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Gyan Prakash

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Science “Gone Native” in Colonial India

IF THE EMERGENCE OF SCIENCE in the late nineteenth century as a sign of Western power constituted the “native” as an object of scientific discourse,¹ the enactment of this process displaced the representations—Western science versus “native superstition”—of colonial domination. In this essay, I explore such displacements in British India, tracing how the deployment of science to appropriate (normalize, make appropriate) India also produced “inappropriate” transformations. I examine these “inappropriate” transformations in the functioning of museums and exhibitions as sites for representing science in British India during the late nineteenth and early twentieth centuries, arguing that the staging of science also enacted other performances.

A classic illustration of how colonial discourse dislodges its constitutive oppositions in the process of bringing them into existence is Rudyard Kipling’s novel *Kim* (1901). The novel opens with young Kim O’Hara “astride the gun Zam-Zammah, on her brick platform opposite the old Ajaib-Gher—the Wonder House, as the natives call the Lahore Museum.”² The Zam-Zammah, an eighteenth-century cannon, had lost its military use by this time, but not its symbolic value: “Who hold Zam-Zammah, that ‘fire-breathing dragon,’ hold the Punjab; for the great green-bronze piece is always first of the conqueror’s loot.” As Kim sat astride the cannon, kicking an Indian boy off it, he did so as a conqueror for, as Kipling writes, “the English held Punjab and Kim was English.” But how is Kim’s English identity established? Kipling tells us that Kim’s mother, whose racial identity remains unmarked, had been a nursemaid in a colonel’s family and had died of cholera when Kim was three, leaving him in the care of his father, Kimball O’Hara. A sergeant in the Irish regiment of the British army in India, the father took to drink, drifted into friendship with a “half-caste woman” from whom he learned the joys of smoking opium, and “died as poor whites do in India.” It was from this “half-caste” woman who raised him that Kim discovered that he was English, as she, confusedly remembering the sergeant’s prophecies in his “glorious opium hours,” told Kim that everything would come out all right for him: “There will come for you a great Red Bull on a green field, and the Colonel riding on his tall horse, yes, and—‘dropping into English’—nine hundred devils.”

Such was the fabulous tale of Kim’s origins and the indeterminate process by which an English identity came to determine him. Kipling at once avows and

disavows these uncertain and hybrid sources of identity and authority when he asserts: "Though he was burned black as any native; though he spoke the vernacular by preference, and his mother-tongue in a clipped uncertain sing-song; though he consorted on terms of perfect equality with small boys of the bazaar; Kim was white."³ Obvious and easy though it is to see how *Kim* asserts racial polarities, it is equally significant to observe that these oppositions are rendered profoundly enigmatic in the process of their formulation. Thus Kim's whiteness does not stand separate from his blackness but is bleached from his "burned as black" skin. So immersed is the formation of Kim's racial identity and authority in difference—whiteness formed on the borderlines of black and white, fact and fable, English and the vernacular—that liminality marks the emergence of a powerful colonizer-colonized hierarchy. Produced in liminality, the relationship between these categories is transformed; the imbalance of power between the white and the black does not disappear but acquires a different balance after the two have been imbricated.⁴ As Kipling's text produces the colonizer from the colonized, we witness the renegotiation of the oppositional relationship between black and white as these terms emerge in the process of denying and displacing their status as self-contained, originary identities.

The history of science staged in museums and exhibitions in British India also bears witness to the ambivalence produced by colonial discourse in its enunciation—that is, in signifying cultural difference, categories, meanings, and identities. This process of enunciation is always ambivalent because cultural representation is signified in difference (as in the case of Kim's whiteness)—because the subject of representation (the West, science, the "native") is always different from, and can never contain and control, the act of its signification. Thus, there exists a disjuncture between meanings articulated and the processes and conditions that make their articulation possible. In the colonial context, these enunciative disjunctures took on an added meaning not only because Western science was represented in "native" objects, but because the representation of science as Western was expected to emerge from the placement of "native" objects before "native" eyes as well. Such was the enunciative split between the subject of representation (Western science) and the process (hybrid, differentiating) by which it was signified. As a result, neither the status of science as Western nor its separation from the Indian could be maintained—European knowledge and institutions emerged pursued by the shadow of its colonial birth. Just as the colony disclosed that whiteness was bleached from the "burned black" skin, it also highlighted that the representation of science as Western was produced in the process of science "going native." With the binary structure—scientific/unscientific, European/non-European, colonizer/colonized—of colonial knowledge and power displaced, an Indian elite could emerge as knowing subjects neither blinded by "superstition" nor endowed with a scientific gaze but with another sight. The subalterns, too, made their appearance in gaps opened by displacements and

rearticulations produced by the performance of science. But they appeared menacingly in the discourse, stereotyped as ignorant and unteachable because their “inappropriate” reception of science, drawing on “improper” mixtures of objectivity and wonder produced in museums and exhibitions, threatened the authority of oppositions sacred to the colonial project. In the emergence of the subaltern, then, there appears another, “third” view of the performance of colonial science—one that addresses the general issue of how the staging of science realigned colonial categories.

The Discourse of Colonial Science: Classification and Function

To the British, India was an ideal *locus* for science: it provided a rich diversity that could be mined for knowledge and, as a colony, offered the infamous “elbow room” for an unhindered pursuit of science.⁵ By the late nineteenth century, this sense of an unbounded opportunity drove the establishment and expansion of museums and exhibitions.⁶ Equally important in the rise of these institutions was the conviction that India needed a new form of knowledge. The British stated the matter plainly in 1874:

Local officers must be able to recognize with precision the various grains and other products of their districts, to enable them to deal with agricultural statistics in an intelligent manner. At present it is almost ludicrous to observe . . . how often the same things are called by different names, and different things by same names.⁷

To know was to name, identify, and compare—this was the frame in which the question of understanding India entered the discourse of colonial science. Museums were valuable because they provided an order of things by naming, classifying, and displaying Indian artifacts.⁸ In this respect, museological practice differed from cabinets of curiosities: unlike these cabinets, museums organized objects to make them speak a language, reveal an order. From this point of view, the Oriental Museum of the Asiatic Society, founded in Calcutta in 1814, which was little more than a warehouse of rare objects, came to be seen as inadequate by the 1850s.⁹ Persuaded by the society’s argument that the existing separation of collections into detached parts robbed them of their scientific value insofar as it did not make visible “that series of links which actually exists in Nature,” the government established colonial India’s largest and most important museum, the Indian Museum, which, housed in a new building, opened in 1878 to the public in Calcutta.¹⁰ The foundation of the Madras Central Museum has a similar history. Originating in a storehouse of curious objects, it was established as a museum in 1851 and began to function systematically after 1885 when Edgar Thurston was appointed as its first full-time superintendent. Thurston remained in charge until 1910, expanded the museum greatly, and became a major colonial

ethnologist who pursued his special interest in anthropometry rather unusually; he kept his calipers and other measuring instruments handy, using them on native visitors to the museum—sometimes paying them, sometimes not.¹¹ A number of other significant museums were established during the second half of the nineteenth century, making them ubiquitous in urban India by the end of the century.¹²

As museums spread and expanded their collections, the stress on natural history, classification, and re-presenting the order of nature persisted.¹³ This natural-history vision proved to be enduring because geological and natural history collections were the predominant concerns of the older and larger museums from their inception. But more important in this respect was the colonial conception that India was close to nature: its inhabitants lived close to the soil; it was home to numerous “tribes and races”; and the state of knowledge was chaotic—“same things are called by different names, and different things by same names”—requiring persistent classification.

If colonialism amplified the importance of classification and natural history in the organization of museums, the imperial connection was visible also in the significant role given to order and naming in provincial and local exhibitions throughout India during the same period. The link between classification and colonialism had also marked the organization of objects at the 1851 Crystal Palace in London.¹⁴ Local exhibitions in India originated in the 1840s to prepare for this event, but they acquired a momentum of their own in subsequent decades. As instruments for promoting commerce and advancing a scientific knowledge of economic resources, they brought artifacts into colonial discourse as classified objects. The emergence of these artifacts as objects of discourse, however, entailed the authorization of colonial officials as experts responsible for collecting information from “native informants.”

