in Saavedra, “Percursos” (n. 6).
supposed to report on in the yearly health statement for the colony?"  

One decade earlier, Head Physician Francisco Torres had complained about the impossibility of providing accurate reports on climatic elements in the absence of such a basic tool as a thermometer.

Eduardo Freitas e Almeida also detailed some of the other obstacles that prevented him from doing his job. For instance, he could not provide accurate statistics on morbidity and mortality in a place where so many people, obedient to their “Moor” or “Gentile” beliefs, hid sick members of their households from the public eye. According to him, they were even prone to hiding their dead, so that corpses would be burned far from the sight, knowledge, and control of the Portuguese authorities. Obstacles were everywhere, for even the Christians were, so he said, secretly attached to the Gentile mores, and the majority of them would rather consult indigenous healers than Portuguese doctors.

In sum, Goa was far from being an orderly colony, and he had no means with which to make it one. Tired and bitter, he requested a long leave, and Surgeon José António de Oliveira again assumed interim command of the health services. In 1871, Eduardo Freitas e Almeida sailed back to Portugal for good.

Western Medicine, Local Practices

The direction of Health Services was then handed to João Stuart da Fonseca Torrie, who had lived in Goa for some time. Born in the northern Portuguese city of Oporto, with a Scottish father and a Portuguese mother, Torrie differed from his predecessors in a few ways. He had been trained in Oporto’s new medical school, not in the old University of Coimbra; also, he had a more pragmatic take on life. He adapted himself to the lifestyles of Goa and did not ask to go back home. For several generations, he was remembered as a brave man who often had to run all of the health services singlehandedly, to the point of teaching, at times, the entire curriculum of the medical school. His reports refer to a severe

38. AHU, SSI, maço 1987, Oficio de 17/6/1857, from Eduardo Freitas d’Almeida, físico-mór, to Manoel Maria Rodrigues de Bastos, presidente do Conselho da Saúde Naval e Ultramar.
39. AHU, SSI, maço 1987, Ofícios dos empregados, 1840–1868, Ofício de 21/4/1846, from Francisco Maria da Silva Torres, físico-mór, to Bernardino António Gomes, presidente do Conselho Naval Ultramarino; Bastos, “Ensino” and “Medicina” (n. 15).
40. AHU, SSI, maço 1987, Ofício 8/2/1856, from Eduardo Freitas d’Almeida, físico-mór, to Ignacio da Fonseca Benevides, presidente do Conselho da Saúde Naval e Ultramar.
scarcity of means and the usual lack of support; yet he persevered more than he complained.

In my understanding, his appointment (1871–85) coincided with the period when Goa had least support from Portugal, a nation that had no real articulated project for its colonies during those years. Goa was far from being a priority. Interestingly enough, Torrie did not complain, like the former head physician had, about the absence of support. Instead, he coped creatively with the situation and often showed sympathy for things Goan. He did not, however, extend those sympathies toward inoculation. He remained adamant that vaccination was safe and the only way forward.42

His successor, Rafael Antonio Pereira, appointed in 1885, had different views on the issue. Unlike his predecessors, he was a Goan Christian of Brahmin extraction.43 In the past—more so in the seventeenth and eighteenth centuries—native Goans had occasionally been appointed to the post in the chronic absence of qualified Portuguese physicians.44 For most of the nineteenth century, though, head physicians had come from Portugal. Representing the imperial order within the entangled misunderstandings that Goan society was, they had to act—or abstain from acting—accordingly. Rafael Pereira’s take on life was slightly different from theirs, as he was familiar with both worlds and used to coping with the contradictions between them. His training in the Medical School of Lisbon may have turned him into a western-style doctor but had not erased his preference for inoculation. Rafael Pereira was no champion of the pro-vaccine arguments. Instead, he found room to develop pro-inoculation arguments on grounds of its practical and scientific value. He tried to show that inoculation was not entirely different from vaccination. He also tried to build the bridge between European and Asian approaches to immunization. His medical views reflected his own composite Asian and European cultural belonging.

42. Saavedra, “Percursos” (n. 6).
43. In the sixteenth century, local populations were forced to convert to Catholicism and adopted a number of other Portuguese cultural elements, from names to architecture, from language to food habits. Social stratification, however, persisted, and the upper castes (Brahmins and Chardós) remained the local upper strata, sharing more of decision making than was acknowledged by the administration.
From his childhood in Benaulim, Salcete, Rafael Pereira remembered a mass inoculation episode during an epidemic of smallpox. Inoculators had come from the neighboring Carwar, just south of Goa. They inoculated about 800 people, including the most distinguished families; it is very likely that young Rafael and his kin were among them. There had been only one death, and there were no signs that the process might have induced the disease among the healthy. Rafael Pereira referred to inoculation as “pastorean variolic vaccination,” which was very similar to conventional vaccination and was, in its outcome, the most positive and direct prophylactic resource against smallpox. For that reason, he unhesitatingly recommended it to those who preferred that method, as long as it was done within the proper sanitary conditions.45

