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Anthropologists Are Talking – About The Anthropocene

D. Haraway

N. Ishikawa

Scott F. Gilbert

Swarthmore College, sgilber1@swarthmore.edu

K. Olwig

A. L. Tsing

See next page for additional authors

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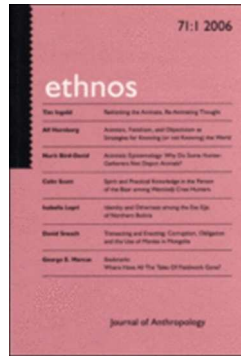
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Authors

D. Haraway, N. Ishikawa, Scott F. Gilbert, K. Olwig, A. L. Tsing, and N. Bubandt



Anthropologists Are Talking About the Anthropocene

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Manuscripts

Anthropologists are Talking – about the Anthropocene.

Love it or hate it, the Anthropocene is emerging as an inescapable word for (and of) the current moment. Popularized by Eugene Stoermer and Paul Crutzen, Anthropocene names an age in which human industry has come to equal or even surpass the processes of geology, and in which humans in their attempt to conquer it have inadvertently become a destructive force of nature (Crutzen and Stoermer 2000; Steffen et al. 2011). This is the tragedy of the Anthropocene. But this tragedy also holds an odd, even schizophrenic, promise; namely the promise of scientific renewal and insight. For in the Anthropocene, nature is no longer what conventional science imagined it to be. And if the notion of a pure nature-*an-Sich* has died in the Anthropocene and been replaced by natural worlds that are inextricable from the worlds of humans, then humans themselves can no longer be what classical anthropology and human sciences thought they were. Arguably, the Anthropocene challenges us all to radically rethink what nature, humans and the political and historical relationship between them might be at the end of the world, peppering its message of environmental doom with the promise of scientific renewal (and global survival) through trans-disciplinary collaboration. This bipolar message of a new science and a new politics is exhilarating for some, and seems to come at an opportune moment. Certainly, the notion that human lives and politics are producers of/produced by natural worlds gels with a growing attention within anthropology and neighboring disciplines to the diverse multispecies worlds that humans and non-humans co-inhabit. And yet the Anthropocene may still be, as Bruno Latour puts it in his Distinguished Lecture to the AAA in December 2014, “a poisonous gift” to the world in general and to anthropology in particular (Latour 2014). The potential gift of the Anthropocene is its push to radically rethink the “anthropos” that is the object of the discipline and thereby to force anthropology to become relevant, in a novel and crucial way, to understanding a world faced with unprecedented human-induced environmental disaster (Ceballos et al 2015; Pimm et al 2014). The potential poison of the Anthropocene is that it may end up either dissolving the human altogether or, perhaps even worse, fetishizing it (when others begin to take it too seriously).

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3 This conversation was held in October 2014 in Aarhus to discuss the still inchoate
4 concept of Anthropocene. Does the Anthropocene entail an important call for a new
5 kind of politics and understanding or is it a political buzzword? Does Anthropocene
6 scholarship signal the prospect of genuine cross-disciplinary collaboration or does it
7 sustain conventional hierarchies of knowledge and power? What, in short, are the
8 pitfalls and possibilities of the Anthropocene? Editor Nils Bubandt invited four
9 scholars from different disciplines and backgrounds to discuss these questions.¹ The
10 participants are:

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13 ANNA L. TSING. Professor of Anthropology at the University of California, Santa Cruz
14 as well as Niels Bohr Professor of Anthropology at Aarhus University where she
15 directs the research project AURA (Aarhus University Research on the
16 Anthropocene). Anna's diverse and exquisite analyses of the entanglement between
17 forms of life and forms of power have resulted in a wealth of remarkable publications
18 including *In the Realm of the Diamond Queen* (1994), *Nature in the Global South:
19 Environmental Projects in South and Southeast Asia*. (co-edited with P. Greenough)
20 (2003) and *Friction: An Ethnography of Global Connection* (2005). Anna has two
21 forthcoming books about the Anthropocene: *The Mushroom at the End of the World*
22 and *Arts of Living on a Damaged Planet: Stories from the Anthropocene* (co-edited
23 with Nils Bubandt, Elaine Gan, and Heather Anne Swanson).

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25
26 DONNA HARAWAY. Distinguished Professor Emerita of the History of Consciousness
27 Department and the Feminist Studies Department at the University of California,
28 Santa Cruz. A leading and highly influential scholar **within** the field of science and
29 technology studies for several decades, Donna's work is suffused by a truly trans-
30 disciplinary curiosity that spans feminism, primatology, ecology, science-fiction,
31 developmental biology, and literary theory. Donna's work is unique in that it
32 combines this broad-ranging curiosity with intellectual acuity and a strong political
33 commitment that encompasses humans and non-humans. Donna's publications
34 include: *When Species Meet* (2007); *The Companion Species Manifesto: Dogs,
35 People, and Significant Otherness* (2003);
36 *Modest_Witness@Second_Millennium.FemaleMan©_Meets_Oncomouse*TM (1996);

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¹ The taped conversation was transcribed by Mathilde Højrup and edited by Nils

