

General Questions

- 1) What are the archives you would use if you were to tell the story of climate history as a history of contrasts within India?
- 2) How might debt impoverish the narrative that these archives create?
- 3) What are the archives that you'd use to tell a history of continuities from India to America? Ex: How does knowledge of the chain of influence from India via the Humboldtian and Brandis-ian traditions of thought – to the thinking of a figure like Samuel Copeland Palmer – change how you think about the relationship between the arboretum and the planetary history of forests?
- 4) What are the stories that might form across *and* between these archives? In what other ways does the progression of this history and this historiography sharpens the questions you might have about climate and government in America?
- 5) The View from Kew: Copeland Palmer's European Sabbatical and the Climate Archives of the British Empire <https://www.kew.org/science/collections-and-resources/collections/archive-collection>
How do the Copeland papers change how you think about the Indian forest archives and vice versa? What are the archives you'd use to tell a history of contrasting fates, with India's forests and Swarthmore's Arboretum as two coordinates of the same global climactic reality?
- 6) From the Pleasure Garden to the Arboretum: Fairchild Ruggles, Islamic Art Spots, Gardens, <https://www.youtube.com/watch?v=xsvE6USHO7U>
- 7) Comets, Birds and Climate Enlightenment: From Mughal India to Humboldt and Brandis Primary Sources and Listening Exercise). How does the history of the pleasure garden, the possibly strange combination of "Science" and fantasy in the Akbarnama's description of the relationship between deforestation and hairy comets, the bird poems of Shah Abdul Latif all explain the different strains of "climate Enlightenment" that Humboldt openly claims to have borrowed from the "Indians"? What is possibly lost in the borrowing? What is possibly created or constructed? How in turn does this change the promise that is contained in the archives of forest history?

Astronomy and Planetary Alignment at 8:30

Further Questions: Please work on these in groups of 2 and submit by 10pm.

Question One: What does the history of colonial forestry – as told by these scholars – change how we think about climate modeling, debt, and justice? For example, how many examples do these readings provide of actual laws that might be used by actual lawyers who are actually fighting cases for climate justice in India, Pakistan and Bangladesh?

Please look at the overview pages of the following and skim the case documents too. And then feel free to keep searching – it’s an incredible database:

<https://climatecasechart.com/search-non-us/>

Rajiv Dutt vs Union of India: <https://climatecasechart.com/non-us-case/rajiv-dutta-v-union-of-india/>

Maria Khan et al versus the Federation of Pakistan: <https://climatecasechart.com/non-us-case/maria-khan-et-al-v-federation-of-pakistan-et-al/>

Question Two: How could thinking about the problem of climate debt and climate justice change how you think about *how* these archives which you’ve found can be used for the purposes of climate justice as framed through debt?

What is a Debt for Climate Swap? <https://www.youtube.com/watch?v=5XPoboROhJQ>

Question Three: How might the archives of colonial forestry be used to clarify the conversation about what can and cannot be modeled – aside from the conversation of what *should* be modeled? What can these archives tell us about what we *can* know about the place of humans in the thermodynamics of deforestation? How does this add to or complicate the conversation we have been having about the pros and cons of using history for climate modeling?

How Deforestation Impacts Life –

<https://www.youtube.com/watch?v=PJdz4gCG6pA>

Question Four: How might these archives empower us to tell new stories about the role of forests in creating the conditions for life and the histories of humans or even “humanity”? In so doing, what are the opportunities that these archives provide for telling a story that actually activates the reader’s or listener’s emotional faculties - fear, hope, compassion, anxiety – in ways that makes the realities of climate history an experience the reader or listener actually has to imagine happening to them? In other words, what do the archives – the stories they contain as suggested by the historians - tell us about the stories that *can* be told in order to create the conditions for climate justice to be literally and metaphorically *sensational* – i.e. intelligible beyond the logics of finance, the kind of knowledge that specifically requires the recipient to imagine the experiences of historical actors living in very different conditions?

