

Domestication of the Planet: An Undergraduate Class' Reaction

Abstract

In the spring semester of 2003, seventy students wrote a 1500-word paper on "The Domestication of the Planet: True or False, Good or Bad?" The majority of the students argued that a domestication of the planet was occurring. There was no clear majority though on the question of whether or not domestication was good or bad. This paper analyzes the responses.

Daniel Woulfin
History Ph.D. Student and Teaching Assistant
Stony Brook University - SUNY
History 238: History of Science, Technology and Medicine II (Spring 2003)

In the spring semester of 2003 Professor Wolf Schäfer of Stony Brook University's History department gave his class an assignment. The students of History 238: History of Science, Technology and Medicine II were asked to write a fifteen hundred word paper titled The Domestication of the Planet: True or False, Good or Bad? The concept of the "Domestication of the Planet," originally inspired by Peter Vitousek's article "Human Domination of Earth's Ecosystems," was presented to the class on the class dates between April 24 and May 6.¹ In these classes the professor examined and explained the changes humans have made on terrestrial ecosystems, water ecosystems and the atmosphere. Professor Schäfer marked four stages of human intervention, 1) without regard to health or ecological effects, 2) health effects, property damage, social impacts are clearly visible but accepted as unavoidable by the population and those who can escape the consequences, 3) technology is used to abate harmful effects but with spotty results and unanticipated consequences, and 4) knowledge is applied to anticipate effects and to avoid or at least mitigate possible bad consequences before they occur. This report examines the responses of the students to this new concept. By examining the work of a diverse group of undergraduates it is my hope that the viability of this concept inside and outside of academia can be found.

The Class

History 238 met twice a week in the spring semester of 2003 on Stony Brook University's campus in Stony Brook, New York. This public university is located on the

¹ See: Peter M. Vitousek, et al., "Human Domination of Earth's Ecosystems," *Science*, Volume 277 (25 July 1997).

North Shore of Long Island in the middle of a suburban area. According to the Undergraduate Bulletin “The majority of Stony Brook's undergraduates—93 percent—come from New York State; 50 percent of these are from Nassau and Suffolk counties and 37 percent from New York City.”² There were eighty-six students in the class, fifty-three male students and thirty-three female students. There is no information available about the economic or ethnic background of the students but it can be assumed that because the class fulfilled a general education requirement of the University the students mirrored the diversity of Stony Brook University.

Academically, the students were at various stages of their academic careers. Three students were non-matriculated, two at the undergraduate level (U0) and one at the graduate level (G0). Eleven students were classified as first years (U1). Twenty-two students were classified as second years (U2). Thirty-three students were classified as third years (U3). Eighteen students were classified as fourth years (U4). Twenty-one of these students had not declared a major. Of those students that had declared a course of study, thirty-one had chosen to study a humanity or liberal art (History, Spanish, English, Music or Art History and Criticism). Fourteen studied a social science (Social Science, Anthropology, Sociology, Psychology, Economics, Linguistics, or Political Science). Eight students studied a math or science (Biology, Mathematics, Computer Science, Mechanical Engineering, Engineering Science, Information Science, or Earth or Space Science). Finally, twelve students were enrolled in a professional program (Health Sciences, Pharmacology, Business Management or Second Baccalaureate administrative).

² “An Introduction to Stony Brook”. 2003 – 2005 Undergraduate Bulletin. <http://naples.cc.sunysb.edu/CAS/ubinfo0305.nsf/pages/intro>. Accessed August 4, 2003.

The Assignment

The students were given the assignment after the midterm on March 13, 2003. The assignment was to, “Use title *and* subtitle *and* answer both questions. Define the term ‘domestication’ and explain your criteria for what would constitute failure or success with respect to the domestication of the planet.”³ The students were allowed to use any sources they desired but were encouraged to incorporate and/or use as much class material as possible. They had approximately two months to complete the assignment which was due on May 8, 2003.

