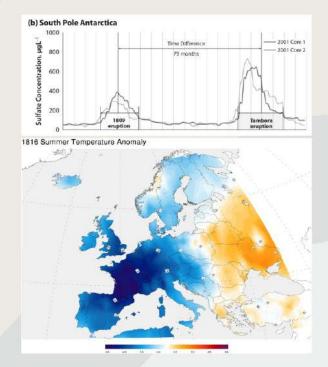


The Little (Volcanic) Ice Age



In June 1816, "incessant rainfall" during that "wet, ungenial summer" forced Mary Shelley, and her friends to stay indoors at Villa Diodati overlooking Lake Geneva for much of their Swiss holiday.



They decided to have a contest to see who could write the scariest story, leading Shelley to write Frankenstein and Lord Byron to write "A Fragment", which Polidori later used as inspiration for The Vampyre – a precursor to Dracula. In addition, Lord Byron was inspired to write the poem "Darkness", by a single day when "the fowls all went to roost at noon and candles had to be lit as at midnight".

1816, the year without a summer

- 6 inches of snow in June
- hard frost on every month
- 3° Celsius on yearly average

WEDNESDAY, June 12, 1816.

The Weather.—The remarkable change of weather, from extreme heat to cold, was as great here as the following paragraphs describes it to have been at the eastward; all kinds of vegetation has suffered, and some plants been entirely destroyed by the cold and frost.



John Constable, The Weymouth Bay (Oct. 1816)

The Climate of London



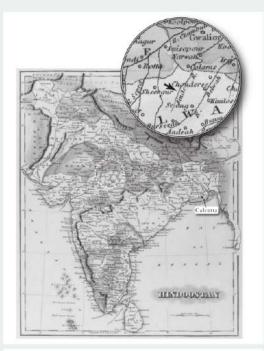
Blue Death in Bengal

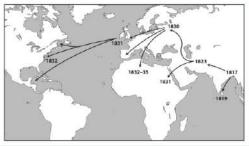
- Cholera and climate change

In 1817, the aquatic environment of the Bay of Bengal had deteriorated radically owing to the disrupted monsoon, a consequence of Tambora's dimming presence in the stratosphere. By a process that remains mysterious in its details, the altered estuarine ecology then stimulated an unprecedented event of genetic mutation of the cholera bacterium.

- The year without a monsoon

Droughts, by increasing the temperature of reduced standing bodies of water and concentrating the bacterial population, promote disease transmission.







The Sorrows of Yunnan

Golden Triangle opium trade is still expanding

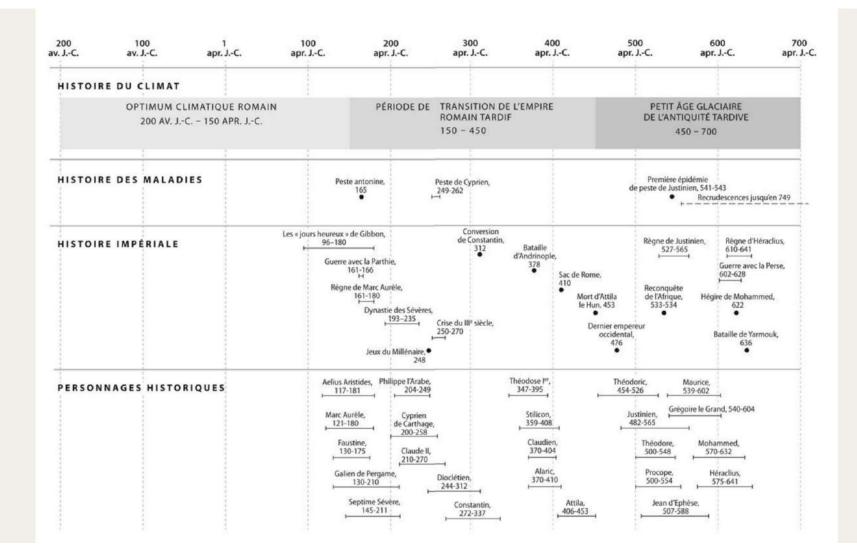
The clouds like a dragon's breath on the mountains, Winds howl, circling and swirling, The Rain God shakes the stars, and the rain Beats down on the world. An earthquake of rain. Water spilling from the eaves deafens me. People rush from falling houses in their thousands And tens of thousands, for the work of the rain Is worse than the work of thieves. Bricks crack. Walls fall. In an instant, the house is gone. My child catches my coat And cries out. I am running in the muddy road, then Back to rescue my money and grains from the ruins. What else to do? My loved ones must eat. There are no words for the bitterness of An empty September. The flood-drowned fields harvest three grains for every ten of a good year. And from these three grains? Meals and clothes till next September.