A general list of Sections was made in advance, and in every district visited, at a meeting of cultivators, called whether by the District Officer or an important zamindar [landlord]; a special list was prepared in accordance with the general list of agricultural articles of special value for that district. In some districts, as in Burdwan, Bankura and Murshidabad, Kabi-rajés [indigenous herbalists and healers] were also consulted. The list so made out was made over to the District Officer or to the zamindar concerned, and things were collected by actual cultivators and others, and sent to the Exhibition.¹⁵

If one aim of colonial pedagogy was to instruct peasants by exhibiting their products and knowledge, organized and authorized by the science of classification, its other aim was to render the principle of function manifest so that it could be applied to improve production. Indeed, the organizers of the Allahabad Exhibition of 1910–11 stated that the exhibition’s purpose was to instruct viewers in different methods of production and in the functioning and benefits of machines.¹⁶ Thus, while a classificatory order emerged in the distribution of spaces and objects into discrete “Courts,” exhibitions stressed the principle of

function.¹⁷ Function as a category of knowledge on display grew rapidly in importance soon after exhibitions made their appearance in the mid nineteenth century. Agricultural exhibitions, in particular, became a regular feature of the rural landscape.¹⁸ Some of these were initiated locally and grafted onto traditional fairs.¹⁹ In addition to such local events, provincial and international spectacles were also staged, such as the 1883 Calcutta International Exhibition.²⁰ So important had these spectacles become by the end of the nineteenth century that even the Indian National Congress, the foremost nationalist party, joined in by organizing, starting in 1901, an industrial exhibition to coincide with its annual meeting.

Organized with a great deal of pomp and show, exhibitions were successful in drawing a large number of visitors.²¹ For example, the Nagpur Exhibition in 1865 reported 30,000 visitors over eight days; 50,000–60,000 visited the Fureedpur Exhibition in Bengal over eight days in 1873; and a million visitors went to see the 1883 Calcutta International Exhibition.²² Museums, though sober and somber, were also successful in this respect. Between 1904 and 1914, the Indian Museum in Calcutta drew at least 503,000 visitors annually, and as many as 829,000.²³ The Madras Central Museum was equally successful, prompting a proud Edgar Thurston to compare favorably the number of visitors to the Madras Museum to that of the British Museum.²⁴ These numbers indicate the measure of success that colonial science had achieved in its pedagogical project. But what happened when Western science, embodied in native material, was staged before an overwhelmingly native audience?

The Liminal Man

As colonial discourse assembled and staged India as an object of the sciences of naming and function, it also created a place for that which it sought to displace; indigenous artifacts and “tribes and races” emerged in their “native” particularity as objects of scientific discourse. The enunciation of colonial science, therefore, was a profoundly ambivalent process that, while formulating scientific knowledge, articulated Western science with “native” objects.

The liminality enacted in the performance of colonial discourse can be seen in the science of man as it emerged in the activities of the Royal Asiatic Society of Bengal. In 1866, the society informed its members that the curator of the Indian Museum had issued a circular soliciting the assistance of the colonial administration in the collection of human crania for the museum’s ethnological section, and that his request had met with a favorable response. The society had received some contributions from private donors, and several sources had promised further aid.²⁵ But the collection of skulls presented problems. One could buy skulls, as one ethnologist did when he persuaded an Andamanese widow to sell for one

rupee the skull of her dead “aboriginal” husband that she had been wearing “as a sort of a locket”; but individuals could have a “not unnatural prejudice” against parting with their crania, and the “possessors of interesting skulls might not be willing to let us examine them, while still on their shoulders.”²⁶ An alternative, superior on both practical and scientific grounds, was suggested by Dr. Frayer, professor of surgery at the Medical College in Calcutta. In a letter to the Asiatic Society, he argued that while the display of crania was valuable, it “fell short of the advantages to be derived by anthropological science from a study of races themselves in life.”²⁷ Thus arose the idea of assembling for display “races” found in and around Bengal and other provinces at various local exhibitions, leading up to an ethnological congress of all the races of India.

Endorsing this proposal, George Campbell recounted being “much struck by seeing men of most interesting and curious races carrying things down to the Punjab Exhibition two or three years ago; the men, who were *not* to be exhibited, seemed to me much more curious than the things they were taking to the exhibit.”²⁸ Persuaded by Campbell, the Asiatic Society proposed to the government that an ethnological congress be held as a “fitting adjunct to the proposed General Industrial Exhibition of 1869–70.”²⁹ Discussions at the society’s meetings now centered on practical aspects of the proposed exhibition. Campbell thought that an “exhibition of the Aborigines would be the easiest thing in the world,” and that “as they are such excellent labourers, they might be utilised as Coolies to put in order the Exhibition grounds at certain times, while at others they take their seats for the instruction of the Public.” Accordingly, he proposed that

an Ethnological branch should be added to the next Agricultural Exhibition, in which, without in any way degrading men and brethren to the position of animals, opportunity should be given for studying man at least to the same extent to which animals are studied; a study, which, in the case of humans, should extend to language and mental qualities, as well as to physical qualities. I would engage a suitable number of individuals of pronounced type, as Exhibitors on a suitable remuneration. I would erect a sufficient number of booths or stalls divided into compartments, like the boxes in a theatre or the shops in a bazar; I would arrange, that at certain hours, on certain days, the Exhibitors, classified according to races and tribes, should sit each in his own stall, should receive and converse with the Public, and submit to be photographed, printed, taken off in casts, and otherwise reasonably dealt with, in the interests of science.³⁰

Unlike exhibits in museums, living exhibits, suitably framed in classified stalls, could talk to visitors; they could be observed in motion, as functioning objects. Insofar as such an exhibit offered an understanding of life itself, a better breeding of “man” became realizable:

I hope, I need scarcely argue, that a movement of this kind is no mere *dilettantism*. Of all sciences, the neglected study of man is now recognised as the most important. The breeding of horses is a science; the breeding of cattle is a science; I believe that the breeding of short-horns is one of the most exciting of English occupations, but the breed of man has hitherto been allowed to multiply at hap-hazard.³¹

This “hap-hazard” multiplication was evident, according to Campbell, in miscegenation. “The world is becoming more and more one great country; race meets race, black with white, the Arian with Turanian and the Negro; and questions of miscegenation or separation are very pressing.”³² By providing the means for observing and understanding separate and mixed races, living exhibits held out the possibility of envisioning a more scientific breeding of man to replace and reorder the chaos of miscegenation—such was the heady lure offered by the science of life. Given such high stakes, nothing was too much to offer at the altar of science. When asked how much clothing was to cover these exhibited “wild creatures,” Campbell replied:

With respect to clothing, I would only suggest that I think we should prefer to have them in their native and characteristic shape. . . . As cleanliness comes after godliness, so I think that decency must come after science; at any rate I would only satisfy the most inevitable demands of decency.³³

The Exhibition Committee of the Central Provinces formulated the plan to seize a family of specimens rather than individual samples of “wild tribes,” and to feed and photograph their “biped specimens”; an official from the Andaman Islands, in preparation for the ethnological congress, sent two Andamanese boys with new names—Joe and Tom—to Calcutta, where they sang and danced at a meeting of the Asiatic Society.³⁴ A great deal of ethnological inquiry was carried out by district officers in different provinces, and a sizable number of reports on “races and tribes” accumulated. But by 1868, the plan for a grand exhibition of all the races had been scaled down, and in the end, due to the lack of funds, such an exhibition was held in the Central Provinces only.³⁵

Notwithstanding the whittling down of overly ambitious plans, the case of the ethnological congress of races shows that the staging of the science of man was inevitably “contaminated” by objects in which it inhered. If the placing of “aboriginals” in theater-like stalls was to demonstrate a science of man, how could this science be separated from the mode and means of its performance? The ambivalence of the colonial science of man lay in the fact that it was produced on the borderlines of black and white, the Aryan, Turanian, and the Negro—indeed, on the margins between man and short-horns. Could man produced by fears of miscegenation be anything but a disturbed, liminal category? The traces of such a disturbed category of man are to be found in Campbell’s plea that the human exhibits be “otherwise reasonably dealt with, in the interests of science,” and the embarrassment with which he concludes that “decency must come after science.” Racism, to be sure, is overwhelming in this and other colonial texts; it empowered the colonialist to place the “native” in stalls, interrogate and photograph him, and refer to him as a “biped specimen.” But it was precisely this “biped specimen” who stood for “man.”