-“Where Poetry Meets Resilience,” <https://www.youtube.com/watch?v=eI4yQX0YrcQ>

-Shah Latif’s Poetry about Climate Change, <https://www.youtube.com/watch?v=Rpj-UZ4jLNE&t=19s>

Question Five: What can we take from these readings which would add to this argument about how deforestation impacts climate change? How does the political life of the forest add to the calculation of why and how the climate changes? How Deforestation Impacts Climate Change -<https://www.youtube.com/watch?v=Ai2OIC6rmd8>

Supplementary Materials

Humboldt, Brandis, and the Indo-German American Context

“The lessons of experience ... tell us how often impressions received by the senses from circumstances accidental, have so acted upon the youthful as to determine' the whole direction of a man's course through life ... if I may have recourse to my own experience, and what awakened in me the first beginnings of an inextinguishable longing to visit the tropics, I should name George Forster's description of the islands of the Pacific [sic] ... paintings by Hodge [sic] in the house of Warren Hastings, in London, representing the banks of the Ganges, and a colossal dragon tree in an old tower in the Botanical gardens of Berlin.”

Humboldt was almost certainly referring here to Hodges' paintings of the River Hooghly alongside the Calcutta Botanic Garden. The remarkable significance of this connection speaks for itself

“between 1784 and 1786 the East India Company authorities in London and Calcutta had become increasingly aware of the advantages that might be gained from playing an active role in promoting and investing in crop experimentation and from efforts to transfer new crops and centralise them in botanical gardens in company territories. “

Humboldt, Kosmos

“The first principle of the origin of things, the first principle of all phenomena, was referred to two causest-either to concrete material principles , the so - called elements of Nature, or to processes of rarefaction and condensation , sometimes in accordance with mechanical , sometimes with dynamic views . The hypothesis of four or five materially differing elements , which was probably of Indian origin , has continued , from the era of the didactic poem of Empedocles down to the most recent times , to imbue all opinions on natural philosophy-a primeval evidence and monument of the tendency of the human mind to seek a generalization and simplification of ideas , not only with reference to the forces , but also to the qualitative nature of matter.

In the latter period of the development of the Ionic physiology, Anaxagoras of Clazomenæ advanced from the postulate of simply dynamic forces of matter to the idea of a spirit independent of all matter, uniting and distributing the homogeneous particles of which matter is composed .”

Edward Henry Stanley touring through Sindh in 1852

“There seems to be a wide difference of opinion as the real nature of the Ameer's government. They have certainly never been fairly judged: Burnes was prejudiced, very naturally, by their equally natural dislike to allow him to enter the country: Sir Charles Napier had only one side of the question, and honest as I believe he is, it would be so much to expect that he should acknowledge himself to have been the instrument of

carrying out an unjust policy. Col. Outram and Capt Eastwick again, are partisans on the other side.

“The charge most commonly brought against the Amirs, and which was made use of to excite public feeling against them in England, is manifestly much exaggerated. I mean that which relates to the Shikargahs, or hunting-grounds. It used to be said that they had done like a Norman kings in the New Forest - depopulated districts, destroyed villages, and starved the people for convenience of pursuing their sport uninterrupted. Now all this is a mistake or more. In the first place - there is no article of commerce more valuable than timber in most parts of Scinde. It would be a good speculation, commercially, to turn cultivated land into forest where the latter uses so scarce? That fuel on wood for building purposes could hardly be obtained. We have proved the fact by keeping up the forests which we denounce the Amirs for being made. “But they drove out the people to make the”. Scinde is very thinly peopled, as appears above and if a village were removed from one spot to another en masse, though the act might be arbitrary in our eyes, it would not necessarily produce any suffering. The houses, or rather huts, of the peasantry are so slight and unsubstantial the two or three days labour would replace them. No landlord in England hesitates to transfer a tenant-at-will from one farm to another nearly adjoining for the purposes of throwing a hundred or more acres into one holding. And this is in fact all with which the Amirs are charged..

