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The cover image is a view of the Chixoy River, Guatemala. Image courtesy of Brent K. S. Woodfill.

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PERSPECTIVES

AN ARCHAEOLOGIST WRITES AGAINST THE ANTHROPOCENE

By Brent K. S. Woodfill

Much of what archaeologists do is study how humans adapt to the environment. After Gordon Willey's (1953) groundbreaking investigation into the entire history of occupation of a

small valley in Peru, understanding how humans lived in and modified their environment became commonplace. Indeed, the "New Archeology" that took the American academy by storm in the 1960s



*Sunrise at El Mirador, Guatemala. This was one of the largest cities in the Americas about 2000 years ago. Now it's located in one of the largest "virgin" forests in Central America.
Image courtesy of the author.*

and strove to make the discipline more scientific made human-environment interactions and the understanding of human-environmental relations one of its central goals (e.g., Binford and Binford 1966, Flannery 1967). Our culture and technology have allowed us to live in jarringly different environments throughout history, and this has been the case for longer than *Homo sapiens* has existed as a species. Our *Homo erectus* ancestors, for example, lived as far afield as South Africa, France, and Indonesia, living in and traveling through deserts, jungles, high mountains, and plains (Van Arsdale 2013).

While academics are comfortable with discussing human adaptation to the environment, the extent of our species' ecological footprint has been largely overlooked until recently. When Svante Arrhenius (1896) proposed at the end of the nineteenth century that the massive spike of carbon dioxide in the atmosphere due to the Industrial Revolution could cause global warming, no one took him seriously—how could one species with around 1.5 billion members, only a small number of whom were participating in the Industrial Revolution, transform something as vast as the earth itself?



Springs feeding waterfalls at the headwaters of the Icbolay River in Guatemala. The area is a village reserve that is being maintained by local Poqomchi' Maya who emigrated to the region during the Guatemalan civil war. Image courtesy of the author.

Eventually, of course, other scientists came around to his perspective. Technological advances allowed scientists to measure parts per million of specific gases in the atmosphere. Weather stations spread across the planet during the waning years of European colonization. This proliferation continued through the Cold War, and a handful of nations sent satellites into the heavens that allowed us to monitor the extent of ice and water blanketing the earth's surface. By 1988, enough evidence had been gathered to inspire the World Meteorological Organization and the United Nations to create the Intergovernmental Panel on Climate Change, which was tasked with assessing the human impact on world climate and formulating responses.

As anthropogenic (human-caused) climate change has become a larger part of our scientific paradigm, there has been a push to rename the current geologic period to something that better reflects our role. The most popular term is the "Anthropocene," which was coined by biologist Eugene Stoermer in the 1980s and popularized in an article he co-authored at the end of the last millennium with Nobel Laureate Paul Crutzen (Crutzen and Stoermer 2000, see also Revkin 2011). By naming this new geological epoch following the Industrial Revolution after humans (*anthropos*), geologists, biologists, ecologists, meteorologists, and other scientists firmly place the blame for rising temperatures and meteorological instability on Arrhenius's original culprit.



Abandoned church on the banks of the Chixoy River, Guatemala. The original location of the village was abandoned after several hurricanes destroyed most of the dwellings. Now families live on Maya ruins that stay above the floodline, even during the worst floods.

Image courtesy of the author.



View of the Chixoy River, the Tortugas salt dome, and the Nueve Cerros ridge in 2018. This part of Guatemala was covered in lush forest for over a millennium between the Classic collapse and the land initiatives of the 1980s. Image courtesy of the author.

The term “climate change” has now firmly entered the mainstream, and the Anthropocene has come with it, making headlines in everything from *The Guardian* (Maddocks 2019) and the *New York Times* (Revkin 2011, Yang 2017) to the *Manitoba Co-Operator* (2019). The industrialized (and industrializing) world does not seem to be able to kick its chemical dependence on oil, coal, and other environmentally catastrophic fuel sources that produce climate change. However, as with any other addiction, the first step towards recovery is to admit that there’s a problem.

This article is not about the future, though, but about our insistence on earmarking the past with Western exceptionalism. The label Anthropocene is one such example. The term has always left me a bit queasy, since we humans have been affecting the global environment for thousands of years. I fear that by using the term Anthropocene we are simply continuing the long-term intellectual trend of conflating white Europeans and Americans with the pinnacles of human achievement, especially when misleadingly using nuclear weapons testing in the early 1950s as the Anthropocene period’s diagnostic signal.