The predicament of a racist colonial science was that it could not escape the

liminality produced in its own performance. As the colonizer staged the colonized as man, he disavowed the very racist polarity—European versus “native”—that was the enabling frame of his discourse. Though hierarchized and placed in an evolutionary frame, the “aborigine” emerges not as alien to man but as his kindred. The liminality of such a man was acknowledged in the anxious reference to “multiplication at hap-hazard,” miscegenation, as much as in the embarrassed and inadequate attempt at reasonableness and decency.³⁶ These troubled gestures express the ambivalence of colonial science as it disavowed its avowed polarities in the process of producing an authoritative discourse from unauthorized miscegenations. In the double-speak of science “gone native,” man turned liminal.³⁷

Spectatorship: Science Taken for Wonder

If the re-presentation of objects by museums and exhibitions produced the signs of science going native, the ambivalence of this process could not but affect the projected conception of viewing and the response of the viewers. The problem for museums and exhibitions was how to make objects rise above their concreteness and their “native” particularity to reveal something more abstract and universal. How was a pure order of knowledge to emerge from the objects of “native” provenance and strike the viewer as science? This was a problem that could not be addressed at the level of the re-presentation of objects alone; it required the conception of a viewership that was capable of separating the pure science of classification from the impurity of “same things called by different names,” one that was competent to isolate the science of “man” from the body of “biped specimens.” Thus the eye became responsible for obtaining the scientific knowledge lodged in objects of India’s natural history, and the production and the authority of science became dependent on its visual demonstration.

The eye as privileged means of acquiring and demonstrating scientific knowledge was particularly important for museums in India because most Indians could not read. For illiterate visitors, captions on exhibits were of little use, least of all those written in English, which most museums used. Given these conditions, labeling was a neglected feature of museums; labels were poorly conceived, often wrong, and unimaginative, rendering the techniques of display all the more important.³⁸ The superior standards of display enhanced the importance of visuality in museums as an instrument of education. In the absence of a reading public, the museum could substitute for a book, and the observing eye could stand for the reading eye. So thought Dr. Bhawoo Dajee, a Parsi merchant from Bombay, who, in addressing a public meeting of “Native and European inhabitants” held in 1858 to establish the Victoria Museum and Gardens, said that

to the unlearned especially—and in that class we must include a very great majority of our countrymen—a Museum is a book with broad pages and large print, which is *seen* at least; and by mere inspection *teaches* somewhat, even if it be not *read*.³⁹

According to Dr. Dajee, seeing was a poor surrogate for reading—it was not reading but inspection, capable only of “teach[ing] somewhat.” But poor substitute though it may have been, the presence of a vast number of the “unlearned” left no alternative. Indeed, *visuality* became all the more critical:

The Natives cannot understand a new thing unless it is held up before their eyes with something of a continuous perseverance. The first time they may wonder; the second time they may understand; the third time they may observe with a view to practice.⁴⁰

This was the condition of colonial spectatorship; the “native,” however unenlightened, was necessary for museums and exhibitions so that the superstitious eye could be transformed into one that, with repeated confrontation with scientific knowledge embodied in objects, was capable of understanding.

If the staging of science transformed the Indian viewer from superstitious to wondrous, the context of viewership also displaced the relationship of science to magic. Such a cultural translation occurs in the staging of mesmerism as a science in India during the 1840s. The chief proponent of mesmerism in India was a surgeon in the colonial medical service, Dr. James Esdaile, who was allowed to set up a Mesmeric Hospital in Calcutta as an experiment in 1846, subject to regular inspections by other medical officers to determine the scientific value of mesmerism. The inspecting medical officers concluded that Dr. Esdaile’s claims on behalf of mesmeric science were untenable, but they admitted that the hospital was popular with the “natives” of Bengal because of the existence of “superstition in its widest sense and in its most absurd forms.” Those natives who had “the most implicit faith in witchcraft, magic, the power of spirits and demons, and the efficacy of charms and incantations” believed that Dr. Esdaile had supernatural powers, and the officers reported that “the common name under which the Mesmeric Hospital is known among the lower classes is that of *house of magic*, or *jadoo hospital*.”⁴¹ But how did Dr. Esdaile’s hospital acquire its name as a house of magic, and why did the “natives” believe that mesmerism was magic? It appears that the hospital had acquired the name of *jadoo hospital* because Dr. Esdaile himself used the term *belatee muntur*, “the European charm,” in explaining mesmerism to his Indian medical assistants.⁴²

If the practice of the European science of mesmerism was mixed with the evocation of the “European charm,” how was its scientificity to be established? As Esdaile himself explained, it was the public staging of mesmerism that established its scientificity among both Europeans and Indians.⁴³ At first, he was skeptical of the utility of “public exhibitions for effecting a general conversion to the truth of Mesmerism” and believed that “performers in public are not unnaturally sus-

pected to take insurances from Art, in the event of Nature failing them.” In spite of his “natural distrust of public displays,” however, he consented when senior officials pressured him to stage a show. The performance, held before Europeans and Indians on 29 July 1845, was reported in the newspapers the next day: “The party was very numerous, two steamers having brought the curious from Barrackpore and Calcutta; and there was a large assemblage of the European and Native residents of Hoogly and Chinsurah.”⁴⁴ Before the day ended, Esdaile had impressed the viewers with his many feats: two women who were mesmerized separately in two different rooms displayed identical symptoms of twinkling eyelids, swaying side to side, entranced; mesmeric trance at “long range” was demonstrated on a man, who in his insensible state, evident in his cataleptic limbs, obeyed Esdaile’s instructions, singing “Ye Mariners of England,” “God Save the King,” and “Hey Diddle Diddle”; “sleeping water” was administered (after two clergymen and doctors had observed “water charmed” by Esdaile) to men who turned cataleptic or became somnambulists. Undoubtedly, this European account treated the whole spectacle as an amusing magic show, but it also saw the show as a demonstration of the scientificity of mesmerism. Indeed it was in the public display of its magical effect that mesmerism emerged as science, perched precariously in between cold scientific scrutiny and superstition in its “widest” and “most absurd forms.”

What was true of mesmerism was also true of other sciences. From 1866 until his death forty-two years later, Father Eugene Lafont, a Belgian Jesuit who taught at the Calcutta St. Xavier’s College, instituted and delivered a series of public lectures and exhibitions.⁴⁵ Starting with a simple magic lantern show, he went on to lecture and exhibit instruments on such subjects as the telephone, the phonograph, Tesla’s high frequency currents, X-rays, color photography, and wireless telegraphy. Acknowledged as a promoter of science, he was invited by the Western-educated Indian elite to lecture to its organizations, evoking wondrous response: “The experiments we have seen tonight shew that Truth is stranger than fiction” and that the “wondrous discoveries of Science surpass the wildest dreams of poetry and romance.”⁴⁶ Building on such enthusiastic responses generated by public lectures and demonstration of scientific instruments, Dr. Mahendra Lal Sircar, a prominent Indian promoter of science, aided by men like Father Lafont and assisted by government patronage, founded the Indian Association for the Cultivation of Science in Calcutta in 1876.⁴⁷ While developing into an organization of scientists and promoting professional research, the IACS also arranged public talks by eminent scientists who illustrated their lectures with scientific instruments.

If performance mixed science with magical spectacle, it also enhanced the importance of visibility. Thus, the museums confronted observers with an orderly organization of fossils, rocks, minerals, bones, vegetation, coins, sculptures, and manuscripts. Exhibitions, on the other hand, offered a feast to the Indian eye.

Depending on their scale, they spared no effort to produce an attractive spectacle: ceremonial arches, palatial structures, military bands, lakes, fountains bathed in colored lights, food stalls, wrestling competitions and pony races, and regional theater—all combined to impress the public eye and draw it to agricultural products, manufactured goods, machines, scientific inventions, and new methods of working and living. So central was the idea of dramatic success to exhibitions that when it did not occur, public commentary was sharp. This happened when the Calcutta International Exhibition opened after an evening of pouring rain—a damp beginning compounded by the darkness that the opening ceremony was plunged into when “owing to the wickedness of some wretch the electric wire was cut.”⁴⁸ The *Englishman*, a newspaper always enthusiastic about colonial projects, could not refrain from commenting that the scene was “very sad, the great ceremony was torn to ribbons, the superb ruby velvet canopy was dripping like a drill cloth. . . . Every Court leaked more or less—Victoria a good deal.”⁴⁹ By contrast, the opening of the Allahabad Exhibition of 1910 to 1911 drew ecstatic public praise. *Saraswati*, a premier Hindi literary journal, was moved to describe the layout and exhibits picturesquely, declaring the event a spectacular success.⁵⁰ The *Pioneer*, an English daily, gushed that “sons and daughters of the East and West” greeted the opening of the exhibition with cries of “Kolossal!, Kya ajib! [how amazing], Bápře báp! [akin to O my God], Wah! [splendid], this beats Chicago!”⁵¹

What began as representations of science staged to conquer ignorance and superstition became enmeshed in the very effects that were targeted for elimination. We encounter this intermixture in the museum’s evocation of the awe of the visitors, in the exhibition’s utilization of a sense of marvels, in mesmeric science’s attempt to show magical efficacy, and in the miraculous powers evoked by public demonstrations of scientific instruments. In these representations of science staged in museums and exhibitions, the cold scrutiny of scientific knowledge confronted the magic of spectacles as part of its own process of signification, as difference within itself. The display of scientific knowledge emerged from this structure of difference to face the eyes of the curious, not those of the superstitious: the Wonder House confronted the museum not as its polar opposite but as an interstitial space signifying a half-awake state of comprehension and incomprehension; in the cries of “Kya ajib!” and “Wah!” we do not confront closed minds and blind faith but open minds and the wondrous curiosity of “This beats Chicago.”