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3 *Simians, Cyborgs, and Women: The Reinvention of Nature* (1991); *Primate Visions:*
4 *Gender, Race, and Nature in the World of Modern Science* (1989). Donna's new book
5 in progress is titled *Staying with the Trouble: Making Kin in the Chthulucene*.
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10 KENNETH OLWIG. A geographer and Professor Emeritus of Landscape Planning at the
11 Swedish University of Agricultural Sciences in Alnarp, Kenneth has for decades
12 studied the aesthetic, legal, literary and cultural geographical aspects of landscapes as
13 political and physical manifestations. His books, which all link geography to political
14 history in diverse and novel ways, include *Justice, Power and the Political Landscape*
15 (edited with Don Mitchell (2008); *Nordic Landscapes: Region and Belonging on the*
16 *Northern Edge of Europe* (edited with Michael Jones) (2006); *Landscape, Nature and*
17 *the Body Politic: From Britain's Renaissance to America's New World* (2002);
18 *Nature's Ideological Landscape: A Literary and Geographic Perspective on its*
19 *Development and Preservation on Denmark's Jutland Heath* (1984). Together with
20 Donna Haraway, he was part of the University of California's Humanities Research
21 Institute project that produced the book, edited by William Cronon: *Uncommon*
22 *Ground: Toward Reinventing Nature* (1995).
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34 NOBORU ISHIKAWA. Professor of anthropology with the Center for Southeast Asian
35 Studies at Kyoto University. Noboru has conducted fieldwork in Sarawak, Malaysian
36 Borneo over the past two decades exploring the construction of national space in the
37 borderland, highland-lowland relations, and commodification of natural resources. He
38 is currently heading a trans-disciplinary project that examines connections and
39 changing relations between nature and non-nature on oil palm plantations in northern
40 Sarawak. His publications include *Dislocating Nation-States: Globalization in Asia*
41 *and Africa* (2005), and *Flows and Movements in Southeast Asia: New Approaches to*
42 *Transnationalism* (2011). His forthcoming book *Anthropogenic Tropical Forests:*
43 *Resilience of Post-Development Nature and Society* studies the transformation of a
44 high biomass society in Sarawak (co-edited with R. Soda).
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54 SCOTT GILBERT. Howard A. Schneiderman Professor Emeritus of Biology at
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Bubandt.

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3 Swarthmore College and a Finland Distinguished Professor at the University of
4 Helsinki, Scott is a leading scientific figure within the field of ecological
5 developmental biology and epigenetics, a position Scott combines with a broad-
6 ranging interest in the ethics, philosophy and politics of science. Scott is the author of
7 numerous scientific papers and his books include: *Ecological Developmental Biology:
8 Integrating Epigenetics, Medicine, and Evolution* (with David Epel) (2008); *Bioethics
9 and the New Embryology: Springboards for Debate* (with Anna Tyler and Emily
10 Zackin) (2005); and *Developmental Biology* (a textbook now in its tenth edition).
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20 Nils

21 Thank you all for coming. “Anthropologists are Talking” is somewhat of a misnomer
22 for this particular conversation. You represent a diverse group of disciplinary
23 backgrounds that ranges from anthropology to geography, area studies, biology,
24 primatology, feminist studies and science studies. I have invited you out of a sense
25 that anthropology needs help, so to speak, with the Anthropocene. Anthropology may
26 share the first three syllables with the word Anthropocene, but Anthropocene is a
27 concept that appears to encourage cross-disciplinary research as an urgent response to
28 contemporary challenges in the world and in science. It therefore also requires a broad
29 cross-disciplinary discussion. So, I would like to begin by asking each of you to say a
30 bit about the concept of the Anthropocene as it looks from your discipline,
31 perspective, or field of interest.
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41 Donna

42 Could I compare the Anthropocene for a moment to “ecosystem services”? I
43 remember, when Jane Lubchenco, who was at that time the head of the Ecological
44 Society of America, introduced ecosystem services into the apparatus of the
45 Ecological Society of America to describe the costing out of everything that Earth’s
46 living worlds do in order to make it possible to make it visible (see *Issues in Ecology*,
47 No. 2, 1997). And I remember how depressed I was. On the one hand, I understood,
48 what she was doing. She had been a freshmen at Saint Mary’s Academy when I was a
49 senior, and I knew her Russian Catholic family very well. I knew that she was really
50 committed to marine conservation and that she was profoundly worried about the
51 ruination of the Earth. At the same time, “ecosystem services” became an
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3 indispensable term for monetarizing all matters. It, too, promised to break down nature
4 and culture, but at the cost of turning everything into circuits of monetarization and
5 counting. I think Anthropocene is similar. I do not think that it was intended to be
6 similar. Eugene Stoermer, after all, was a student of fresh water diatoms and in love
7 with water, with the ways of living on the Earth that are tied to waters, and terribly
8 worried about the warming and acidification of the oceans. It is the destruction of the
9 coral worlds, which are primary in his heart and mind, and he enlists the atmospheric
10 chemist friend of his, Paul Crutzen. Crutzen, also a Nobel Prize winner, was equally
11 deeply concerned. Together they proposed a term for situated human impact on the
12 Earth of a global scale. And this is where I get worried. Anna, you once wrote so
13 eloquently that the scale is global because the models are global. And this is where
14 part of the problem with “Anthropocene” lies for me. We know how something like
15 the globe has had many morphs throughout what we will call “modernity”. The
16 Anthropocene is another instance of a kind of Earth that can only exist post-space
17 race and post-Cold War. It is a particular model: a view from space of how the
18 chemical cycles of the Earth are influenced in really profound ways by something
19 called, you know, *Homo sapiens* or Anthropos. The Anthropocene is thereby
20 produced as a human species act. And here is a second problem. Because the
21 contemporary world is not a human species act. Rather, it is a situated highly complex
22 systematicity of situated peoples and their apparatuses, including their agricultural
23 critters and other critters. It is not just a human species act. But the term
24 Anthropocene by emphasizing the “anthropos” and ignoring other species portrays
25 itself as the result of a human species act; in the same manner that ecosystem services
26 represent the Earth is if it were an accounting system and thereby became a tool for
27 the capitalization of the planet.
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46 If you propose to call the present time Capitalocene, as I and others have done to
47 highlight these processes (Haraway 2014; Moore 2014a, 2014b), you will be accused
48 of being political. Propose Anthropocene and you are simply talking about the human
49 impact on the planet that is now of a geological scale. So I find myself furious at the
50 term Anthropocene in exactly the same way I am furious about the term “ecosystem
51 services”. At the same time, I also understand that I need to use this term, and that
52 others will use this term. The Stratigraphic Commission of the Geological Society of
53 London will give its decision in 2016, I believe, as to whether Anthropocene will
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3 become a term to replace the Holocene as a geological epoch, and my guess is that
4 they will say “yes”. And I am sort of for it, because I do not see any alternative now,
5 but what if they had proposed the Capitalocene? Would it really be taken seriously?
6 The Anthropocene is now inescapable, and is doing good work, but it makes me
7 seriously angry at the same time.
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12
13 Scott