Out of the eighty-six students in the class an analysis was performed on 70 papers. Of the seventy papers, a majority of the students, sixty-five, argued that Domestication of the Planet was true. Only five students dissented. On the second question, whether the truth or falsity of “The Domestication of the Planet” was good or bad the answers were closely split between three categories. Of those papers that felt “domestication of the planet” was true twenty-one papers argued it was good, twenty-six papers argued that it was bad and eighteen papers either did not take a side or argued that there were good and bad aspects to “domestication.” Typically students followed the arguments of the course, looking at human impact on natural resources, land, water, and other organisms. They also commonly mentioned the effects of industrialization, urbanization and the spread of transportation and communication networks.

Of those who chose that “domestication of the planet” was false, two papers felt it was bad, two papers felt it was good and one paper argued for good and bad aspects. One argument that was prevalent in the dissenting papers was that domestication does not

³ History 238: History of Science, Technology and Medicine II syllabus (Spring 2003).

occur unless there is complete human control over all of the earth's ecosystems and geological/chemical/ecological processes. One student pointed to human's inability to control aspects of the environment (the tides, geological shifting, volcanic eruptions). For this student as long as humanity is threatened by catastrophes, humans are not in control and therefore have not domesticated the earth. In the same vein another student stated that since the Earth's ecosystems are constantly changing through natural means or human intervention, Earth cannot be domesticated. These constant changes make it impossible to know and control each process.

The other main argument of those who argued an anti-domestication stance was the issue of waste control. For these students only a sustainable ecosystem and society are signs of a truly domesticated planet. Without sustainability the inevitable destruction of the planet signals a lack of domestication, since domestication should in the end be an absolute (whether positive or negative). Those students who chose the false option tended to think of domestication as all or nothing rather than a process. Either the Earth is domesticated or it is not and the lack of human control over various natural processes and the inability to reach the fourth stage of human intervention proves that domestication is not occurring.

Notable Examples and Arguments from Students

In their papers, students used memorable arguments, examples and sources that add new elements to the concept of a domestication of the planet. This section will focus on the original contributions of these students. For the most part these contributions circled around a concept that can be broadly described as an "environmental (or

ecological) consciousness.” They used various sources outside of the sciences including works of literature, politics, and the visual arts. Their main argument is that an “environmental consciousness” is necessary for domestication to occur. By looking at the various disciplines that the students emphasized, various possibilities for aspects of an “environmental consciousness” will be uncovered.

The first discipline that students drew upon was literature. One student focused on the development of language as a tool for domestication. This student decided that language and communication was essential to building up and sharing knowledge. Therefore, language was the first and most important step since it set into place the first and most essential communication network necessary for the accumulation and transmission of technical knowledge. Another student also looked for an original cause for domestication and chose to take it from religion quoting a portion of the Jewish Torah/Christian Old Testament. Within Genesis it is stated,

“God said; Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over every creeping thing that creepeth upon the earth. So God created man in his own image. And God blessed them, and God said unto them, Be fruitful and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over ever living thing that moveth upon the earth.”⁴

The student used this statement as the basis for the rest of the paper and the source of humanity’s right and ability to domesticate the earth.

Other views expressed by the students focused on ideas that were more nature based. One student focused upon the writings of Daniel Quinn, author of *Ishmael, My*

⁴ Genesis, 1:25-26.

Ishmael, *The Story of B* and other books and articles.⁵ His philosophy can be described as a form of deep ecology and neo-Malthusianism. Quinn, like the student, focuses on the problems of land transformation, population growth, pollution, and other ecological changes. For Quinn, the solution to these problems is to return to a hunter-gatherer mentality. Only by changing human ideology from the Judeo-Christian belief scheme and industrial mentality in favor for an ideology that limits resource use can humanity be saved from destroying itself.

The apocalyptic vision of humanity's relationship with the Earth was also expressed in another literary genre, science fiction. One student focused on non-fiction and fiction expressing the "steady death of the planet." The difference for him is that fiction is more dramatic and emphasizes how human societies can survive apocalyptic conditions. He points towards several authors and books including Stephen King's *The Stand*, Kim Stanley Robinson's Mars Series (*Red Mars*, *Green Mars*, and *Blue Mars*) and again Daniel Quinn's writings.⁶ Ironically, the apocalyptic vision of Earth's future seems to be shared by both Christian and secular ideology. Only the means of the Earth's destruction changes, for Christians a supernatural Satan is the cause while for secularists it is humanity's own fault.