The Second Sight

The rearticulation of the science-superstition opposition into a non-binary relationship between wondrous science and knowledge-seeking wonder opened up an ambivalent space for the subjectivity and agency of Western-

educated Indian elites. So long as the propagandizing of Western science was construed as a conquest over Indian superstition, there was no place for these elites. But because the ambivalent functioning of museums and exhibitions reformulated conquest as translation, the Indian elites could surface as subject-agents with, as one text states, “second sight.” The double-edged process that makes this “second sight” possible is ignored in the theory of “second colonization,” which posits that ideologies of modernity and science colonized Indians far more enduringly than military conquest and political domination.⁵² Such an approach focuses primarily on the content of colonial representations, not on the process of their composition and deployment. Consequently, it overlooks that processual and contextual meanings of the discourse cannot be simply read off mimetically in the content of representations. It was precisely between the utterance of the text and the process of articulation, between the representational content and the act of its staging, that the elite found its “second sight.” Having found it, the elite went on to distinguish their visual power from the superstitious eye of the subaltern masses whose education was their task. This became possible because the functioning of museums and exhibitions required that the superstitious eye become curious.

We can observe the emergence of the curious eye of “second sight” in R. B. Sanyal’s *Hours with Nature* (1896), which includes a chapter titled “Round the Indian Museum,” a fictional account of a visit by schoolteachers to the Indian Museum.⁵³ Mr. W., inspector of schools in Bengal, instructs Pandit Vidyabhushan, a Sanskrit grammarian, in a dialogue that opens with the teachers expressing amazement at the sight of zoological specimens:

‘What a variety of forms!’

‘From all parts of the world!’

‘The vastness of the collection is perfectly bewildering!’

‘Not so much as those strange weed-like things,’ said Vidyabhushan, pointing towards some really very plant-like objects kept in cases against the western wall of the hall. . . . Mr. W., who was attentively listening to the conversation and had noticed Vidyabhushan’s embarrassment, explained that though weed-like in appearance they were in reality *animals*.

‘Truth is, as they say, stranger than fiction,’ exclaimed Vidyabhushan.

‘Let us hear something about these strange forms,’ cried many almost in chorus.

‘Well then,’ resumed Mr. W., ‘those weed-like objects are “Zoophytes or Plant-animals,” so called owing to their superficial resemblance to plants.’⁵⁴

The text continues in this manner for several pages, bewilderment and amazement followed by explanation and understanding. The method of comparison and classification is demonstrated, leading to the following:

‘I have been connected,’ said Vidyabhushan, ‘in one capacity or another with the education of children and young men for the last thirty years, and have read and taught a great many things about animals and their ways as related in story and reading books. I know, as every

school-boy knows, that lions and tigers are formidable animals; that ostriches are very large birds that live in the deserts of Africa, and are remarkable for their speed; that elephants are very sensible and amusing to children, and have their uses. But then, this is learning things without method, and is, therefore, of no value. I am so glad that Mr. W. has hit upon this plan of teaching the teachers to value system. In fact, he has given us a *second sight* [emphasis mine]. When I first entered this great hall, I was perfectly bewildered at the vastness of the collection, and had not the least idea in what order and plan they were arranged. I have got at least some notion now of their arrangement, thanks to the interesting demonstrations of Mr. W.⁵⁵

After describing several other occasions of puzzlement followed by Mr. W.'s explanations, the text concludes with Mr. W. stating that understanding nature requires the simplicity and the purity of a child's heart, and an "ear of faith." Vidyabhushan acknowledges the importance of childlike simplicity but adds that "according to our old Hindu idea 'Reverence' is another essential quality for the training of the mind." With this invocation of the "Hindu idea," Vidyabhushan does not dilute difference but affirms it as the basis for negotiating a relationship with "an ear of faith."

As the text sketches and negotiates the relationship of wonder with science, and of childlike simplicity and Hindu reverence with knowledge, it outlines a space for an educated elite, now possessed of the "second sight" and able to absorb Western science. The "second sight" emerges in the process of encountering the objects in the museum, out of the bewilderment poised in between scientific gaze and superstition. The emergence of this amazement and wonder through the performative process is evident from the fact that the text does not attribute them to prior scientific training; the museum goers are described as "school-masters and Pandits," and the principal character is described as "Pandit Jadavchandra Vidyabhushan," a scholar of grammar.⁵⁶ As a grammarian, he presumably brought logic and classification to his understanding of the museum, but this was not the same as the "value system" taught by the museum. In fact, the text invokes the "Hindu idea of 'Reverence.'" Significantly, this "Hindu idea" emerges in the act of learning, even though part of Vidyabhushan's heritage, it surfaces at the museum in the process of viewing objects. Outlined here is the notion of a Hindu conceptual system, or "Hindu science," that is not derived from or opposed to Western science; the "Hindu idea" arises in the process of recognizing the difference of Western science.

It is significant that the text outlines this space of difference in a museum, and the records of several museums also provide evidence that they made room for the educated elite. Almost all museums organized visits of groups of students and teachers to their galleries;⁵⁷ in addition many museums organized regular public lectures. It appears that the Lahore Central Museum was the most active in this respect.⁵⁸ Besides housing the Science Institute and allowing the Society for Promoting Scientific Knowledge to use its lecture hall, the museum also insti-

tuted a series of “Magic Lantern Lectures” in 1892 and 1893, when John Lockwood Kipling reported the purchase and apparently hugely successful use of a magic lantern in a lecture. The topics of these lectures, delivered in both English and Urdu and by both Englishmen and Indians, varied—they ranged from history to science. The best attended lectures were apparently the “Zenana Lectures,” reserved for purdah-clad women, delivered frequently in the 1910s and the 1920s by Manorama Bose, a Bengali Christian woman who taught at the Victoria School, eventually becoming its headmistress.⁵⁹ She belonged to a family devoted to missionary work. Her father had converted to Christianity when, after graduating from the Calcutta Medical College and joining the medical service in Punjab, he came across American missionaries in Ludhiana. One of his four daughters, Manorama Bose was sent to London to train as a teacher in 1884. There she began to keep a diary which records her visits to Kew Gardens, the Natural History Museum, the Crystal Palace, and a demonstration of the magic lantern.⁶⁰ On her return to India in 1886, she learned Urdu, Persian, and Bengali, joined the Victoria School as a teacher, and lectured frequently in the series of the Lahore Museum. Her lectures were not on science, but the combination of lectures on nonscientific issues with scientific subjects appears to have been part of an effort to draw the educated to the museum.⁶¹

The desire to find and include activities that would draw the uneducated was a continuing feature of museums and exhibitions, and it provided the means for marking and separating the elite from the subaltern. We notice this process of marking emerge in Dr. Bhawoo Dajee’s conception of the museum as a “book with broad pages and large print” that taught through seeing, by “mere inspection,” the “very great majority of our countrymen”—“the unlearned.” We catch a glimpse of it again in the response of Bhoobun Mohun Raha and Jadub Chandra Goswami, the two Joint-Secretaries of the Fureedpur Agricultural Exhibition, to criticisms of amusements in the exhibition: “If bands of music and other attraction are found necessary in England, how much more so is something of this sort necessary in this country.”⁶² That this referred not to Indians as a whole but to the lower orders becomes clear when they state, while reporting on the performance of *jatra* (Bengali traditional theater) and “nautches” (dances) during the 1873 exhibition, that these performances were “chiefly for the amusement of the lower classes, who have still a great taste for these things.” The lower classes were not only marked by their taste for *jatras* and “nautches” but were also defined by their poor understanding of scientific agriculture. Thus these amusements were considered justified for the sake of “the improvement of the agriculturists of this Sub-division, who were so much in need of instructions and practical demonstration on scientific mode of cultivation and manuring.”⁶³

The awareness that the subalterns are in need of scientific instruction runs through the writings of the educated elite. It appears, for example, in an article on the Alaska-Yukon-Pacific Exhibition of 1910, published in the Hindi journal

Saraswati. The author, after being struck by the Agricultural Court and describing the demonstration of scientific methods of production, writes of his conversation with a friend:

‘Does not the sight of these things teach a great deal?’ Munshiram said in amazement. ‘Undoubtedly, why not. This knowledge is relevant to farmers. They have gained much by coming into this building.’