14 I agree. Anthropocene is full of problems. One is its global pretentions. We should
15 not talk about Earth as a globe, because it is not a unified space.
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20 Donna

21 It is not a globe!
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25 Scott

26 My second problem with the Anthropocene is a general problem with geological ages.
27 The Anthropocene is coded into this long history of ages, which is biblical, too. The
28 Fire Next Time sort of thing, the ages of Chaos, Eden, the Fallen Present, Apocalypse,
29 Earthly Paradise, and Judgment. Thomas Burnet (1635-1715) called it “the sacred
30 theory of the Earth” (see Gould 1988). I should say that I use the Anthropocene in
31 some of my work (Gilbert and Epel 2009). But when I first saw the term I did not like
32 it at all as a biologist because it seemed to reintroduce the great chain of being
33 (Lovejoy 1964): we had the age of fish, we had the age of reptiles, we had the age of
34 mammals, and guess what is next on the great chain of being? The Anthropocene!
35 The age of the human!
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45 Donna:

46 Which ends in the destruction of the Earth.
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50 Scott

51 Which ends in destruction! Talk about sacred theory. The other thing that I did not
52 like about the term, is that it is a term of a geological epoch. Okay, I think what we
53 are calling the Anthropocene is a short geological *event* rather than an *epoch*. It is
54 more like the K-T event, (or, more properly, the K-Pg event) , the Cretaceous–
55 Tertiary boundary 66 million years ago that saw the extinction of the non-avian
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3 dinosaurs, or perhaps more aptly like the even bigger Permian–Triassic extinction
4 event 252 million years ago in which more than 90 percent of all species went extinct.
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6 The Anthropocene is like the Great Permian extinction (Kolbert 2014). The
7
8 Anthropocene is, you know, “The Great Dying”, which is not an epoch, it is a
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10 transition time. And so, I do not think we are in a new epoch, I think we might be in a
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12 transition to who knows what. But it is not a geological epoch. I think that we are
13
14 elevating ourselves by thinking that humans are making a geological epoch. I think
15
16 we are rather making a transition to something.

17
18 Anna:

19
20 I agree with everything that has been said, but I will also argue for the usefulness of
21
22 the term Anthropocene. For me, the term Anthropocene maintains a productive
23
24 distance to “Man”, the modern human conceit. “Man” does not mean humans, but a
25
26 particular kind of being invented by Enlightenment thought and brought into
27
28 operation by modernization and state regulation and other related things. It is this
29
30 “Man” who can be said to have made the mess of the contemporary world. It was
31
32 “Man” who was supposed to conquer nature. Building that recognition into the name
33
34 Anthropocene could potentially – at least at this moment when the term has not yet
35
36 been used so much – bring some thought to the very contradiction of asking for
37
38 solutions from the very creature that caused all the problems in the first place. I share
39
40 your concerns about the Anthropocene as a form of conceit, Donna, a conceit that
41
42 suggests the current world is the product of a species act. At the same time,
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44 Anthropocene also contains an interesting contradiction that perhaps can be played
45
46 with. It is precisely because the Anthropocene is still so multiple and inchoate that it
47
48 maintains potential (Swanson, Tsing and Bubandt 2015). And part of its potential is
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50 what I am seeing right here: we have a geographer, a biologist, a science studies
51
52 scholar, and three anthropologists sitting down at a table together to talk about the
53
54 environmental dilemmas that we are in right now. This is, I think, the promise of the
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56 Anthropocene: having critical thinking going on across some of the divisions that
57
58 existed before.
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61
62 Nils

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64 Noboru, I know you are educated in the States, but you teach and have spent most of
65
66 your academic career in Japan. Japan has a very different history of science, when it

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3 comes to understanding the relationship between nature and culture. How does the
4 Anthropocene look from where you stand?
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6

7
8 Noboru

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10 Currently we have been working on a research project, in which we use the term
11 “Humanosphere”. We started this research titled “In Search of Sustainable
12 Humanosphere in Asia and Africa” in 2007 (Lopez et al. 2013) before we learned
13 about the discussions concerning “the Anthropocene” in the West. We imagine three
14 spheres on a global temporal-spatial scale: the Geosphere, the Biosphere and the
15 Humanosphere. The Geosphere appeared about 4.5 billions years ago, the Biosphere 4
16 billions years ago. What we call the Humanosphere is only around 200,000 years old
17 but it is now the dominant force of change on a global scale since the advent of the
18 agricultural and industrial revolutions. There is a lot of contention about when the
19 Anthropocene began (e.g. Lewis and Maslin 2015; Ruddiman 2013; Zalasiewics et al.
20 2014,), but at a glance, the Anthropocene and *Humanosphere* seem quite similar. Our
21 conceptualization, however, is more sensitive, I believe, to the kind non-unified
22 nature of the globe that Scott just pointed to. We also place less weight on the
23 positionality of humans vis-à-vis other agents in the spheres. Can I explain how the
24 two concepts differ?
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36 Donna

37 Yes, of course.
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41 Noboru

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43 The Humanosphere is governed by a working that underpins other spheres. The
44 Humanosphere is therefore conceptualized as incorporating geosphere, biosphere, and
45 human society. The geosphere emerged first, followed by the appearance of the
46 biosphere, and finally human society in a narrow sense and the Humanosphere in a
47 broader sense. This sequence is very important as human society is much dependent
48 on the existence of the preceding spheres. In other words, the structure of the
49 Humanosphere is defined by such factors as material and water flows, biological
50 activities in common lands, rivers and seas as well as their complex interactions. In
51 addition, we pay particular attention to tropical zones where material flows and
52 biomass regeneration are most active. The flows and regeneration there are a driving
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3 force for the sustainable existence of multispecies including humans, if not for the
4 land-based, productivity-driven capitalism. Attention to the history and the state of
5 articulations among geosphere, biosphere and human society in Asia and Africa, led
6 us to paradigm shifts, or shifts of our focus: from temperate zone to tropical zone,
7 from production to sustainable livelihood, and from the land surface to sphere. We
8 argue that in the Asian and African Humansphere, many societies pursue their own
9 paths of endogenous development, rather than the growth of per capita income or
10 population. That was actually a norm for most human societies until a few centuries
11 ago. The Humansphere is not two-dimensional or surface-bound. It is not only the
12 ground surface on which to cultivate, but also other agents that support the livelihoods
13 of multispecies and environmental sustainability. Our “spheric” perspective, I think, is
14 a product of a Japanese perspective. In Japanese *shinra bansho* (森羅万象) refers to
15 “all things in the universe” or “all the creation between heaven and earth”, of which
16 we humans are occupy only a small part.
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28 Anna