In contrast with the condescending Eduardo de Freitas e Almeida, who might give the benefit of doubt to local practices until they were understood in terms of scientific concepts and converted to the uses of public health, Rafael Pereira gave full credit to local knowledge and practices. In his view, rather than combating inoculation with smallpox, the medical authorities should domesticate its practice and exercise control over it. The technique itself had proved appropriate. If adopted and controlled by the state, the spread of clandestine inoculation procedures would be avoided.

But this was a short interlude of medical nativism within the Portuguese administration. Even though all the future heads of the health services in Estado da Índia were native Goans, their policies became increasingly pro-Portuguese. Goa-born Miguel Caetano Dias, who took the job in 1902, became the very epitome of the imperial representative; his zeal for the sanitary order seemed to come out of a manual of colonial governance.46

In order to look beyond this apparent paradox, one should analyze the wider political context within which these physicians acted. From one moment to the next, European nations, Portugal among them, were rushing to give shape, backed by hard evidence, to their vaguely defined colonial ambitions.

Rearranging the Colonial Agenda

Rafael Pereira had come to direct the health services of Goa at a threshold moment for European colonial history; 1885 was also the year of the Berlin Conference and the European “scramble for Africa.” Nations that had claims on African territories now needed to demonstrate that they held control over them; for Portugal, that meant a push toward reorganizing the colonial health services that had been until then administered so loosely. Among other measures, the graduates of Goa Medical School were co-opted to serve in Africa. Rafael Pereira developed long arguments about the special skills of Indian doctors and their new vocation as intermediaries between the Portuguese rulers and the African populations. The idea was later adopted by the Portuguese authorities and retrospectively became part of the Medical School of Goa’s narratives of identity.

The late push toward empire in Africa also affected the organization of the colonial administration in Goa. Pereira’s nativist line gave place to a more clearly procolonial medical administration, like that of the Portuguese interim director Cesar Gomes Barbosa, who had no sympathies for variolation. Barbosa’s 1897 health report was all about training Goan doctors in vaccination techniques in British India, importing cowpox lymph, and implementing vaccination throughout the territory.

Miguel Caetano Dias, appointed in 1902, continued the procolonial attitude. Also a native Christian, but not from the elite circles from which Rafael Pereira before him and others after him had come, Dias had fought his way toward social and professional recognition in a highly stratified society. He obtained his degree in Lisbon in 1882, achieved a high mili-

47. Bastos, “Doctors” and “Race” (n. 15).
48. Rafael Pereira was the first to argue that Goans were the ideal mediators for European–African encounters: AHU, SSI, maço 1987, Rafael A. Pereira, Relatório, 30/10/1889. He developed the idea as part of a larger argument in support of the Medical School of Goa at a time when its continuation was being questioned by the Portuguese representatives (see Bastos, “Ensino” and “Medicina,” n. 15).
50. Barbosa was sent to India in the aftermath of the 1895 Marathas rebellions in the New Conquests and was also the author of quite critical reports on the state of the Medical School of Goa. He commented that the government should either change policies and support the school or, otherwise, close its doors: AHU, SSI, maço 1988, Relatório da Inspeção ao Serviço de Saúde do Estado da India, by César Gomes Barbosa 1897.
tary rank, and worked with endless zeal for the colonial health services. His writings are in tune with the official understanding of public health, medicine, and the state. He did not miss one opportunity to condemn the local “atavistic” traditions. His views on smallpox seemed like a synthesis of all that has been said of medicine and empire in India: in his words, “the majority of the people, particularly the Hindus, saw smallpox as a divine entity, or the incarnation of a goddess, named Devi,” and “in spite of the fact that they acknowledge it as a contagious and lethal disease, they do not fear it, nor do they step back: instead, they adore her and give her flowers . . .” The natives’ “unlimited confidence” in inoculation, which “touched obsession,” was asserted as the main reason why the Jennerian vaccine had failed to strike roots among the population. He also argued, based on his own experience of serving for sixteen years in the vaccine department, that

unless the vaccine method exhibits some good results, there is no chance that the people will take it instead of inoculation: the bulk of the population since immemorial times has shown a blind predilection and trust in the inoculation of the variolic virus to the detriment of the Jennerian vaccine, because this goes against their religious beliefs ( . . .) and because they do not believe in its prophylactic efficiency, which is not surprising, for the people, for whom science is still a mystery, can’t be persuaded of the vaccine’s superiority until they see it with their own eyes.