‘And then, there is our country where people are living in darkness. The same old ploughs and bullocks. These unfortunate souls believe that fate determines the poor productivity of their soil. They do not realize that their miserable condition is due to their own ignorance. The same land can grow hundred times more if scientific methods were to be employed.’

‘But who will teach them?’

‘Just as governments here spend crores of rupees to teach peasants, so should our governments do.’

I smiled. Munshiram understood the meaning of my smile. He took a deep breath and joined me as we came out of the building.⁶⁴

The admiration for scientific agriculture, the bitter recognition of the Indian peasant’s ignorance, and the smile and the deep breath—these were the gestures and expressions of the discourse in which the elite formed its identity, enlightened unlike the subaltern but colonized like it. This identity can also be seen to come to the fore earlier, in reactions to the 1883 Calcutta International Exhibition. The *Bengalee* welcomed the idea of an exhibition, acknowledged that it could instruct particularly when held on a small scale in districts. But a grand one such as the Calcutta Exhibition ignored the fact that one had to keep in mind the character of the people it was aimed at and the resources they possessed:

If an Exhibition were held among the remote barbarians of the Sandwich Islands, the spectacle would create astonishment, the projector would probably be worshipped as a god—an honour that would perhaps be extended to some of his commodities—but nothing solid or substantial would follow. These barbarians have no capital, and even if their curiosity were deeply stirred, and their inclinations moved, there would be wanting the capital to manufacture.⁶⁵

A similar problem existed in India. Here, too, “artisans and agriculturists will come from the moffasil to see the great Bazar,” and though they would be moved by things they see, nothing could come of it as they were deeply in debt and had no capital. Once again, this commentary bears the imprint of an educated elite distinguishing itself from artisans and peasants (who were seen as similar to “the remote barbarians of the Sandwich Islands”), and pressing its right to speak for the welfare of the subaltern. Eighteen years after this commentary, when the Indian National Congress began to hold industrial exhibitions to coincide with its annual meeting in 1901, this elite emerged, organized in a powerful institution, as a class apart from the subaltern masses, and determined to change them.

Science and the Subaltern

If museums and exhibitions made a space for the emergence of the educated elite from which they could act and speak, what of the subalterns? They did not write books or letters to editors. But the absence of their testimonies is not as critical an issue here as the lack of their positions as speaking subjects. They are spoken to and spoken for. We encounter them in the discourse of colonial and Indian elites as representing the ignorance and darkness the elites wished to remove. What can we read in this process of expulsion from colonial discourse as speaking subjects? What do we make of their presence as bearers of ignorance and “superstition”?

The project of science had begun by targeting the subaltern as the object to be transformed by the exposure to new forms of knowledge. But those defined as ignorant and superstitious could never be fully understood or completely appropriated—for if they ever became fully intelligible and completely assimilable, the project of educating them would have come to an end. Therefore, if the lower classes were silenced or made to speak only through “superstition,” they were also assured an intractable presence in the discourse of colonial science; the discourse had opened an incommensurable gap between elites and subalterns that could never be accurately measured or closed. An acknowledgment of this incommensurability appears in George Campbell’s rueful remarks:

I often stop and look at them [“tribes and races”], and I have tried to make something of them, but they don’t understand me; I don’t understand them; and they don’t seem to realise the interest of ethnological inquiries, so I have not progressed much.⁶⁶

If Campbell’s acknowledgment of the unbridgeable gap between colonial elites and “tribes and races” regrettably accepted the inassimilable presence of subalterns, this intractability acquired a threatening dimension when it was given the destabilizing momentum of rumors. Colonial rulers registered this intractability when, wishing to uplift peasants by dazzling them with agricultural exhibitions, they were rudely shocked by rumors sweeping the Madras countryside. In some districts it was said that the British were plotting a new tax scheme; while the landed gentry and traders cooperated in organizing exhibitions, others, due to their “unconquerable feelings” had “strange notions” such as that the government wanted to identify the best agricultural land and produce so that it could assess higher taxes.⁶⁷ Even more disturbing was the word going around in the countryside of south India during the 1850s that agricultural exhibitions were British plots to convert Hindus to Christianity:

Superstition also lent its aid to fill the cup to the brim, and the most wild and laughably fanciful notions, were in some instances, I am inclined to think, designedly spread and seized by the people, one of which was so original that it deserves mention, *viz.*, that one of the great ends of the Exhibition was to convert the heathen to Christianity, that for this

reason prizes were offered by the Government for the best paddy, that the *whole* in the District might be brought up and the natives compelled to eat boiled rice and become Christians, and that to celebrate the event, prizes were offered by Government for the best beef in the shape of cattle of all sorts, on which the Europeans were to regale at Christmas in token of thanks giving.⁶⁸

We can read the strategy of normalization in references to “superstition” and “laughably fanciful notions.” But this very strategy of showing the far-fetched nature of stories also opened a place for the subaltern, for its agency—rumors “designedly spread and seized”—and for its “original” speech. This contradictory process of denying and acknowledging the subaltern can be observed in Edgar Thurston’s description of his ethnological tours:

The Paraiyan women of Wynaad, when I appeared in their midst, ran away, believing that I was going to have the finest specimens among them stuffed for the museum. Oh, that this were possible! The difficult problem of obtaining models from living subjects would be disposed of. The Muppas of Malabar mistook me for a recruiting sergeant, bent on enlisting the strongest of them to fight against the Moplahs. An Irula of the Nilgiris, who was ‘wanted’ for some ancient offence relating to a forest elephant, refused to be measured on the plea that the height-measuring standard was the gallows. A mischievous rumour found credence among the Irulas that I had in my train a wizard Kurumba, who would bewitch their women and compel me to abduct them. The Malaialis of Shevaroy’s got it into their heads that I was about to annex their lands on behalf of the Crown, and transport them to the penal settlement in the Andaman islands.⁶⁹

While the wry humor of “Oh, that this was possible” and the amused description in Thurston’s prose presents rumors as wild stories of wild people, his retelling of these stories—indeed, the general tendency of colonial officials to retell what they regarded as fanciful—is significant. For the very strategy of defining and appropriating the Other in rumors compels the colonial officials to give life to rumors, to make a place for “absurd” tales. In accommodating them, the elites opened their discourse to the wild contagion of indeterminacy characteristic of rumors, to the menace of their shadowy origins, and to their reckless reverberations once set forth in motion. Registering the threat posed by such escalating indeterminacy, one official wrote that “the most absurd reports were in circulation, no one pretending to know or with whom originating, still they were greedily credited, and the more grossly absurd the report, the more certain was it of belief.”⁷⁰ The panic felt was real enough. Thus, the exhibition in Cuddapah opened with considerable apprehension because the British were unable to read people’s intentions. On the one hand, they expected considerable apathy though not an “intention to defy the authorities,” prompting the British to consider postponing the opening of the exhibition. On the other hand, since defiance was “also stated to be the intention of those inimical to the Exhibition, all thoughts therefore of postponement were abandoned.” Unable to determine whether the “natives” were apathetic or intent on defying the authorities, and choosing to

make a stand, the authorities opened the exhibition on 26 May 1856. In the event, however, officials noted that “nothing was forthcoming save a few cattle.”⁷¹

Anticipating a similar outbreak of rumors due to the impending census operation, Abdool Luteef Khan, an elite Bengali Muslim, recalled the atmosphere created by rumors at the time of the Alipore Agricultural Exhibition in 1864. Among many “absurd and ridiculous stories” there was one according to which the real reason why cattle and horses were required by the exhibition was the outbreak of a war somewhere, for which the cattle and horses would be slaughtered for food or used to transport military stores. These rumors prompted Khan to launch a campaign of education. He issued a pamphlet in Urdu which, along with its Bengali translation, was widely distributed by the government. As a result, he concluded, the “bugbear called into existence by popular ignorance has vanished, and that which was once dreaded is now invited and welcomed.”⁷² It is true that later exhibitions did not record similar outbreaks of rumors, but the subaltern continued to occupy an intractable position in colonial and Indian elite conceptions; if the lower classes did not spread the contagion of rumors, they disclosed bad cultural taste in their predilection for amusements that exhibitions had to provide in order to attract them.