29 May I try to tease this out? Please correct me when I am wrong. When we spoke
30 before, you moved your concept away from the “sphere” to something like “an
31 encompassment of many disparate things.” This sphere in your terms is not really a
32 sphere. It is a bag of everything; it is the world of living things; it is all the mass and
33 the matter, and the interconnection of everything on the surface of the Earth and in the
34 water. What is interesting about this approach to me is that, on the one hand, it
35 reaches out to make a connection with Western science. On the other hand, it is doing
36 something entirely different. It is this concept of undifferentiated mass that is
37 important to think with. This is the rich mix of roots and rhizomes, a mess of
38 biomass. This works against the familiar distinctions of Western science; it forces us
39 to consider entanglement as a whole.
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49 Donna

50 And that the very notion of sphere makes difficult.
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55 Anna
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3 Yes. So I do not think that any of the spheres you discuss are exactly spheres. The
4 “Biosphere” you mention might be, instead, “the world of living things.” When we
5 talked about this the other day, I introduced the Meratus Dayak notion of *bulu gumi*,
6 which literally means “the body hair of the earth” (Tsing 2005). It is all the living
7 things, in the water, in the air, and on the surface of the earth. It is all those things:
8 they are the body hair of the earth.
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12

13
14 Noboru

15 Yes.
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20 Kenneth

21 This reminds me, of the Greek concept of “choros”. For Plato, who spelled it *chora*,
22 it was an enclosed space, like a jug, from which everything wells up. And it was
23 identified by him as a kind of female principle, but from the perspective of the
24 citizenry of the Greek polis, it was a notion of the “where things take place”, not
25 within a sphere, but as they take place in a complex entangled relationship. Choros
26 thus defines a place from within, rather than from without, as with boundaries drawn
27 on a map or globe, but as, for example, a common pasture is defined by grazing
28 animals from within. (Olwig 2011).
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36 Donna

37 Think also of the chorion, the mammalian membrane, in embryology.
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40

41 Kenneth

42 Yes! I think Plato’s concept of “chora” is important, precisely because Plato does not
43 understand its embryonic implications! Plato is a disciple of a utopian idea of
44 Euclidian space. In his universe, there are two important things. One is the “idea” and
45 the other is “chora”. The chora is a bastard concept, he feels. It is a dream concept
46 that he does not understand. But then he still goes on to describe it as a kind of
47 feminized vessel, in which women are reduced to jugs that give birth to everything.
48 Plato thus saw the chora as a sphere, an enclosed Euclidean spatial vessel, out of
49 which everything emerges. The notion of choros upon which the Greeks founded their
50 polity, however, was closer to the eastern concept of nothingness. By virtue of the
51 entangled relations between people and the material of life more generally, an
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3 unbounded nothing becomes a some place, a choros, that nourishes life (something
4 like a placenta).
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8 Scott

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10 I think Ursula Le Guin comes in really interestingly with her bag theory of knowledge
11 (Le Guin 1996). A sphere is connotes completeness, not only wholeness, but
12 everything is there. This is a denial of creation, a denial of creativity, a denial of new
13 things coming into the world. The bag on the other hand is open, full of holes.
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16

17
18 Donna

19 Especially if it is made of nets!
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21

22
23 Kenneth

24 Bag lady! God is a bag lady!
25
26

27
28 Donna

29 A pretty good approximation!
30
31

32
33 Donna

34 See, I think people like us have an obligation to propose these words for naming our
35 urgent conjuncture, and not to be dazzled and tame in the face of the proposal of these
36 other terms that maybe useful in ways. What if we were truly interested in not the
37 sphere, but the old lady's net bag that collects up, a gathering, a collecting up? I think
38 folks like us, who are really over-educated have an obligation not to let them get away
39 with another simplification, that I think is part of the problem with the Anthropocene
40 in the first place...Please tell me that you share my anger, that in this moment of
41 trans-disciplinarity and multispecies everything, in this moment of beginning to get a
42 glimmer of how truly richly complex the world is and always has been, someone has
43 the unmitigated arrogance to name it the Anthropocene. [Laughter] Tell me you share
44 my anger!
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54 Nils

55 I share it, but I want to play with it at the same time.
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3 Donna

4 And I do, too.
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7
8 Nils

9 Because for these people that story of the Anthropocene is not a story of human
10 mastery at all, it is a story of unintended consequences and decay.
11
12

13
14 Donna

15 Of course, but then it is of course the old tragic story—look there is the noble project
16 of barely secularized Man, acting like God, which will of course fail. And you will
17 come down in a freaked-out ecosystem, where the jellyfish and the slime will sting
18 you to oblivion. Because it will all end in slimy ruin with a lot of stingers in it.
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23
24 Scott

25 Right.
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29
30 Donna

31 And that is what the Anthropocene story does.
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34
35 Anna

36 I think you are wrong about that. Take for instance, the Gifford Lectures by Bruno
37 Latour (2013), in which Latour makes a masterful defense of apocalypticism, and he
38 does so through the concept of the Anthropocene. I thought it was really brilliant.
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40
41