Inbound and outbound heroin flows in Yunnan province of China

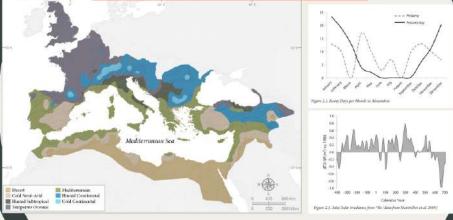
Ch

Li Yuyang, A Sigh for Autumn Rain, September 1815





200 BC - AD 150 The Roman Climate Optimum (RCO)



"If a man were called to fix the period in the history of the world, during which the condition of the human race was most happy and prosperous, he would, without hesitation, name that which elapsed from the death of Domitian [AD 96] to the accession of Commodus NAD 180!"

Gibbon, History of the Decline and Fall of the Roman Empire



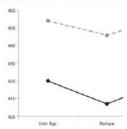
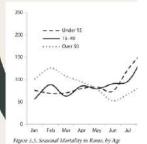


Figure 3.3. Average Femur Length in Italy (mm) (data Cocchi 2008)



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ite Figure 3.3. Acresge Femur Longth in Italy (1100) (data from Gianneschini and Moggi-Cecchi 2008) -- - Under 15 + + + + + + Over 50 e world, happy and Jen Felb Mar Apr May Jun Jul Aug Sep Oct Nov Dec ch elapsed Figure 3.5. Seasonal Mortality in Rome, by Age ommodus Table 3.5 The Epidemiological Factors of the Amurine Plague oman Empire Titel Comart Rain Thatseninine Red Case Fession Rase + ope structure + pathugen kud - medical infrastructure - lack of social bocaldows +/- matrixonal baffering multifarmily housing lack of gents theory

