IN THE LITERATURE

What Happened After Columbus Arrived

By Oliver Houck

Let us suppose that before the creation, God was subject to NEPA and required to write an environmental impact statement, describing what would happen to the world he so carefully created. Suppose, too, that He could predict with precision all that followed and is unfolding now. His statement completed, would He go forward?

Of the questions that arise while reading Charles Mann's new book, *1493: Uncovering the New World Columbus Created*, this is the most frequent, and it is probably quite unintended. Mann does not pose the question. His task is to assemble from bits and pieces the story of what happened to the world — not just America, the entire world — after Columbus's arrival in the Caribbean islands in 1492.

In an earlier work, *1491: New Revelations of the Americas Before Columbus,* Mann described the (surprising) population numbers and social diversity that pervaded the Americas prior to Columbus, millions of people soon on their way to oblivion via (in Jared Diamond's phrase) germs, guns and steel. It was not a pretty story, but neither was it new.

Mann's sequel is more ambitious. In the wake of Columbus, chains of dominoes fall in endless directions, rebounding on themselves, all leading to what Mann calls the homogenocene, reduction by globalization of economic and biological systems. Everything morphs, on every continent. Tiny things have large consequences, most of them without design, many without even our awareness that they were happening. The result is a Big Bang, with humans as the trigger this time.

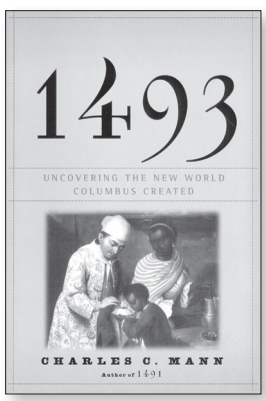
Take worms, for example. Apparently we did not have earthworms in North America at the time of the Indians' arrival, but they changed the landscape from a thick-leaved and heavily covered understory to what Europeans found instead. Meanwhile, we also find tobacco growing in the carefully diverse, self-sustaining gardens of the Powhatan in coastal Virginia. Except that these fields whose commingled plants and vines produce one food or another all year round are not — if we can imagine such a thing — enclosed by fences nor larded with cow manure. They are thus unclaimed wastelands, obviously ripe for the taking with a clear conscience. The tobacco goes abroad, and then farther abroad, and wherever it goes its massive reproduction begins to exhaust the soil.

Then come potatoes, from a maze of varieties in the high Andes, where they have been cultivated together in raised beds bordered by drainage ditches that discourage insects and mold by drying the soil. The world latches onto a single variety whose mass production, too, conquers the world; down come the raised beds, human populations boom, followed by potato blight, starvation, and migrations. Followed by an antidote, not changed production methods but pesticides, the first in a long chain of chemical dependencies that now challenge everything from cellular life to reproduction.

The story repeats. We follow corn to similar ends, and then on to rubber, whose abuse of humans exceeds even that to the land. It is like watching a pinball game with all five balls running, ricocheting off of multiple bumpers, bells, and buzzers ringing, fingering our flippers wildly to keep it all in play. Reflecting on this view, one wonders whether environmental law is capable of dealing with these phenomena. And if not, whether anything can.

The human impacts are also sadly repetitive. The most despotic men on earth claw their way to the top of resource empires that depend on enslaving indigenous peoples, a dispassionately told but macabre scenario. An estimated 100,000 Chinese are dragooned to Peru, just one example. Unspeakable conditions; unspeakable numbers killed. Races, languages, entire peoples vanish.

One might pause to consider the twinning today of human rights with environmental rights, and how long this relationship has existed, unrecognized and unaddressed. Cases now rising from the Niger Delta, Papua New Guinea, and Ecuador are taking environmental protection where it has not been able to go before (for one place, to new tribunals), while environmental issues are, in turn, adding momentum to the human rights agenda. They, too, are a response in law to the homogenocene,



1493: Uncovering the New World Columbus Created, by Charles Mann. Alred A. Knopf, 2011.

flippers waving against the disappearing balls.