The subaltern also evinced an “inappropriate” attitude toward museums. Colonial officials feared that, because of the popularity of museums with lower classes, the elite had been driven out: “The Indian aristocracy look on a museum as something pleasing to the vulgar with which they are not concerned.” Frequented by the lower classes and the “vulgar,” the museum in India could not be “an institution of education and research.”⁷³ Descriptions of the “improper” appropriation of museums by illiterate Indians, who formed the overwhelming majority of visitors, abound in colonial writings. Apparently, a visit to the museum was a regular feature of wedding ceremonies in Lahore.⁷⁴ In Madras, as also other places, days of the most important Hindu festivals drew the largest numbers of visitors. But contrary to what we may suppose, these visitors did not go to museums to pay obeisance to the statues of deities; at least no such mention is made by any document. Instead, Hindu festivals appeared to have only provided an occasion for festive recreation, which might include a visit to the museum. Describing the day of the feast of Pongal, 15 January 1895, when 36,500 visitors flocked to the Madras Museum, Thurston wrote:

The museum grounds presented the appearance of a fair, occupied as they were by a swarm of natives in gay holiday attire, vendors of sweetmeats, fruit, toys and ballads, jugglers, mendicants and others.⁷⁵

Interestingly enough, when describing what visitors did inside the museum, Thurston does not mention any religious purpose:

For the great mass of visitors to the museums in India, who come under the heading of sight-seers, and who regard museums as *tamasha* [show] houses, it matters but little what

exhibits are displayed, or how they are displayed, provided only that they are attractive. I am myself repeatedly amused by seeing visitors to the Madras museum pass hurriedly and silently through arranged galleries, and linger long and noisily over a heterogenous collection of native figures, toys, painted models of fruit, &c.⁷⁶

Thurston adds that for these uneducated visitors, who called the museum a “stuffing college” and *jadu ghar* (Magic or Wonder House), the main delight offered by the museum was “in the recognition of familiar objects, which they shriek out by name, *e.g.*, *káká* (the crow), *pachi pámbu* (the green tree-snake), *áni* (the elephant), *periya min* (big fish—the whale!), etc.”⁷⁷ When Thurston pulled out his anthropometrical instruments every evening, a crowd would gather to watch him:

Quite recently, when I was engaged in an enquiry into the Eurasian half-breed community, the booking for places was almost as keen as on the occasion of a first night at the Lyceum, and the sepoy of a native infantry regiment quartered in Madras, entered heartily into the spirit of what they called the ‘*Mujeum gymnastik shparts*’ [Museum Gymnastics Sports] cheering the possessor of the biggest hand-grip, and chaffing those who came to grief over the spirometer.⁷⁸

The Signification of Science: An Enigmatic Articulation

It is tempting to see the “*Mujeum gymnastik shparts*” as the price European science had to pay for its implantation in the non-European soil. Indeed, this perspective frames Thurston’s narrative, implying that European discourses, originary and normal in the metropolis, were perverted in the process of their “tropicalization” in the colonies.⁷⁹ Such a view overlooks that the representation of Europe emerged in the encounter with the “native”; it was fashioned in the foreign and exotic material accumulated initially in the Renaissance cabinets of curiosities and later in the burgeoning colonial spoils displayed in European museums and exhibitions.⁸⁰ At issue here is not that the European and the non-European were syncretistically fused or that the two were locked in a dialectic, now to be reversed in favor of the repressed Other to explain the “origin” of Europe. Recognizing that colonial oppositions were enunciated in difference allows us to track the relocation of the binarism which posits that the imperial culture, fully formed in the center, was “tropicalized” as it was diffused in the periphery.⁸¹ I have traced such a relocation in the disjuncture between the representation of Europe as absolute and organic and the unequal and antagonistic encounter with the “native” in which this representation of Europe as autonomous took shape. Imperial discourse disavowed this disjuncture as it denied an intimacy with the “native,” while constituting colonial artifacts as objects of universal knowledge. In Europe, this disavowal took the form of appropriating the “savage” in a narrative of Enlightenment and Progress, articulated

in the language of class, as museums and exhibitions drew the working classes, who were often compared with the exhibited “savages” elsewhere, into disciplinary regimes.⁸²

But if science staged in European museums and exhibitions disavowed the “native” in order to constitute the authority of science in terms of class and disciplines, the colonial “supplement” surfaced forcefully in India. Colonies, after all, provided the infamous “elbow room” unavailable in Europe. It was thus that museums and exhibitions in India remained singularly concerned with science and natural history. But it was precisely in the virgin, colonial space of India that museums and exhibitions as European institutions were forced to confront their articulation with the “native.” As the British staged Western science in Indian material and sought the authority of scientific knowledge in the display of these objects before an Indian audience, the “native” supplement, hidden in Europe, made a forceful entry in colonial discourse. But conceding a place to Indians exposed colonial discourse to an unresolvable dilemma. If Indians, who were objects of knowledge, were recognized as knowing subjects, the very strategy of hierarchizing and displaying them as objects was invalidated; yet the project of science demanded recognition from Indians as knowing subjects. It was thus that “second sight,” Hindu reverence, and subaltern rumors emerged as forms in which Indians found a place as knowing subjects. Even if overdetermined to be less than appropriate, the “native” response could not be ignored. As Thurston described his anthropometrical enterprise turning into the “Muzeum gymnastik shparts” in order to claim the authority of ethnological science, he had to concede a place for the “inappropriate” knowing subjects.

In making room for the “native” and for “inappropriate” forms of agency, colonial discourse produced displacements of its own founding representations; Western science staged in museums and exhibitions was realigned by the structure of difference in which it was articulated. Such a process of transformation contains an account of how the categories of colonial discourse were revised in the process of their historical articulation, urging a rethinking of our customary notion that the colonial discourse of modernity and science produced nothing other than domination. To view colonial modernity in these terms, however, runs the risk of portraying British India as a place scorched by the power/knowledge axis, leaving nothing of its history except the remains of that which was either appropriated or stood resistant to it. Such an understanding fails to consider the performative process in which claims to hierarchical position (science/superstition, European/native, us/them) were signified and institutionalized. Consequently, it cannot track the “inappropriate” realignments and relocations produced in the institutionalization of the European and the “native.”⁸³

In this essay, I have traced “inappropriate” realignments in the very process that institutionalized Western science in museums and exhibitions in India. In such realignments and displacements, distinctions and differences did not dis-

appear into syncretistic acculturation. Difference remained irreducible, but the process of rendering it oppositional produced a contingent and contentious negotiation, a form of “translation” that set binaries into a relationship of mixture and movement. Thus, while the distinctiveness of science was never lost in museums and exhibitions or in colonial writings, the process of articulating it produced splits in science’s identity from which science emerged in a nonbinary relationship with wonder. Indian elites found a place for themselves in this nonbinary relationship, composing their eyes as wondrous instead of superstitious while marking themselves off from the ignorance of the subaltern. As for subalterns, their appearance was disruptive because their presence was registered through their “unconquerable feelings” and their predilection for show and play. While the discourse undoubtedly portrayed the subalterns as unteachable, it also conceded them a stubborn and menacing agency. This agency, however, was also contained by means of the stereotype of the unteachable native because colonial science, unable to determine but compelled to address the subaltern audience, faced viewers who threatened the authority of the science-magic opposition. Like the elite’s “second sight,” the subaltern’s view was also made possible by the enactment of science, but its “third sight” also represented the limits of colonial discourse because it placed science and magic in a relationship of dangerous liminality—a liminality, I have argued, which was a condition of the discourse’s enunciative process. In this process lies the story of how science became a part of a “second colonization” while also being subjected to “second” and “third” sights—therein lies the enigma of science “gone native.”