As other authors have shown in this issue of *Open Rivers*, humans have profoundly transformed the environment since well before the nuclear age. The Amazon forest and the great American wilderness were dramatically transformed through human intervention (see, for example, Mann 2005) and the great civilizations of the world—both in Europe and far from it—changed local ecologies and global climate in ways we are just beginning to understand. Just one example is the Little Ice Age that reached its pinnacle in the sixteenth–nineteenth centuries. This lines up with the American genocide caused by European colonization. Since trees are a carbon dioxide sink, the rebirth of the New World forests, which had been kept at bay by local cultures, began to reclaim most of the hemisphere after the *entradas* of Columbus, Cortés, and their ilk. One recent study estimated that around 55 million

Americans died after the European *entrada*, resulting in the reforestation of around 56 million hectares (around 216,000 square miles), enough to explain the worldwide drop in temperature (Koch *et al.* 2019).

Even keeping these facts in mind, of course, our experience in the late twentieth and early twenty-first centuries is obviously at a different scale than that of our ancestors. Still, using the term Anthropocene draws a fake line between the modern West and everyone else and conflates Western culture with that of all of humanity.

I’m not the first to grumble about this problem. Other terms that have been proposed are interesting but have had little staying power. Donna Haraway (2016: 101) tries out a new term in her most recent book, *Staying with the Trouble: Making Kin in the Chthulucene* (which, she notes, is not related to the “misogynist racial-nightmare monster Cthulhu”). Here, she emphasizes the tentacular interconnectivity of regions, species, and social processes. I prefer the term “Capitalocene” (e.g. Moore 2016, 2017) since the root of much of the environmental degradation and climate change we are concerned with can be more directly blamed on global capitalist processes rather than just humans. The modern capitalist system involves Godzilla-like stomping of large chunks of the planet’s surface, replaces indigenous environments (and Indigenous knowledge of environmental management) with industrial monocropping, and focuses on short-term financial profits for corporate shareholders at the expense of long-term global stability. Local environmental degradation creates problems that need to be addressed by new interventions, such as developing more intensive chemical fertilizers, constructing ever deeper and more powerful pumps to extract water from ancient aquifers, or transporting bee colonies across continents to aid pollination. When the environment is damaged to the point that not even applied industrial science can fix it, corporations can simply move operations to a similar climatic niche, leaving local

residents—be they human or other animal, plant, and fungal species—to pick up the pieces.

The term Capitalocene addresses a few problems that are folded into the “Anthropocene.” Its use can springboard into a larger discussion about multiple issues that are essential to have a real dialogue about the state of the environment in the twenty-first century and how to effect real change. These include:

1. The specific causes of climate change beyond people, fossil fuels, greenhouse gases, or pollution (i.e., systems and behaviors instead of nouns)
2. The deep history of anthropogenic climate change that predates (and exists alongside) the European colonization of the world
3. The acknowledgment that even if we do modify the local and global environment, it doesn't have to be as extreme as it is now and it can actually lead to a remarkable degree of stability if done correctly
4. The acknowledgement that other cultures have important insights into environmental management that are as worthy of serious consideration as the Western scientific perspective, while at the same time not Othering them or turning them into exotic, mystical keepers of forgotten, magical wisdom
5. The subconscious assumption that Westerners—even those of us who are into cultural relativism and global inclusivity—still perpetuate the belief that our scientific objectivity is a better fit for reality or that Westerners can stand in effectively for something universal

Fundamentally, I believe that the archaeological perspective is important for understanding climate change. We do have access to deep history and can combat many of the unconscious assumptions we make about human nature, our place in the world, and how many environmental management strategies and ontological systems existed before the global ubiquity of Western capitalism. This economic system, like our carbon footprint and atomic radiation, is infused in nearly all contemporary societies and ecologies.

I feel like this more nuanced, long-term approach to understanding climate change is essential for students, the public, politicians, and other scientists to hear. I realize that I'm echoing earlier evangelists of the New Archeology, but archaeology does have access to a sizeable compendium of evidence about the history of the human species. As our understanding of local and global climate processes is dovetailed with our understanding of human environmental exploitation and management, archaeology will continue to be important to issues of anthropogenic climate change. By getting archaeological findings out beyond academia, maybe we'll be able to influence future politicians who can replace the corporate shills who continue to fight for profit over planet.

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