Insect-borne diseases aggravate the exchange. There are two dozen varieties of mosquitoes endemic to Africa, several carry malaria, two of them in virulent forms. They find a warm welcome in America along the shores of the Chesapeake and up the lowland rivers of the Virginia colony. Europeans, even the hardier indentured ones, plant the swamps and die before the first crops come in. African slaves, however, curse their luck, developed malaria resistance millennia ago, which makes them ideal for the fields of Louisiana and South Carolina. So slavery comes to the Americas, extending centuries later to rubber plantations up the Amazon, not because it is cheaper than capturing natives or scouring European prisons, but because Africans are immune to this pivotal piece of the new, biotic trade.

Nor is it all biotic. We tend to think of the "discovery" of America by Puritans and other land-seekers, with a nod to the Spanish and their cities of gold. The gold, to be sure, goes back to Seville and funds four centuries of warfare, but the more transforming find is silver, which changes the destiny of the largest and wealthiest civilization on earth, China.

The Chinese economy is based on silver, a limited commodity and a limiting factor to growth and development. When Pizarro hits the jackpot in Peru, however, it is not long before the "hell-pit" of Potosi in the high Andes is sending Spanish galleons laden with ingots up the Pacific coast and then west (not east) to Manila, for trade with Chinese merchants, solid silver for every luxury good desired by the western world. The rest is predictable. There is too much silver. China's economy collapses. Warring regimes follow. Dirt poor and starving peasants are loosed on the countryside to fell the woods, terrace the denuded hillsides, and grow what they can, new monocrops like corn, and then come the rains. It all collapses. Wide swaths of China, like wide swaths of the American Dustbowl in another century, will never be the same.

Today, of course, the global exchange continues and with it the homogenocene. Yet more rapidly. Strains of bird flu can jet from the African forest to the streets of Philadelphia in about 12 hours time. We can strip entire countries in a wink for rubber, palm oil, whatever we wish until the soil runs away and the chemicals remain. We can turn the American Midwest from wheat to corn with the wave of a subsidy, taking food from people we never even see, to keep gas below $4 a gallon. To say nothing of what we are doing to Appalachia, Alberta, the Arctic, Siberia — is there a place on earth that is immune?

One wonders if environmental law is capable of dealing with these phenomena

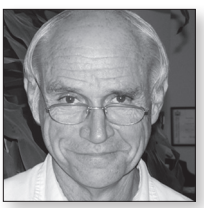
Mann blinks at none of this. Like the former science reporter he is, he remains strangely agnostic about his story. The great reduction of the world he describes, cultures, ecosystems, and species whose life histories are marvels (although, these he does not describe), may be lamentable but they are simply a matter of choice.

As he says in a coda at the end, perhaps feeling compelled to say something, if people want to ravage the planet in order to buy cheap gas and industrial food, well, who is he to say otherwise? Indeed, Mann coauthored a book ten years ago with an economist (always a risky choice for social theory) ridiculing the Endangered Species Act for preferring bugs to human beings, missing fully half of the Noah parable, that all those creatures saved Noah too. The act's critics loved it, of course, praising Mann for his "rationality," although how rational it would have been to destroy, say, the fungi at the base of penicillin and other miracle drugs was never explained.

In the end, the homogenocene may be a human choice but that makes it his choice too, and to sit in the stands and lob spitballs at those who would choose to maintain the diversity of this blue ball as fully as possible is to make a choice, in a negative way. Destroying the life chains of history is either right, because after all we are the humans, and many think this way, or it is wrong, but it is not simply someone else's affair.

What is different today from the sweep of *1493* is that the impacts back then were unseen — certainly unpredicted. We have no such excuses any more. There is a difference between knowing conduct and mere inadvertence, one that computes inter alia to many years in jail, even death. Today, we are in "knowing" land. That a U.S. senator can go to the climate change conference in Durban to gloat over those seeking to curb carbon emissions ("You've lost!" he tells them joyously) takes things to a new level.

Thanks to its great genius, the human species has become the one living thing on the planet beyond checks and balances. Nothing could be more clear from his book. Nothing could be more clear from the daily news. For those willing to try to do something about it, with its biological dimensions crashing around us, we have three options: a new kind of awakening; or something too terrible to contemplate; or environmental law. I do not count on awakenings, nor spend time (beyond my own mortality) thinking about the awesomely terrible. Which leaves the field in which we are engaged.



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