Notes

1. Michael Adas's *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca, N.Y., 1989), traces the mid-nineteenth-century ascension of science and technology to dominance in colonial ideology.
2. All quotations cited in this essay appear in Rudyard Kipling, *Kim* (London, 1901; reprint ed., Harmondsworth, 1987), 7–9. For a history of the Zam-Zammah and a description of the Lahore Museum, see T.H. Thornton and J.L. Kipling, *Lahore* (Lahore, 1876), 59–60, 62–77.
3. On hybridity, ambivalence, and the disavowal of difference, see Homi Bhabha's “Signs Taken for Wonders: Questions of Ambivalence and Authority Under a Tree Outside Delhi, May 1817,” *Critical Inquiry* 12, no. 1 (1985): 144–65.
4. Homi Bhabha calls this rearticulation of the relationship of power (and knowledge) cultural translation—a contingent equalization of nonequivalent terms that transforms and displaces their relationships and meanings. See his “The Commitment to Theory,” in *Questions of the Third Cinema*, ed. J. Pines and Paul Willemsen (London, 1989), 111–31. Also of relevance is his “DissemiNation: Time, Narrative, and the Mar-

- gins of the Modern Nation,” in *Nation and Narration*, ed. Bhabha (London, 1990), which contains an insightful discussion of cultural difference as an analytic that “does not simply represent the contention between oppositional contents” but “marks the establishment of new forms of meaning, and strategies of identification, through the processes of negotiation where no discursive authority can be established without revealing the difference of itself” (313).
5. Speaking of the opportunity that India offered for scientific inquiry, George Campbell, the governor of Bengal and a noted colonial ethnologist, remarked in 1866: “In fact, it is now evident, that as this country, in a far greater degree than any other in the world, offers an unlimited field for ethnological observation and enquiry, and presents an infinity of varieties of almost every one of the great divisions of the human race, so also there is no lack of able and qualified men to reap this abundant harvest”; *Proceedings of the Asiatic Society of Bengal, January to December, 1866* (Calcutta, 1867), 46.
 6. As one British official put it, museums in India could be better organized to perform these scientific functions, it was believed, than in Europe, “where museums had grown up by accretion of legacies and bequests generally tied up with special conditions”; *Report on the Conference as Regards Museums in India Held at Calcutta on Dec. 27th to 31st, 1907* (Calcutta, 1908), 16.
 7. Government of Bengal, Financial Department (Industry and Science), Proceeding no. 2.1, May 1874, India Office Library and Records, London (IOLR), P/186.
 8. Michel Foucault writes in *The Order of Things* (New York, 1973): “Natural history in the Classical age is not merely the discovery of a new object of curiosity; it covers a series of complex operations that introduce the possibility of a constant order into a totality of representations. It constitutes a whole domain of empiricity as at the same time *describable* and *orderable*” (158). He attributes this possibility for an order, a language, to a gap that opened up between things and words when things seemed to be things in themselves. It was in this gap, arranged in the juxtaposition of objects, that a language murmured, the taxonomic order of natural history made its appearance (129–32). Ken Arnold’s “Cabinets for the Curious: Practicing Science in Early Modern English Museums” (Ph.d. diss., Princeton University, 1991), particularly chaps. 6 and 7, charts this shift.
 9. *The Indian Museum, 1814–1914* (Calcutta, 1914), 1–9 passim; see also S. F. Markham and H. Hargreaves, *The Museums of India* (London, 1936), 123. See O. P. Kejariwal, *The Asiatic Society of Bengal and the Discovery of India’s Past, 1784–1838* (Delhi, 1988), 85, 102–23 passim, for an account of struggles to establish and improve the museum.
 10. Letter from the Secretary, Asiatic Society, 8 October 1858, Government of India, Home (Public), 7 October 1859, no. 49, National Archives of India.
 11. The results of Edgar Thurston’s anthropometric research and ethnographic tours are contained in the monumental *Castes and Tribes of Southern India*, 7 vols. (Madras, 1909), a classic of its genre in Victorian anthropology.
 12. Markham and Hargreaves, *Museums of India*, 13–18. By 1911, there were 39 museums spread all over India. For a list of these, see *The Conference of Orientalists Including Museums and Archaeology Conference Held at Simla, July 1911* (Simla, 1911), 99–115. This figure rose to 105 by 1936.
 13. The stress on natural history and classification emerges clearly in records. See Government of Madras, Educational Department, *Administration Report of the Government Central Museum for the Year 1895–96* (Madras, 1896), appendix E, p. 15; see also Government of India, Department of Agriculture, Revenue and Commerce (Industrial Arts, Museums, Exhibitions), Proceeding no. 6, April 1872, “Précis of the History of the Government Central Museum, Bombay,” IOLR, P/687.

14. See Carol A. Breckenridge, "The Aesthetics and Politics of Colonial Collecting: India at World Fairs," *Comparative Studies in Society and History* 32, no. 2 (1989): 195–215.
15. *Indian Industrial and Agricultural Exhibition, 1906–1907: Catalogue of Exhibits of the Bengal Agricultural Department* (Calcutta, 1907), iii. On the role of Indian officials and landed gentry in organizing exhibitions, see Government of Madras, *Report on the Agricultural Exhibitions in the Provinces in the Year 1856* (Madras, 1856), 41; Moulvi Arshad Ali, ed., *A Report on Pagla Mian's Mela with Agricultural and Industrial Exhibition* (Feni, 1915), 2; and Government of Bengal, Statistical Department (Industry and Science), Proceeding no. 17.1, May 1873, IOLR, P/186.
16. A complete description of the exhibition and the statement of its aims, rendering the stress on function manifest, is provided in Satya Chandra Mukerji, *Allahabad in Pictures* (Allahabad, 1910), 44–50.
17. For the difference between classification and function, see Foucault, *Order of Things*, 217–21, 226–32.
18. Accounts and references to these appear in *Report on Agricultural Exhibitions in 1856*; Abdool Luteef Khan Bahadoor, *Discourse on the Nature, &c., of a Periodical Census* (Calcutta, 1865), vi–vii; and *Report of the Nagpore Exhibition of Arts, Manufactures, and Produce, December 1865* (Nagpore, n.d.).
19. Government of Bengal, Statistical Department (Industry and Science), Proceeding no. 17.1, May 1873. In Bengal, an annual local fair named after a Muslim saint and miracle worker (the Pagla Mian mela or the Mad Saint's fair) and established by the famous Bengali poet and an official in British administration, Nabin Chandra Sen, was turned into an agricultural and industrial exhibition; see *Report on Pagla Mian's Mela*, 1–2; see also Nabin Chandra Sen, *Āmār-Jīban* [Bengali], vol. 4 (Calcutta, 1912), reprinted in *Nabin Chandra Rachnabali*, ed. Sajanikant Das, vol. 2 (Calcutta, 1959), 428–37.
20. "The Calcutta International Exhibition," *Hindoo Patriot*, 10 December 1883.
21. We can gauge some sense of the success that even a local exhibition could enjoy from the following report on the agricultural exhibition in South Arcot in 1856. It states that, after the registration of exhibited articles, at mid-day on February 20th,

the Exhibition was formally thrown open to the public, the signal for doing so being the firing of a salute, on the Collector and the Committee taking their places on a platform raised for the purpose. Upon this the crowds who had been waiting outside for some hours streamed in such numbers that it was no easy matter for the Peons assisted by a Guard of Sepoys to preserve order. The visitors continued to pour through the building until shortly after 4 p.m., when further admissions were ordered to cease. It had been announced publicly that the place would be lighted up in the evening and thrown open to Native females only. A considerable number availed themselves of this opportunity, as the immense crowds during the day had for the most part deterred all but those who had the courage to fight their way in. These evening visitors were not numbered, but those during the day amounted to upwards of 30,000.

See *Report on Agricultural Exhibitions in 1856*, 41–42.

22. Government of Bengal, Statistical Department (Industry and Science), Proceeding no. 17.1, May 1873, IOLR, P/186. For attendance at the Calcutta exhibition, see the *Bengalee*, 15 March 1884.
23. *Indian Museum*, xliii–xlvi. By 1936, the annual number of visitors to the Indian Museum, Calcutta, and the Victoria and Albert Museum, Bombay, was reported to be a million each; Markham and Hargreaves, *Museums of India*, 69.