AD 165 **The Antonine Plague**



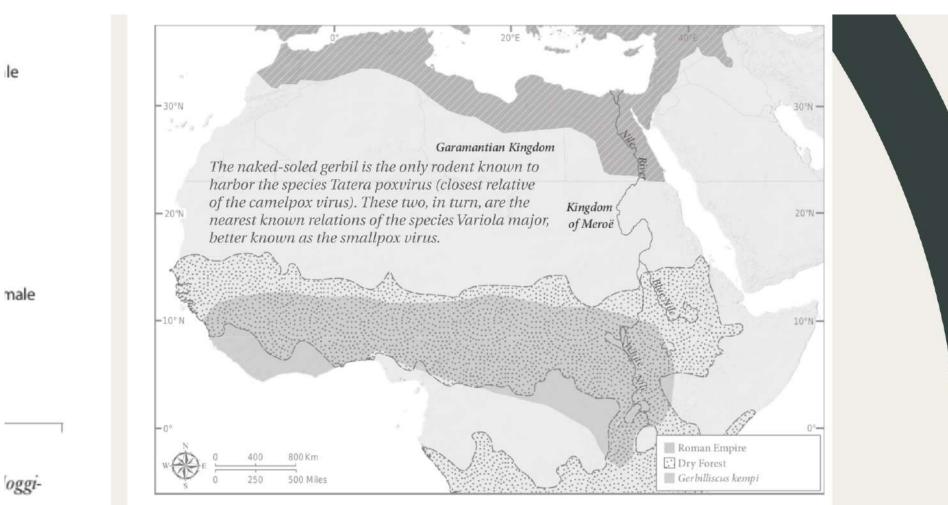
Map 7. Range of Naked-Sole Gerbil



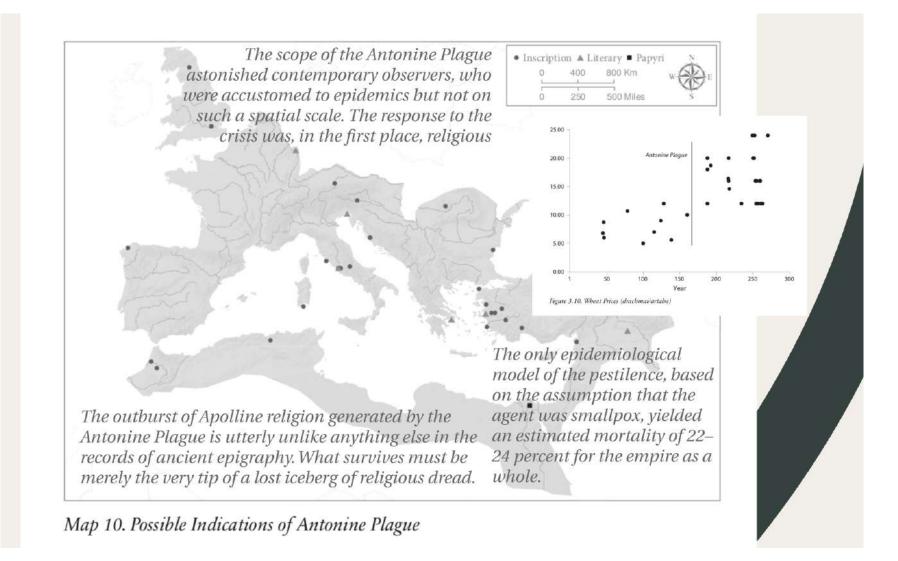
Figure 5.2. Number of Date-of-Dauth Inscriptions by Year

The Plag

Map 19. The Itinerary of Y. pestis: From Polusium to Pandemic



Map 7. Range of Naked-Sole Gerbil



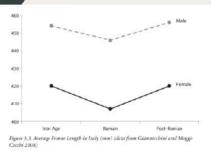
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Table 3.5 The Epidemiological Factors of the Antonine Plague

Total Contact Rate	Transmission Risk	Case Fatality Rate
+ transportation networks + population density + multifamily housing + lack of germ theory + medical infrastructure + lack of social learning	perhaps ~.70 for <i>Variola major</i>	 + age structure + pathogen load - medical infrastructure - lack of social breakdown + / - nutritional buffering

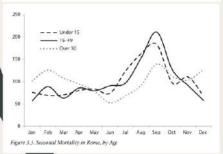
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AD 165 **The Antonine Plague**

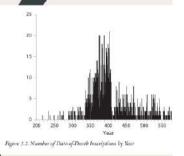




Map 7. Range of Naked-Sole Gerbil







The Plag



Map 19. The Itinerary of Y. pestis: From Polusium to Pandemic



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AD 541-... The Plague of Justinian

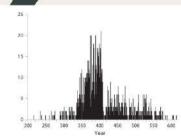


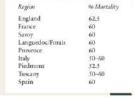
Figure 3.2. Number of Date-of-Death Inscriptions by Yes