Dias recommended the creation of vaccine parks in different districts so that lymph could be obtained fresh and spread via arm-to-arm vaccination. He knew what a challenge this was to local beliefs about ritual and body pollution. This did not need to be spelled out: everyone knew it. But while the rules of pollution avoidance had been tolerated by the medical authorities throughout the entire nineteenth century—demonstrated by the faculty’s acceptance of student resistance to human dissections—it was time now to cross a new frontier; Goan doctors, more than ever before, were called on to endorse the rationale of western medicine and its public health policies. Dias represented this new position well, and his arguments were developed within the frames of public health and ethics:

51. In 1898, a note by the head of health services, Rafael António Pereira, remarked of Miguel Dias that “His obsession with popularity and his display of deference inhibit him from being a reliable assistant for the maintenance of order and discipline in the establishment”: AHU, SSI, maço 2070, Informações anuais 1856–1907.
52. AHU, SSI, maço 1988, Relatorio do Serviço de saúde, Referido ao anno de 1902, 10/9/1902, by Miguel Caetano Dias.
53. Ibid.
54. Bastos, “Ensino” (n. 15).
was mandatory vaccination a threat to individual freedom, or did it speak louder than individual rights as the protection of the social body?

The Twentieth Century

With the arrival of the twentieth century, the plot of medicine, society, and empire in Goa had changed. In the aftermath of the Berlin Conference and the British ultimatum to Portugal in Southern Africa, the Portuguese government had embarked on the task of empire building in Africa and involved Goan doctors in the process. Ambiguities were put aside, and Goans in the health services now became, in new ways and as never before, a part of the apparatus of a redesigned, expansionary colonial power. From then on, there was little room for indulgent passivity on Goa’s internal frontier. Resistance in the New Conquests was overcome through various strategies that mingled persuasion, mystification, and force.

Those combinations might include arranging for the local gods to speak of the need for vaccination in places of active opposition to it, as was reported by the colonial official in Pernem, Florêncio Mariano Ribeiro. In 1917 he tried to vaccinate the children of Cançarnovem in the midst of a smallpox outburst. He sent a notice to the villagers asking them to gather the children in designated places. When he arrived, however, “not a soul had showed up: neither children nor adults.” The local leaders (Gaokares), after much instigation, came into his presence and reported that there were no children in the village, explaining that pregnancies rarely arrived to term and that, when they did, the children often died of fevers.55 The official did not believe them; when persuasion failed, he resorted to intimidation, threatening to force “all of them, men, women and children,” to go to Pernem in order to be vaccinated. In his view, “the fear of a forced march” produced results “at least convincing them to consult the gods of the Pagoda (temple), something that was done in a highly complicated ceremony.”56 With that strategy, he finally achieved his goal and got the villagers to bring their children:

after some hours the gods consented to come down from their Olympus into the bodies of those individuals . . . and by their mouths they spoke allowing vaccination, as it was reported to me next day. Only after that I was able to vaccinate the forty something children that had been hidden away in places I shall omit to mention.57

56. Ibid.
57. Ibid.
This combination of different techniques of persuasion and punishment seems to have persisted throughout the twentieth century in favor of vaccination and the conventional sanitary order. The colonial state appeared to have been reinforced in health matters as it was on other fronts. However, the adoption of Portuguese authority and rules, as well as the celebrated participation of Goan doctors in the Portuguese colonial health services in Africa, did not mean a full embrace of Portuguese colonial rule; sometimes, the pro-Portuguese, procolonial rhetoric went hand in hand with anticolonial feelings and attitudes, sometimes in the very same individuals. That coexistence allowed for the paradoxical perception, by the Portuguese authorities, of large support within Goa in the last years of their rule (until 1961)—even though, in the same period, there was also strong evidence to the contrary.58

Concluding Remarks

These examples from Goa only partially match the conventional literature about medicine and empire. On occasions, medicine and the colonial state work together harmoniously. Frequently, however, the state has to cope with local customs. Sometimes, original hybrids develop. Sometimes, colonial authorities support local ways in contradiction to their own mandate. At other times, they repress local customs violently. Until the twentieth century, much creative interaction between western and indigenous medicines takes place; there is abundant proof of that for the eighteenth century, some examples for the nineteenth, and signs that the process continued into the twentieth.59

How to account for this originality? Claims about Goa’s exceptionalism are problematic; they may turn into occasional assets for the tourist industry (the suave character of Goa), or they may feed into expanded theories that easily blend with stereotypes and feed political ideologies. Such was the case with Freyre’s Lusotropicalism, which theorized that the

58. The secret report written by the geographer Orlando Ribeiro after his mission to Goa in 1956, under Salazar, clearly stated that Portuguese rule in India at the time was experiencing many problems; Orlando Ribeiro, *Goa em 1956: Relatório ao Governo*, org. S. Daveau, pref. F. Rosas (Lisboa: CNCDP, 1999). Government policies, however, maintained Goa’s colonial status as a matter of imperial pride, increasing the anachronistic character of Portuguese colonialism in the twentieth century; see Maria Manuel Stocker, *Xeque-Mate a Goa* (Lisboa: Temas e Debates, 2005).