42
43 Donna

44 Those lectures are fun!
45
46
47

48
49 Anna

50 He answers the charge of being apocalyptic: “why not use it? We know it is a trope.
51 We know it can get us in trouble. But it also enables a kind of serious play that allows
52 us to think things that we would have never been able to think without that trope”. So
53 I found myself drawn in. Meanwhile, that does not mean all is well with the term
54 Anthropocene. My fears and angers are about another set of people, the “good
55 Anthropocene people”...
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5 Donna

6 The “fix-it” people.
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9
10 Anna

11 Yes, the “fix-it” Anthropocene people, those people have a plan for us, but they are
12 going to fail in a really destructive way.
13

14
15
16 Donna

17 I agree with you, and I am afraid of those people, too. Big time! Because they actually
18 believe their sacred secular story, they believe in a “techno-fix”. And they practice it,
19 and they teach it, and they get a lot of money to do it. And I do not mean that you
20 cannot research to fix things, I am perfectly for research that seeks to fix things...
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26 Anna

27 Right, but their conception of the epoch is a modernist, a perfection-yet-to-come-
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31 Donna

32 “Techno-optimism” is way scarier than “techno-pessimism”.
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36 Anna

37 Right.
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41 Nils

42 Your discomfort with the simplifications of both time and space that go into the
43 concept of the Anthropocene is reminiscent of the discomfort that drove a recent
44 conference organized by Bruno Latour, Deborah Danowski and Eduardo Viveiros de
45 Castro, called “the Thousand Names of Gaia”. They suggested at the conference that
46 the Anthropocene is predominantly temporal. The suffix “cene”, after all, is Greek for
47 “recent” or “new”. The Anthropocene grew, they noted (as you have also just
48 highlighted), out of a particular view of the world that is hegemonically Western
49 (Danowski, Viveiros de Castro and Latour 2014). The Anthropocene, in other words,
50 had a Western legacy and a Western logic. Meanwhile, the notion of Gaia, proposed
51 by chemist James Lovelock and microbiologist Lynn Margulis (Lovelock and
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3 Margulis 1974), was, so the conference organizers suggested, a spatial phenomenon,
4 an autopoietic sphere that created its own stabilities and instabilities. As a spatial
5 concept Gaia seemed to open up to other ontologies and other worldviews and
6 perhaps also to other potential solutions to the world's problems. Gaia was a better
7 anthropological alternative.
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13 Donna

14 I am thinking about the "Thousand Names of Gaia" conference, and how it originated.
15 Because the idea came from Eduardo Viveiros de Castro and me in the train coming
16 back from the "gestes spéculatifs" (speculative gestures) colloquium in summer 2013
17 at Cerisy in France organized by Isabelle Stengers, where we were both angry at the
18 absence of any other peoples from imagining the world other than essentially Western
19 Europeans. The sense of the absence of thinking the world out of other languages, and
20 other ways of doing life. Nobody was against the understanding that Western
21 Europeans and Euro Americans are not the world, but none of us made the Thousand
22 Names, the Thousand Worlds, actively present either. This is not about cultural
23 pluralism or epistemological relativism, but about decolonial work with consequences
24 for and in the world. You do not have to look very far these days in order to be not to
25 be quite as ignorant as we are. Our ignorance is culpable, and it is unnecessary. It is
26 not merely that other terminologies open up a kind of pleasure in the philology of it
27 all, which is true. But other words and worldings help us reimagine our current
28 urgencies, and perhaps open up a possibility of collaboration and of research. It opens
29 up, I think, the possibility of working otherwise. I feel like we quickly give up on
30 naming our urgencies with more situated precision and diversity. If we as highly
31 educated people do not do this work, who is going to do it? We need to get literate!
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48 Nils

49 I think, we can agree, that the Anthropocene is a polluted concept, it is a contested
50 concept, it is a problematic concept for all kinds of reasons. At the same time, it might
51 still be utilized to do useful work, to galvanize already emergent forms of thinking
52 and acting in academia. For instance one could claim that it disrupts the global
53 hierarchy of sciences. After all, it comes as an invitation to collaboration from the
54 "hard sciences", from the apex of the hierarchy of sciences, to the human and social
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3 sciences. The invitation is also a declaration of the failure of the conventional natural
4 sciences and sounds something like this: “something is happening to the natural world
5 and to understand this, we need to bring the activities of those beings called ‘humans’
6 into the picture. To properly understand ‘nature’ we need the social and human
7 sciences.” This invitation comes, it seems to me, at an auspicious moment, namely a
8 moment that you represent, Scott! It is a moment of fundamental ferment in genetics
9 and molecular science in which symbiosis, co-evolution, epigenetics emphasis the
10 social and co-species nature of evolution. This type of approach, in turn, gels really
11 well with what is happening in anthropology (and other social sciences) where there is
12 also considerable interest in co-species symbiosis. So my question is this: does the
13 Anthropocene, in spite of its polluted nature, not still represent an opportunity to
14 break the two cultures of science (Snow 1961)?
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25 Donna

26 Well, I think that Scott’s biological argument that “we have never been individuals”
27 (Gilbert, Sapp and Tauber 2012) is different from that of the anthropologists, because
28 there is a crowd of critters in Scott’s argument that are only now beginning to find
29 their way into anthropology. The radicalism of “we are all lichens” is way more
30 interesting than the radicalism of anti-humanist anthropologists.
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37 Anna

38 I agree that your work, Scott, presents a really interesting challenge for all humanists,
39 not just anthropologists, who think it is off-limits to study anything except humans,
40 that we do not have the kind of right to ask about any other organisms, except for
41 humans. Just yesterday one of my colleagues said: “As an anthropologist, how can we
42 ask about a fungus?” You challenge us to say we can.
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49 Donna

50 The answer is “how not?” [Laughter]
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53
54 Scott

55 How not? Yes!
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59 Kenneth
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3 We are fungi?
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6 Donna

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8 Hopefully we are delaying that! [Laughter] Well, some of us-
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11 Scott

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13 We will become! [Laughter]
14
15

16 Donna

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18 It is in our near future!
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20
21 Nils