Map 19. The Itinerary of Y. pestis: From Pelusium to Pandemic

The Making of a Murderer: A Natural History of Yersinia pestis

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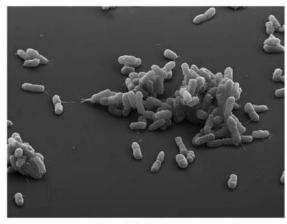
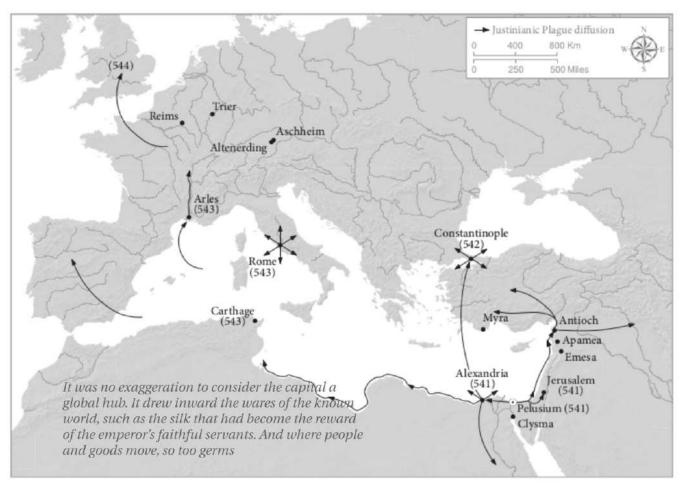


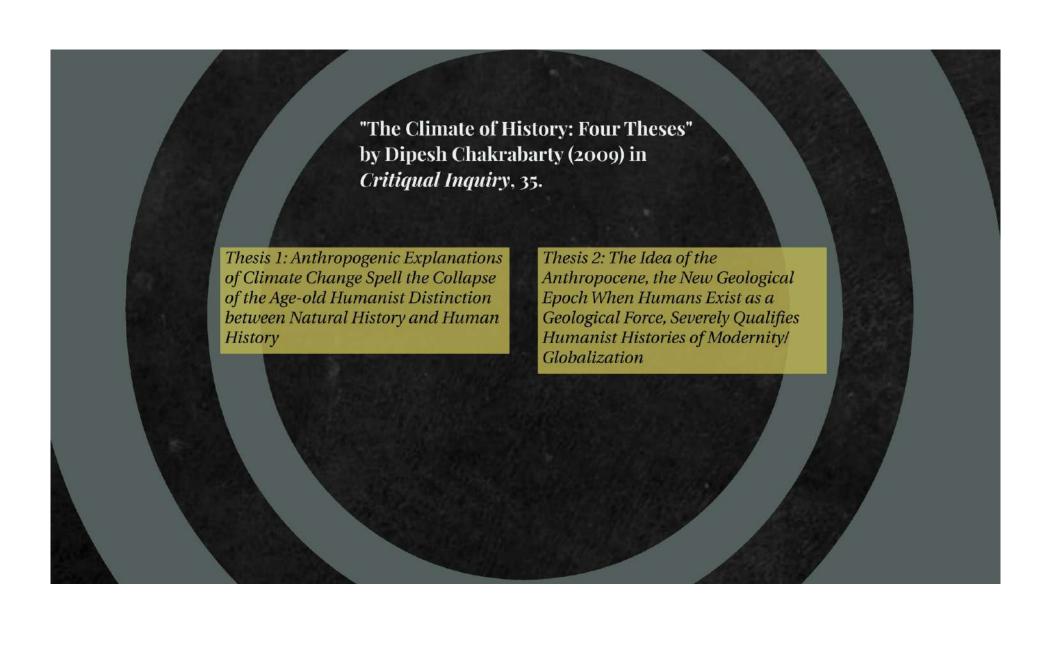
Figure 6.2. Yetsinia pestis. The most deadly bacterium ever. (Scanning Electron Microscope, Science Source)





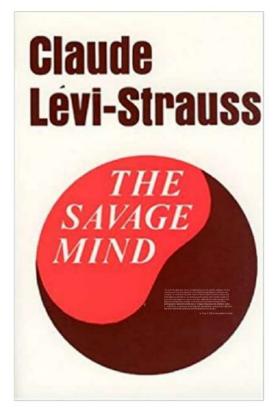
Map 19. The Itinerary of Y. pestis: From Pelusium to Pandemic