Also in the cultural vein, another student used visuals to explain how an "environmental consciousness" adds to the "Domestication of the Planet." This student defined domestication of the planet as "the complete and total accommodation of society's interests in precedence over any living species or non-living ecosystems." He

⁵ See: Daniel Quinn, *Ishmael: a novel*, Bantam Books (New York, 1992). Daniel Quinn, *The Story of B*, Bantam Books (New York, 1996). Daniel Quinn, *My Ishmael*, Bantam Books (New York, 1997).

⁶ See: Stephen King, *The Stand*, Doubleday (Garden City N.Y., 1978). Kim Stanley Robinson, *Red Mars*, Bantam Books (New York, 1993). Kim Stanley Robinson, *Green Mars*, Bantam Books (New York, 1994). Kim Stanley Robinson, *Blue Mars*, Bantam Books (New York, 1996).

then moves into a brief history of the Cold War and the visuals used to show a domination of the planet by the U.S. Specifically these were the photographs of the Earth from the Moon during the Apollo moon landing. This brought up two points. The first was the United States “technocratic superiority” over other nations. The second point was that a single vision of the Earth became popular knowledge through television and other media. Again quoting the student...

Seeing, in true Foucauldian fashion, is more than believing; it is the exercise of power. This radical reorientation beamed out across the TV sets of millions of viewers but what could be seen was not the visual evidence of ecological ailments or even the artifacts of social justice. Instead, this distance obliterated detail to facilitate purely empirical knowledge crucial to the process of planetary domestication. It visually classified a distinct and detached entity in space, a biologically self-contained entity or superorganism accessible to a global audience through the pale blue glow of the picture tube.

Other students used political rhetoric rather than cultural rhetoric. These students noted the role of politicians and governments in making decisions that affect how the planet is viewed. For example, one student used Al Gore’s (former U.S. senator and vice-president) book *Earth in the Balance: Ecology and the Human Spirit* (1993) as a source that shows a domestication of the planet.⁷ Another student was more law oriented. He focused on governmental and legal policies in America that affected natural ecosystems including Roe vs. Wade (abortion lowering the human population), Superfund sites, eco-justice, and energy policies. His main point was that the government does not take an active role in creating sustainable societies and technologies; therefore NGO’s (Greenpeace, Sierra Club, National Audobon Society, and etcetera) have filled this niche. Governmental bodies, such as the Environmental Protection Agency and the Bureau of

⁷ See: Al Gore, *Earth in the Balance: Ecology and the Human Spirit*, Houghton Mifflin (Boston, 1992).

Land Management do not have the resources to be effective. For him the answer for a domestication of the planet lies in an active ecologically aware government.

Conclusion: A Work in Progress

The concept of a domestication of the planet is obviously viable for this group of undergraduates. They have pointed out many facts and studies that support this idea. However for me, a more international perspective, citing works by non-Americans, would be stronger evidence of a domestication of the planet. In this vein, I emphasize the work of Madhav Gadgil and Ramachandra Guha. In their book, *This Fissured Land: An Ecological History of India* (1992), they introduce the concept of different Modes of Resource Use, a Gathering Stage, a Pastoral Stage, a Settled Cultivation Stage, and an Industrial Stage.⁸ They also speculate on a post-industrial stage. Although these stages are of different historical periods they can exist at the same time creating conflict between groups of differing Modes of Resource Use. Authors focusing on parts of the world besides India also offer dissenting perspectives from the American vision of the environment.⁹

Inside the western literature several points made by the undergraduates can be elaborated upon. Environmental history has provided a perspective that seems capable of coinciding with the “Domestication of the Planet.” Works such as Donald Worster’s *Nature’s Economy: A History of Ecological Ideas*, Richard Drayton’s *Nature’s*

⁸ See: Madhav Gadgil & Ramachandra Guha, “A Theory of Ecological History” in *This Fissured Land: An Ecological History of India*, 9-68.

⁹ See: James C. McCann, *Green Land, Brown Land, Black Land: An Environmental History of Africa, 1800-1990*, Heinemann (Portsmouth, NH, 1999). Roderick P. Neumann, *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa*. Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism: Essays North and South*, Earthscan Publications (London, 1997).