59. Walker “Remedies” (n. 44); Bastos “Medical Hybridisms” (n. 15).
vocation of the Portuguese colonizers was to mix with local peoples and produce hybrid cultures.  

A different sort of argument depicts the Portuguese empire as feeble, or as representing “uneconomic” colonialism, as suggested by Hammond for the Portuguese empire in Africa; along the same lines, Pearson refers to Portuguese colonialism in nineteenth-century Goa as *opera buffa*—a joke. Better than Lusotropicalism, the idea of a feeble colonial power worked for me in an earlier phase of my research; it seemed to explain why the colonial health services seemed so loose and unsupported in the nineteenth century, whereas in the twentieth century projects for Africa brought Goa and its doctors into the picture. And yet it echoed a deficit model, one that stressed absences and weaknesses in contrast with an ideal type of the “right” exercise of power, agency, and project.

As I see it now, the problem lies less in Goa’s exceptionalism and more in the implicit reference to a model of a colonialism largely inspired by a depiction of a homogeneous Raj with a clear opposition between colonizers and colonized. In Goa the opposition between rulers and ruled was not that clear. It was often quite confusing: colonial authorities complained that their own representatives blocked the way to the exercise of power. The development of vaccine programs was no exception to that tendency. Does that mean that Goa was an exceptional case of noncolonialism, or feeble colonialism, where variolation displaced vaccination for most of the nineteenth century? Or, instead, that this was an extreme case of a variation that better characterizes South Asia at the time?

If we move away from a static depiction of the Raj, one in which the vaccine was everywhere promoted by the colonial state against a people who praised Sitala and resisted by choosing variolation, and we adopt a more nuanced understanding of a heterogeneous place where colonial and local


63. I am indebted to the discussions held at seminars where this material was first presented, particularly at the Casa de Oswaldo Cruz, Rio de Janeiro; special thanks to Marcos Chor Maio for his remarks.

64. Although no single author promoted such simplified view, the works of Apffel-Marglin, “Smallpox” (n. 1), Kumar, *Medicine and the Raj* (Delhi: Sage, 1998), and even Arnold, *Colonizing*, (n. 1) are often—albeit inappropriately—used as sources for that sort of dualism. Recent theorization about agency within colonialism has allowed a more complex understanding of the contradictions involved in every issue, including smallpox prevention.
authorities engaged in different modes of prevention, adopting one or the other according to the situation, then Goa’s particularities no longer seem so exceptional. They emerge instead as yet another example of combining the two techniques in order to maximize prevention. In that sense, Goa prolonged the diversity of preventive forms throughout the subcontinent. Rather than an exception, we should conclude, Goa’s case is the confirmation of a diversity that has somehow been eclipsed in many historical accounts.

The fractures within the exercise of colonial power in India are well documented by the analysis of Bhattacharya, Harrison, and Worboys, which stresses the agency of the different social actors involved in the plot of colonialism and medicine, one that accounts for many layers of authority, interaction, and collision. The study of multiple sources and places, as opposed to the focus on specific regional administrations, replaces the monolithic view of colonial power to generate a picture of heterogeneity and fracture and provides a new tool for the interpretation of Goa’s material. The point is no longer about the contrast between one form of administration and another or about the difference between the British way of implementing medicine and hygiene as a means of control and the Portuguese way of not doing so efficiently. The fact is that nineteenth-century Goa, despite being administered by the Portuguese, was one region of India, like the several other regions across the subcontinent. Once we understand better the variety of what went on at ground level, we may see more clearly the actual unfolding plots in Goa as part of that diversity. After we refocus on local agency and local plots, colonial governance can be interpreted as a fraction of a broader context of multiple coexisting projects and actions that interacted with one another in different modes, and often through misunderstandings. As the study of smallpox prevention so well illustrates, those different modes included violence, brutality, resistance, but also integration and cooperation—and, quite often, the complex negotiation of differences.

cristiana bastos is an anthropologist (CUNY 96) based at the Institute of Social Sciences, University of Lisbon. Her research interests include health, environment, history of medicine, colonialism, transnationalism, science & society, and the politics of knowledge. She is the author of Global Responses to AIDS: Science in Emergency (Indiana University Press, 1999) and several articles on the anthropology and history of medicine.

65. Bhattacharya, Harrison, and Worboys, Fractured States (n. 1).