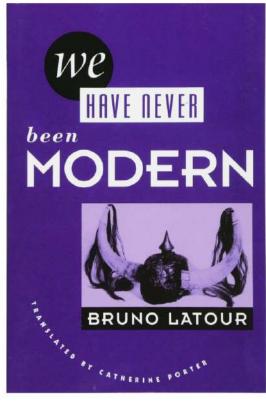
Figure Micro

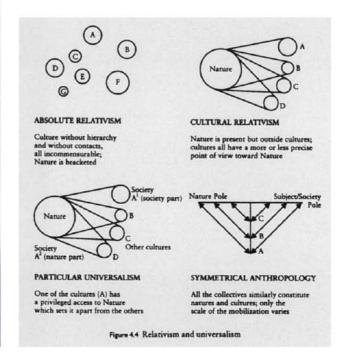




Nature, Societies, and Modernity





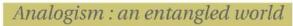


"On intuitive grounds alone we might group onions, garlic, cabbage, turnips, radishes and mustard together even though botany separates liliaceae and crucifers. In confirmation of the evidence of the senses, chemistry shows that these different families are united on another plane: they contain sulphur. A primitive philosopher or a poet could have effected these regroupings on the basis of considerations foreign to chemistry or any other form of science. Ethnographic literature reveals many of equal empirical and aesthetic value. [...] Given this, it seems less surprising that the aesthetic sense can by itself open the way to taxonomy and even anticipate some of its results."

in Chap. 1, The Science of the Concrete

Who Owns Nature?

Animism: an animated world



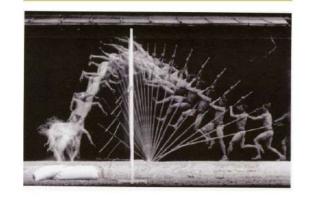


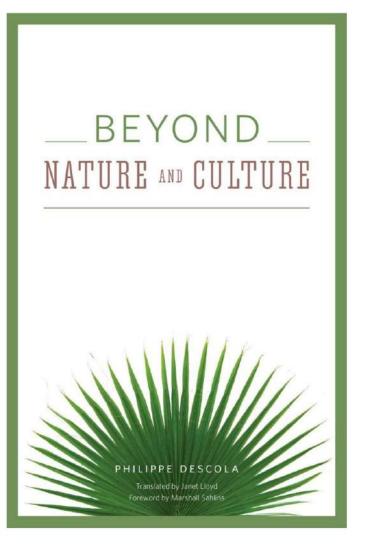
Totemism: a divided world



Naturalism: an objective world

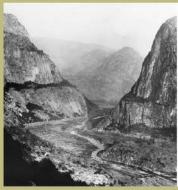








The Trouble with Wilderness or, Getting Back to the Wrong Nature





Damming the Tuolumne River in Hetch Hetchy valley, within the boundaries of Yosemite National Park

John Muir: "Their arguments are curiously like those of the devil, devised for the destruction of the first garden-so much of the very best Eden fruit going to waste; so much of the best Tuolumne water and Tuolumne scenery going to waste."

Frederick Jackon Turner - the myth of the Frontier





Henry David Thoreau:"In Wildness is the preservation of the World."

William Cronon, 1995

WILDERNESS

PRESENVING WILDER-NISS HAS FOR DECADES REES A FUNclaimmal street indeed, a passion or of the environment movement, especially in the United States. For many American wildences canada as the last place where origination, that all rich human disease, has not fully inforced the earth. It is as island in the polluted see of urban-industrial modernity, a refuge we may somehow recover to save the planes. As Henry David Thoras Emmostly decaded. Tim Wildens is the preservation of the World in