22
23 Well, in no small measure inspired by your work, Donna, anthropology is already
24 being populated by many critters, and there is a lot of research into more-than-human
25 worlds and multispecies relationships. So something is clearly happening in
26 anthropology. The same is the case in geography, I believe.
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31 Kenneth

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33 I think that the goal of breaking down the two cultures is wonderful. George Perkins
34 Marsh (1801-1882), the American geographer and conservationist, is part of a whole
35 tradition in geography and environmental history that tries to do that. Interestingly, he
36 was also an early promoter of a version of the idea we now call Anthropocene. He
37 thus used the epigram: "Not all the winds, and storms, and earthquakes, and seas, and
38 seasons of the world, have done so much to revolutionize the earth as Man" to
39 preface his 1864 conservation classic *Man and Nature* (Marsh 1965). And it is also
40 interesting, in light of our conversation today, that he subsequently dropped "man,"
41 changing the title to: *Physical Geography as Modified by Human Action*. The
42 problem is that within geography, at least, this tradition has been side tracked by the
43 modernist discourse of "spatial science," which has split apart the humanities and the
44 natural sciences (Lowenthal 2000).
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56 Donna
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3 The big challenge is pragmatically how to study it. What is a good ethnography under
4 these circumstances? Truly how does one practice? It is all well and good to
5 understand this as a pleasure, a philosophical invitation, an invitation to both play and
6 work, fine, but how do you really work in a finite lifetime, and how do students get
7 trained, so that they might possibly be able to write something! I mean truly, I think
8 the pragmatics of this are extremely challenging for all of us.
9

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14 Anna

15 Science studies is an interesting case here. The kind of science studies that just
16 followed scientists around proved easy for humanists. But the kind of science studies
17 that Donna does where you actually have to get involved with what the scientists are
18 studying as well as who they are is much more challenging.
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23
24 Noboru

25 Right.
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30 Scott

31 We are actually trying to do something at Swarthmore College. We have been asking
32 ourselves what we at the liberal arts colleges can we do better than those in the
33 established research universities. What we do better is simply that we can talk with
34 our colleagues. Because you cannot easily do that at a research university.
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40 Donna

41 And you are not buffered by your graduate students-
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45 Scott

46 We are not buffered by graduate students, and we are not focused by the graduate
47 students and their training, which is incredibly important. What we can do is banal but
48 important: we can walk across the hall and be in a different department. Here is the
49 possibility of new start-ups, new sorts of foundations! What new knowledge can we
50 make in this way? We can make interdisciplinary knowledge, and do it better than at a
51 prestigious research university.
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58 Anna
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3 I think that is an important insight, and important particularly for someone like me,
4 who is social scientist, but who has wanted natural scientists as playmates for some
5 time. But in the US I have had a very hard time finding anyone in the sciences who
6 would even have lunch with me in a serious way.
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10
11 Kenneth

12 I think that US universities in general are better to do that than here in Europe and
13 Scandinavia, where we...
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16

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18 Anna

19 I would say the opposite: more is possible in Denmark!
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22

23 Kenneth

24 Well, okay, but in geography, as inspired by thinkers like Marsh, the idea was that we
25 were to have physical and cultural geography in one department and that we would
26 therefore begin talk to each other and be interdisciplinary. But a lot of departments
27 have ended up splitting up...
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33 Donna

34 That is happening in the US, too.
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38 Nils

39 Can I go back to the challenges of inter-disciplinary practice? I do not see the practice
40 of interdisciplinary work as an obstacle but rather as an opportunity. I have in mind
41 here not the practice of publications and merits, but the actual practice of research. I
42 think – and it is in the main thanks to Anna – that in AURA, a transdisciplinary
43 project about the Anthropocene at Aarhus University that involves both
44 anthropologists and biologists, some of the most fruitful moments have come, not
45 when we have epistemological discussions, but when we are in the field together
46 talking about concrete findings. I remember, for instance, the fascination we all had –
47 and the transdisciplinary discussion about the challenges of understanding truly alien
48 life forms that developed – when Peter Funch, a freshwater biologist, showed us
49 weird and wonderful live images of the rotifers or wheel animals he had just collected
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3 in a nearby lake. Our best interdisciplinary moments are when we are most practical,
4 as it were, being led by a shared curiosity about the world.
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6

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8 Anna

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10 Let me expand, too, on what Nils is saying. I think that rather than trying to start with
11 these great differences of knowledge practices, we might put those aside for awhile.
12
13 Instead, we might get interested in some common puzzles together and see if it works.
14

15
16
17 Scott

18 And again, the metaphor I like to use for this kind of endeavor is an *alliance*.
19
20 Disciplines do not have to take over the other in order to work together.
21
22 Collaboration does not mean you need to fuse the disciplines to make some new
23 hybrid. No, you are allies! You can keep your disciplinarity, in fact you should in a
24 way, because you only get a creation of something new, when you have differences to
25 begin with, to interact with.
26
27

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29
30 Donna

31 Do not give up all your skills!
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35 Scott

36 Right, so when I talk about alliances between even science and religion (Gilbert
37 2013), religion is not going to take over science, science is not going to take over
38 religion. But they can work together to a common end such as ending habitat
39 destruction. The phrase that I sometime use is the “Grand Alliance” of World War II.
40
41 This was also called “the Strange Alliance”, which becomes apparent when you think
42 of the characters. England, the United States, and the Soviet Union each had totally
43 different politics and economics, but still allied together! And then they went their
44 separate ways afterwards.
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51 Donna

52 Something of an understatement! [Laughter]
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56 Scott
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3 Yes, but the thing is that one can say: “okay, we are going to get together to
4 understand this. But that does not mean that I have to give up my disciplinary identity,
5 and I should not fear that you are going to try to remake me.”
6
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8

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10 Anna

11 What I have been thinking disciplines through right now is *genre*. Instead of thinking
12 of each discipline as a mode of knowledge, we might think of each as offering the
13 difference between a mystery novel and a science fiction. There it no reason why you
14 could not construct a science fiction mystery novel. If you think about these
15 differences as genre differences, it allows a lot more play.
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21 Donna