24. Government of Madras, Revenue Department, *Administration Report of the Government Central Museum for the Year 1894–95* (Madras, 1895), 2. For equally impressive numbers at smaller museums, see *Report on the Working of the Lahore Museum by J. L. Kipling, Curator, for 1892–93* (Lahore, 1893), 1; and *Letter from the President, Provincial Museum Committee, Lucknow, Dated 5th June, 1886* (n.p., n.d.), 4.
25. *Proceedings of the Asiatic Society*, 1866, 5.
26. *Ibid.*, 71. 27. *Ibid.*, 82. 28. *Ibid.*, 71.
29. *Ibid.*, 83–85. 30. *Ibid.*, 90. 31. *Ibid.*, 90.
32. *Ibid.*, 91. 33. *Ibid.*, 188–89.
34. *Ibid.*, 190; *Proceedings of the Asiatic Society of Bengal for November, 1867* (Calcutta, 1868), 157–62.
35. *Proceedings of the Asiatic Society of Bengal, January to December, 1868* (Calcutta, 1869), 29–31.
36. Donna Haraway, *Primate Visions* (New York, 1989), 26–58, also notes the eugenic impulse (brought on by fears of a decadence) in the epistemology and politics of taxidermy at the American Museum of Natural History, New York, but she does not explore the discourse’s enunciative disjunctures.
37. A similar double bind emerges in Breckenridge’s argument that the use of nineteenth-century world fairs by the British empire involved an effort to create a *transnational* culture of the disciplined gaze and aesthetic taste by displaying objects, from colonies such as India, marked by their *national* origins; see her “Aesthetics and Politics of Colonial Collecting.”
38. On labeling and exhibiting, see Markham and Hargreaves, *Museums of India*, 62–66.
39. *Report on the Government Central Museum and on the Agricultural and Horticultural Society of Western India for 1863, With Appendices, Being the History of the Establishment of the Victoria and Albert Museum and of the Victoria Gardens, Bombay* (Bombay, 1864), appendix A, 17.
40. *Report on the Nagpore Exhibition*, 27.
41. *Record of Cases Treated in the Mesmeric Hospital, From June to December 1847, With Reports of the Official Visitors* (Calcutta, 1847), xxi–xxxii *passim*.
42. James Esdaile, *Mesmerism in India and Its Practical Application in Surgery and Medicine* (London, 1846), 49.
43. The following quotations and account are taken from *ibid.*, 251–52.
44. Letter to the *Englishman*, 30 July 1845, reprinted in Esdaile, *Mesmerism in India*, 253. The following account is taken from pp. 253–62 *passim*.
45. The following account of Father Lafont is taken from the biographical sketches in the *Empress* 15, no. 1 (December 1904): 2–3; and “Annals of St. Xavier’s College, Calcutta, 1835–1935,” Typescript compiled by A. Verstraeten, St. Xavier’s College Library, Calcutta.
46. *The Seventeenth Anniversary Report of the Burra Bazar Family Literary Club, Established in 1857, With the Abstracts of the Anniversary Address and Other Lectures* (Calcutta, 1874), 14.
47. For another account of such lectures, see *A Quarter Century of the Mahomedan Literary Society of Calcutta: A Resumé of Its Work from 1863 to 1889 for the Jubilee of the Twenty-Fifth Year* (Calcutta, 1889), 4–10 *passim*. A brief biographical sketch of Dr. Sircar and his role in founding the IACS appears in Rai Chunilal Bose Bahadur, “Science Association and Its Founder,” in *Report of the Indian Association for the Cultivation of Science and Proceedings of the Science Convention for the Year 1918* (Calcutta, 1920), 35–49.
48. *Hindoo Patriot*, 10 December 1883.
49. *Englishman*, 6 December 1883.

50. "Prayag ki pradurshini," *Sarawati* [Hindi] 1, no. 12 (January 1911): 33–36.
51. *Pioneer*, 3 December 1910.
52. The concept of "second colonization" comes from Ashis Nandy, *Intimate Enemy: Loss and Recovery of Self Under Colonialism* (Delhi, 1983).
53. R. B. Sanyal, *Hours with Nature* (Calcutta, 1896), 84–121.
54. *Ibid.*, 86–88. 55. *Ibid.*, 98. 56. *Ibid.*, 84, 87.
57. The annual reports of most museums detail these visits. See, for example, Government of Madras, Education Department, *Administration Report of the Government Central Museum for the Year 1896–97* (Madras, 1897), 2.
58. The following account is taken from the annual series entitled *Report on the Working of the Lahore Museum* (Lahore, 1892–).
59. Manorama Bose, "Notes on Various Subjects," IOLR, mss Eur. 178/72.
60. "Diary of Manorama Bose, 1884–1905," entries for 18 April, 26 May 1884; 25 July, 30 December 1884; and 23 May 1885, IOLR, mss Eur. 178/69.
61. In the 1930s, the Lahore Museum began screening such films as *Automobile (Making a Motor Car)* and *Surfing, the Famous Sport of Waikiki* to attract the uneducated; Central Museum, Lahore, Annual report for 1922–23 to 1936–37.
62. Government of Bengal, Statistical Department (Industry and Science), Proceeding no. 17.1, May 1873, IOLR, P/186. This reply was reinvoled later; see Government of Bengal, Financial Department (Industry and Science), Proceeding no. 3.3/5, March 1876, IOLR, P/894.
63. *Report on Pagla Mian's Mela*, 2. The report also notes that "circus and bioscope performances were given under the denomination of scientific instructive amusement," 12.
64. *Saraswati* 11, no. 1 (January 1910): 26–27 (my translation).
65. *Bengalee*, 17 November 1883.
66. *Proceedings of the Asiatic Society, 1866*, 88–89.
67. *Report on Agricultural Exhibitions in 1856*, 41, 59; and Government of Madras, *Report on the Agricultural Exhibitions in the Provinces in the Year 1856*, vol. 2 (Madras, 1858), 29, 63.
68. *Report on Agricultural Exhibitions in 1856*, vol. 2, p. 51.
69. Edgar Thurston, "Anthropology in Madras," *Nature*, 26 May 1898; reprinted in Government of Madras, Educational Department, *Administration Report of the Government Central Museum for the Year 1898–99* (Madras, 1899), appendix F.
70. *Report on Agricultural Exhibitions in 1856*, vol. 2, p. 121.
71. *Ibid.*, 121.
72. Bahadoor, *Discourse on Periodical Census*, vi–vii.
73. *Conference of Orientalists at Simla*, 117–18.
74. *Ibid.*, 117.
75. *Administration Report of the Government Central Museum for 1894–95*, 1.
76. *Ibid.*
77. *Administration Report of Government Central Museum for 1895–96*, appendix E, 14. A very similar description appears in Markham and Hargreaves, *Museum of India*, 61.
78. Thurston, "Anthropology in Madras," 26.
79. Colonial science, from this point of view, emerges as a bad imitation of science born and developed in Europe. See George Basalla, "The Spread of Western Science," *Science* 156 (1967): 611–22.
80. For the importance of foreign exotic objects in Renaissance England and for their place in the development of museums, see Arnold's "Cabinets for the Curious." Also relevant is Steven Mullaney's "Strange Things, Gross Terms, Curious Customs: The Rehearsal of Cultures in the Late Renaissance," in *Representing the English Renaissance*,

ed. Stephen Greenblatt (Berkeley, 1988), 65–92. For the centrality of colonies in nineteenth-century exhibitions, see Breckenridge, “Aesthetics and Politics of Colonial Collecting”; R. W. Rydell, *All the World's a Fair* (Chicago, 1988); and Paul Greenhalgh, *Ephemeral Vistas: The Expositions Universelles, Great Exhibitions, and World's Fairs, 1851–1939* (Manchester, 1988).

81. For persuasive arguments against such binarisms, see Gauri Viswanathan's powerfully argued *Masks of Conquest: Literary Study and British Rule in India* (New York, 1989); and Sara Suleri's probing *The Rhetoric of English India* (Chicago, 1992).
82. For the politics of disciplinary regimes and class politics, see Tony Bennett's “The Exhibitionary Complex,” *New Formations* 4 (Spring 1988): 73–102; and Eilean Hooper-Greenhill, *Museums and the Shaping of Knowledge* (London, 1992), 167–90.
83. Bhabha's “Signs Taken for Wonders” presents a brilliant reading of such revisions and realignments.

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³ **Signs Taken for Wonders: Questions of Ambivalence and Authority under a Tree outside Delhi, May 1817**

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¹⁴ **The Aesthetics and Politics of Colonial Collecting: India at World Fairs**

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⁷⁹ **The Spread of Western Science**

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Science, New Series, Vol. 156, No. 3775. (May 5, 1967), pp. 611-622.

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