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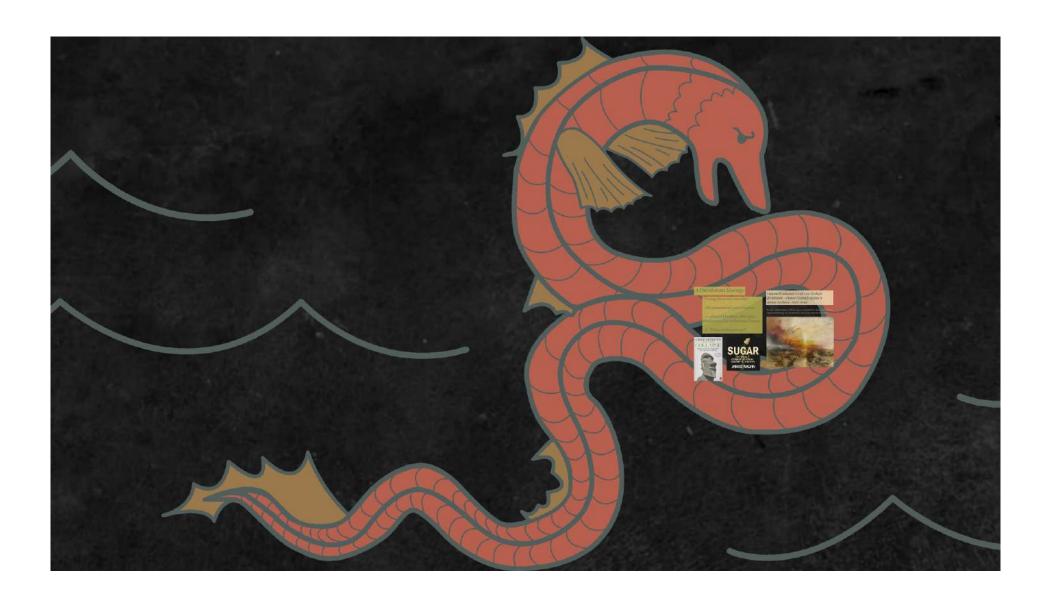
A belief the party frames distillutions of these pagines were translated up as inmost of the party frames as the restrict most distillar range for distincts be according to the party of the party of the party of the party of the surviving of Gript's own consents. Homestein, as original eligibilities were then the Fibe of Branch and the party of the party of the party of the party of the own things if I'm the law passes, the Blackholm continue on the minimal of party of the party

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If wildness can stop being (just) out there and start being (also) in here, if it can start being as humane as it is natural, then perhaps we can get on with the unending task of struggling to live rightly in the world-not just in the garden, not just in the wilderness, but in the home that encompasses them both.

"The Climate of History: Four Theses" by Dipesh Chakrabarty (2009) in Critiqual Inquiry, 35. Thesis 1: Anthropogenic Explanations Thesis 2: The Idea of the of Climate Change Spell the Collapse Anthropocene, the New Geological of the Age-old Humanist Distinction Epoch When Humans Exist as a Geological Force, Severely Qualifies between Natural History and Human Humanist Histories of Modernity/ History Globalization Thesis 3: The Geological Hypothesis Regarding the Anthropocene Requires Us to Put Global Histories of Capital in Conversation with the Species History of Humans



A Decolonial Ecology

"Ecology from the slaveship"

- The plantation system / native
- A colonial blackbox: 80% of its biodiversity lies in Overseas France.
- A "White Anthropocene"?

JARED DIAMOND

SUGAR

THE WORLD
CORRUPTED FROM
SLAVERY TO OBESITY

JAMES WALVIN

Malcom Ferdinand (2019) Une Écologie décoloniale - Penser l'écologie depuis le monde caribéen. Paris: Seuil.

Turner (1840) Slavers Throwing overboard the Dead and Dying Typhoon coming on | inspired by the Zong Massacre (1781)





By refusing to recognize these interrelations, by seeing the fight against mosquitoes like the battle against tanks, decision-makers and experts reinforced the interrelations between multiple factors, thus making it harder to manage them.

Whoever wants to write this history must take into account not only the interventions by experts and policymakers but also the interrelations between the forces to be fought. The experts overlooked these interrelations, since they considered these forces to be independent.

The social sciences would err in darkness if they remained blind to these sociotechnical patterns and separated, like the experts and decision-makers, the social from the natural sphere.