22 You know, I think it has been long time since C. P. Snow’s “two cultures” (1961)
23 described very much. But I do think there are questions of trust involved. I know this
24 is not a project for everybody, but for me the question is “how did trust get
25 destroyed?” I am interested in rethinking what happened in the period of the so-called
26 science wars of the 1990s that allowed a kind of devastation of trust in a way that has
27 had consequences. How, against this background, do we now build trust around
28 problems and situations that you care about, such as, let us say, the question of the
29 destruction of the remaining native grasslands in the US Midwest? How do people get
30 involved in habitat restoration and maintenance around grasslands and watertables?
31 Bible Christians and scientists in places like Kansas really do need to work together.
32 And they turn out to be able to work together around certain kinds of storytelling,
33 certain kinds of terminologies, and not others, backgrounding certain kinds of
34 terminologies, in this case both evolution and climate change (see
35 <http://njconservation.org/blog/?p=36>). Science studies scholars can be positive forces
36 in such difficult collaborations.
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49 Scott

50 I think, trust often comes down to a matter of personal relationship, eating of the same
51 rice bowl, drinking at the same bars-
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56 Donna

57 Having lunch together.
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5 Scott

6 Having lunch together. It cannot be done on a theoretical basis; it is not that type of
7 thing. That it has to be done out of person-to-person-
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11 Anna

12 I am going to speak for more than trust, but for the kind of imagination that every
13 person in this room has added to what counts as scholarship. Sitting down together is
14 not enough. Social scientists have had many, many experiments in working with
15 scientists, most of which are examples of things not to copy, it seems to me.
16 Particularly those forms of experiments in which social scientists naively adopt the
17 scientific form, reducing questions to tautologies that you can test a hypothesis and
18 quantify everything. You end up with a trivial kind of social science; social scientists
19 become PR persons for science. In these unhelpful endeavors, social scientists and
20 natural scientists have also trusted each other and worked together. But still they
21 come up bankrupt. We began this conversation by saying that maybe the term
22 Anthropocene is not enough, and that the concept itself will not do the work. But a
23 change in imagination is also part of the kind of new relationships that are evolving.
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35 Donna

36 Speculative fabulation is a phrase that I am very attracted to. All the SF terms:
37 Science Facts, Speculative Fabulation, String Figure, etc. You know, “cat’s cradle
38 terms” (Haraway 2012). Speculative fabulation is something everybody sitting around
39 this table does. Taking fabulation seriously entails proposing possible worlds,
40 inhabiting them with different sorts of work practices, or disciplinary skills, or
41 whatever. Such proposals are not made up. It is a speculative proposal, a “what-if”. It
42 is a practice of imagination, as a deliberate and cultivated practice. And it is a
43 deliberate and cultivated practice that we know a little bit about how to do. It is not a
44 “set-up”, and you do not really know if anything is going to come out of it, or not.
45 People may decide to work together on something, or not. But it will grow out of
46 somehow having affected each other’s imaginations.
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56 Kenneth
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3 I agree. The idea of play is important here....and perhaps also more generally. I am
4 thinking of Huizinga's (1970) classical concept of homo ludens.
5
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8 Donna

9 Yes, *ludens* is a good enough species name! A better species name than *sapiens*!
10
11

12
13 Scott

14 There is more evidence for it! [Laughter]
15
16

17
18 Noboru

19 I would like to hear a little more about what distinguishes the concept of Capitalocene
20 from Anthropocene. When I got together with natural scientists for the first time for
21 my research on plantations in Southeast Asia, I explained to them how the social
22 scientists in the group liked to think about flows of capital and money to enquire into
23 how capitalistic system is articulated with flows of nitrogen and material cycles. The
24 natural scientists found this interesting because it allowed them to think about
25 circulation and articulation between nature and societies.
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33 Donna

34 Andreas Malm who was graduate student at Lund first proposed the concept of the
35 Capitalocene (Malm and Hornborg 2014), and Jason Moore, who was there when it
36 happened, picked it up, and used it to reread Marx in a multispecies kind of way
37 (Moore 2014a, 2014b). What I think the term Capitalocene does that the term
38 Anthropocene does not do, and cannot do, is to insist that it is an historically situated
39 complex of metabolisms and assemblages. The people that I know who use
40 Anthropocene tend to emphasize the history from the mid-18th century forward, and
41 tend to take the use of fossil fuel as the key historical moment. The Capitalocene
42 suggests a longer history. I think we are looking at slave agriculture, not coal, frankly,
43 as a key transition.
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53 Noboru

54 I see.
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58 Anna
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3 The concept of Capitalocene intersects with your work, Noboru, because it asks the
4 question of what makes a plantation, and what kinds of long-distance simplification of
5 landscapes all over the world were made possible by it (Ishikawa 2013).
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10 Donna

11 And the transportation of genomes. I think the transportation of genomes, the
12 transportation of breeding plants and animals, including people, is crucial to the
13 plantation.
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18 Anna

19 What thinking through capital means for knowing the Anthropocene might be to
20 consider the importance of long- distance investors in creating an abstract relationship
21 between investment and property. This new relationship makes it possible to turn
22 ecologies into something completely different, even if their sites are very far away.
23 This move, which I think of as alienation, changes the plants, the animals, the
24 organisms that become part of the plantation.
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31 Donna

32 And the people!
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37 Anna

38 The people, too, become alienated resources, and it is that move that has allowed the
39 spread of the plantation system.
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44 Donna

45 Maybe we should propose a different word to signal this? The Plantationocene?
46 Maybe that is a better, more descriptive, term? [Laughter] Capitalism is a late
47 development!
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52 Anna

53 We need to understand the dynamics through which plants and animals are abstracted
54 in order to become resources that can be used for investment. Plantations and feedlots
55 are places where this happens.
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1
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3 Noboru