“As to the tyranny of their government generally, it was undoubtedly the government of a conquering over a conquered ? There is no example in the world of such an administration being as considerate as one which rests on old hereditary occupancy. But not all the Baloochees were recent conquerors. Many of them had had been established in Scinde during more than 100 years. One tribe has been here for more than 300! Nor is it easy to believe that if misgovernment had really been carried to any excess, the whole people would at once have submitted to an equal and rigid law, as enforced by us, with scarcely a sign of discontent. The people, it is true, showed no regret for the fall of the rulers. But should we be regretted, if our empire were overturned in India? Or, nearer home, in Ireland? I have not yet a very decided opinion on the subject, but all I hear and see inclines me to believe that in dethroning the amirs, we have acted on the principle of hanging the criminal first, and trying him afterwards. There is a story told of Sultan... “

“One of Sir Charles Napier’s most original projects was an offer, during the Irish famine, to send over 11,000 tons of grain, at a third of the market price in England. IT was not accepted. He would have taken it as revenue. “

“Sir W. Napier in his history says that leases of 14 or 21 years were given to all who would cultivate land, with exemption from taxes during the first two. The details of Sicndian

administration in this work are tolerably accurate, and with the few notes I have taken, give a sufficient idea of what has been done.”

Dietrich Brandis, April 1883 – The Indian Forester

On the Aravalli Hills in Meywar , where cultivation mainly depends on the water stored up in tanks , the value of preserving the scanty thorny scrub on the hills , in order to regulate the filling of the tanks from rain , is recognised by some of the larger landholders. Nor must we forget that we owe the maintenance of the forests in Sindh and of the rukhs in the Punjab entirely to the action taken by the former rulers ; and that during the first period after the occupation of the country , the action of the British Government has not in all cases been favourable to the preservation of the forests and woodlands in the arid and dry regions of India . Great exertions have , however , been made of late years to make up in some measure for past neglect in this respect, and in the Punjab extensive plantations have been established since 1865 , which now cover upwards of 12,000 acres , the main object in the formation of these new forests being to provide fuel for the consumption of the railways , and fuel and timber for the large towns in that province .

Dietrich Brandis, 1897 – to Gifford Pinchot

It will then be necessary to decide, which forest district should be taken in hand first. It will be best to select a forest district, stocked, partly at least, with marketable timber, so that lumber operations may commence at once. These operations, however, must, as a matter of course, be undertaken very cautiously, at one place only, and they must from the beginning be effectually supervised. They must be regulated by a preliminary rough working plan intended to ensure a sustained, and if possible an increasing annual yield from that forest district. The collection of the data to frame this preliminary working plan will be a difficult business, and will demand the entire services of an experienced forester. It must be done rapidly and cannot be expected in all respects to yield accurate results. The safeguard in such cases is to fix the quantity to be cut annually, or the area to be cut over annually, much below the supposed possibility of the forest district.

Indus Valley Counter-factuals (tbc)

- The Dawn of Everything (Indus civilization), <https://www.youtube.com/watch?v=fyQzn-GVWdA>

- Mark Kenoyer, One Hundred Years of Indus Archaeology, <https://www.youtube.com/watch?v=T10JsyZA7dw&t=12s>

- Mark Kenoyer, The Role of Marine Shell in the Ornaments, Arts and Rituals of the Indus Tradition, <https://www.youtube.com/watch?v=Xs4s4WIPYoQ>

- The Collapse of Indus Valley Civilization, <https://www.youtube.com/watch?v=-HPKs7Y65Dk>
- Sherni, <https://www.youtube.com/watch?v=o2wg-11MWFU>
- Climate Migrants Story from Pakistan, https://www.youtube.com/watch?v=N3g1ZSgcx_8
- The Sunken Kingdom of Krishna, <https://www.gaia.com/video/the-sunken-kingdom-of-krishna>
- Restoration of the Indus River Delta (especially 20-23 on mangroves), <https://www.youtube.com/watch?v=53feflQKrsA>
- Sur Ghatu, https://www.youtube.com/watch?v=Bqr_74kfGK8
- Sur Sarang, https://www.youtube.com/watch?v=JFs_UV0u8J0
- Sur Karyal, Song of the Crane, <https://www.asymptotejournal.com/poetry/shah-abdul-latif-bhittai-sur-karyal/>
- Sur Karyal, <https://pakistanlink.org/Commentary/2022/July22/08/02.HTM>
-