Government: Science, Imperial Britain, and the 'Improvement' of the World, and Peder Anker's *Imperial Ecology: Environmental Order in the British Empire, 1895-1945* bring information from the history of science (especially botany and ecology) into the debate.¹⁰ The recent debates over the themes of environmental history in a global perspective also seem to illuminate the different possibilities and questions of the concept of a "Domestication of the Planet."¹¹ These perspectives offer a healthy critique which needs to be addressed in the "Domestication of the Planet" concept.

Culturally, the students touched upon many points but did not exhaust the possibilities by any means. Literature can still provide insight into the development of an "environmental consciousness." Works of science fiction beginning with the pulp magazines and radio of the early twentieth century, for example Isaac Asimov, should be explored. More modern works could also be used: fictional works (*Dune* by Frank Herbert),¹² science fiction movies (*Mad Max*, *Escape from New York*),¹³ and political tracts (*Pale Blue Dot* by Carl Sagan).¹⁴ Popular visuals also provide an insight into the human domination of the planet. T.V. provides the most popular example but modern maps are also useful. Road maps define the land by highways and roads as well as natural

¹⁰ See: Donald Worster, *Nature's Economy: A History of Ecological Ideas, Second Edition*, Cambridge University Press (Cambridge, 1977/1994). Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement of the World'*, Yale University Press (New Haven, 2000), Peder Anker, *Imperial Ecology: Environmental Order in the British Empire 1895-1945*, Harvard University Press (Cambridge MA, 2001).

¹¹ John M. MacKenzie offers an interesting distinction between different styles of environmental history, specifically apocalyptic environmental history, neo-Whiggism, the longer-perspective school, and the fully integrated school in John M. MacKenzie, "Empire and the ecological apocalypse, the historiography of the imperial environment," in *Ecology and Empire, Environmental History of Settler Societies*, University of Washington Press (Seattle, 1997), 215-228.

¹² See: Frank Herbert, *Dune*, Chilton Books (Philadelphia, 1965).

¹³ See: *Mad Max*, Dir. George Miller, Participants, Mel Gibson, Joanne Samuel, Hugh Keays-Byrne, Tim Burns, Roger Ward, Orion Pictures, 1979. *Escape From New York*, Dir. John Carpenter, Participants, Kurt Russell, Lee Van Cleef, Ernest Borgnine, Donald Pleasence, Isaac Hayes, Season Hubley, Harry Dean Stanton, Adrienne Barbeau, Embassy Pictures, 1981.

¹⁴ See: Carl Sagan, *Pale Blue Dot: A Vision of the Human Future in Space*, Random House (New York, 1994).

phenomena. All of these sources show a popular domestication of the planet. These sources reach many people through mass communication and define popular conceptions of the human relationship to nature.

International political organizations probably also would provide a wealth of information. The United Nations, as a global institution, is a good place to start for a political domestication of the planet. Other international groups, Greenpeace, Friends of the Earth, the Red Cross, the World Bank, multinational corporations (any transnational organization) show a transcending of the nation state to a truly global society. They also are contrasted by local resistance movements or groups both within the developed world and outside it. This is obvious from the walkout of the Group of 21, mainly developing countries, over agricultural subsidies in the Fifth Ministerial session of the World Trade Organization (WTO).¹⁵ The questions between developing and developed countries over areas like agriculture, tourism, wildlife protection, pollution and others are ones which cannot be ignored when thinking about global topics, such as a “Domestication of the Planet.”

The concept of a Domestication of the Planet is worthy of consideration and further inquiry. It is also obviously a work in progress. Its acceptableness to the students of a public university shows that as a concept it has great potential. Their inquiries and arguments about whether the Domestication of the Planet is true or false, good or bad took elements from different disciplines, the sciences and the humanities. These lines of inquiry should be continued. More work on what I termed “environmental consciousness” and international organizations needs to be done. By this I mean

¹⁵ The Fifth WTO Ministerial Conference.
http://www.wto.org/english/thewto_e/minist_e/min03_e/min03_e.htm. Accessed May 26, 2004.

historiographies, examinations of secondary sources, and literary works. Investigations from geographic perspectives besides America should be done to increase the global parts of the argument. But for this assignment the majority students found a “Domestication of the Planet” to be true, although they were equally divided on whether it was good or bad or neither.