Michel Callon on Timothy Mitchell, Rules of Experts

"The Climate of History: Four Theses" by Dipesh Chakrabarty (2009) in *Critiqual Inquiry*, 35.

Thesis 1: Anthropogenic Explanations of Climate Change Spell the Collapse of the Age-old Humanist Distinction between Natural History and Human History

Thesis 3: The Geological Hypothesis Regarding the Anthropocene Requires Us to Put Global Histories of Capital in Conversation with the Species History of Humans Thesis 2: The Idea of the Anthropocene, the New Geological Epoch When Humans Exist as a Geological Force, Severely Qualifies Humanist Histories of Modernity/ Globalization

Thesis 4: The Cross-Hatching of Species History and the History of Capital Is a Process of Probing the Limits of Historical Understanding

An Environmental History of Political Ideas

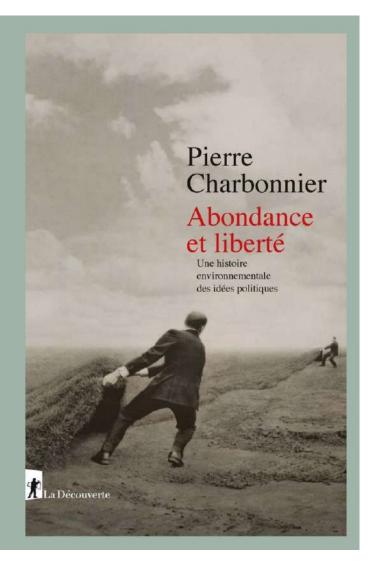
For Chakrabarty: "Most of our freedoms so far have been energy-intensive"

From Timothy Mitchell "Carbon Democracy" to the analysis of **Durkheim "Carbon Sociology**"

Industrial Democracy and Division of Labour

"The social" as Durkheim defines and objectifies it, cannot be thought without a conflict between abundance and freedom.

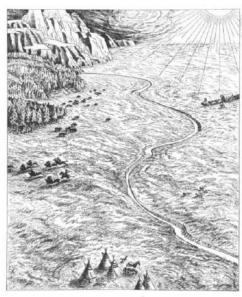
Durkheim unknowingly writes an environmental history of autonomy



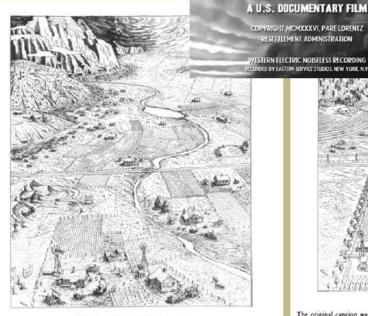
A Place for Stories: Nature, History, and Narrative

William Cronon in The Journal of American History Vol. 78, No. 4 (1992), pp. 1347-1376

Bonnifield (1979), The Dust Bowl | Worster (1979) Dust Bowl

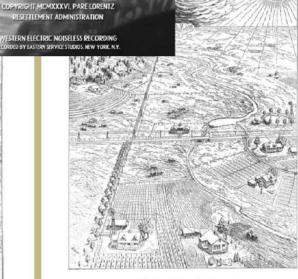


"The Great Plains of the Past," an illustration for The Future of the Great Plains (1936). This and its companion illustrations on the following pages illustrate the New Deal story of the Great Plains. The caption for this one reads, in part, "As the first white settlers drove their covered wagons slowly westward..., they found the Red Man living in rude but productive harmony with Nature."



"The Great Plains of the Present."

The original caption was, in part, "The White Man . . . came as a conqueror first of the Indian, then of Nature. . . The plough ignores Nature's "Keep Off' signs; communities, for all the courage of their people, fall into decay."



THE PLOW THAT

BROKE THE PLAINS

"The Great Plains of the Future."

The original caption was, in part, "The land may bloom again if man once more makes his peace with Nature. Careful planting will give him back the foothill trees; fewer and larger farms on scientifically selected sites may yield a comfortable living. . . This is no Utopian dream. It is a promise, to be realized if we will."