4 To me plantations is just the slavery of plants.
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8 Anna

9 I agree.
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11

12
13 Donna

14 And microbes.
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16

17
18 Noboru

19 Yes.
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21

22
23 Donna

24 When Anna and I taught our last geofeminism seminar at UCSC, we spent a lot of
25 time on plantations, around just these arguments. And, the plantation system predates
26 both the term Anthropocene and Capitalocene. The Plantationocene makes one pay
27 attention to the historical relocations of the substances of living and dying around the
28 Earth as a necessary prerequisite to their extraction (see also Lewis and Maslin 2015).
29 It is no accident that labor is brought in from elsewhere, even if, in principle, there is
30 local labor available. Because it is more efficient in the logic of the plantation system
31 to exterminate the local labor and bring in labor from elsewhere. The plantation
32 system depends on the relocation of the generative units: plants, animals, microbes,
33 people. The systematic practice of relocation for extraction is necessary to the
34 plantation system. This began prior to the mid-18th century story of fossil fuels and
35 steam engines and industrial revolution and so on and so forth. All of which is terribly
36 important, God knows! And unfortunately so. But I think that the fundamental
37 revolutions in wording are consequential – so we need to call it the Plantationocene,
38 forget the Capitalocene! [Laughter]
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51 Everyone

52 [Laughter]
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56 Kenneth
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3 Your point about bringing in people from outside as to the slaves themselves in the
4 West Indies because they did not reproduce, they had to keep bringing in new
5 supplies. The debates about slave rights began with reformers who initially just
6 wanted to allow them to have children, because they were not even allowed to
7 reproduce.
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13 Donna

14 It is like the United States becoming energy sufficient through fracking. Self-
15 sufficient slave production becomes a reformer's goal because so many slaves are
16 dying under conditions of extreme extraction.
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21 Kenneth

22 But the Capitalocene, or whatever you call it, is the Obscene maybe.
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25

26 Donna

27 The Obscene! [Laughter]
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29
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31 Kenneth

32 If you think about enclosure. Enclosure is essentially a way of putting a Euclidian grid
33 on the world. If you think about Euclidian geometry, the line has no width, the dot
34 has no depth, no space, it does not exist. It was a mind construction.
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39 Donna

40 Which was part of its beauty.
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42
43

44 Kenneth

45 Which was its beauty. Then you take this mind construction and put in on the Earth,
46 and you turn it into the basis of enclosure and property. It is interesting, in this
47 respect, that the German (Nazi) legal thinker Carl Schmitt, in his currently influential
48 book *Nomos* (2006; original 1950), sees a new Eurocentric global order, a variant of
49 the Anthropocene, dating from the discovery of the New World and its spatial
50 enclosure of that world, for example by plantations. *Nomos* is the measure by which
51 the land in a particular order is divided and situated; it is also the form of political,
52 social, and religious order determined by this process. It is a kind of precursor of the
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3 Capitalocene, but cast in a positive modernist light. What is property from this
4 perspective? It is a space, which is uniform in its own economic context, but does not
5 really exist in the greater scheme of earthly life. The next step is to try to manipulate
6 this new reality, through drainage for example, so that you get crops that grow evenly
7 in spatially uniform squares of property. The problem you face, however, is that
8 earthly life processes cannot exist for long within uniform squares, and in times of
9 increased rainfall, turbulence leads to disastrous flooding. You are manipulating the
10 world to make it fit a utopian Euclidian grid that maybe good to think with, and good
11 to construct property relations with, but which does not fit the toplan world. But in
12 doing so, you are creating property that you can then sell and circulate according to its
13 exchange value, and when it is carried away in a flood, you can blame it on global
14 warming, rather than global Capital (which one might then blame for global
15 warming).

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26 Nils

27
28 The Euclidocene?

29
30
31 Kenneth

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33 [Laughter]. You have got it! That is what it is!

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35
36 Donna

37
38 No, but hang on. You are giving us a story of the invention of certain cognitive
39 technologies that are terribly important in the history of philosophy, and the history of
40 art and many other things. Cognitive technologies that are rooted back in the Greeks-

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42
43
44 Kenneth

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46 Yes.

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49 Donna

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51 This weird group of highly fictional people, called the Greeks! [Laughter]

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54
55 Donna

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3 Anyway, cognitive technologies have a history. And they were repurposed in the
4 Plantationocene. Okay? And Cartesian cognitive technologies proved to be very apt
5 for repurposing in the Plantationocene-
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9
10 Anna

11 Right.

12
13
14 Kenneth

15 Yes.
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20 Donna

21 We need to remember that these conceptual apparatuses like Euclidian geometry
22 became useful in the hands of a Galileo, who employed it to theorize about gunnery
23 problems in the cities states of Italy. Galileo was faced with the problem of the
24 trajectory of a cannonball. Euclidian geometry allowed him and others to make some
25 headway in this problem in the Italian cities states. This is a cognitive technology that
26 then gets inherited, partly because of the history of schools, as if they are disembodied
27 ideas. So they are deliberately disembodied as part of the way the technology works. I
28 do not mean to suggest that Galileo was nothing but a gunnery planner, but ...
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36 Everyone

37 [Laughter]
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41 Kenneth

42 I agree that the Euclidian thing was not just an idea. The point is that when this was
43 applied initially to enclosures in Venice and elsewhere, it formed the basis for an
44 expansion, a global expansion that ended with overseas the plantations. And this
45 happened through a related idea of the nature of the garden; of this garden as the
46 epitome of the natural. At the seminar yesterday I showed pictures of people making
47 gardens, "English landscape gardens" they are called, but they were really British.
48 The point is that these people at the same time were starting plantations in the West
49 Indies and other places. All over the world, you have these English landscape gardens
50 showing up; universalizing a scenic spatial idea of landscape, in which the exchange
51 value of the estate is not just a question of its enclosed property, but also the cultural
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3 capital represented by the extensive view, from the estate's garden, of infinite global
4 perspectives. So it is an application of a global ideal (Olwig 2002).
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8 Scott

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10 On the Plantationocene idea, I read a very interesting review in the *New York Times*
11 on Edward Baptist's book *The Half Has Never Been Told* (2014), which basically said
12 that slavery in the United States was the basis for the economy, because you could
13 sell the slaves as collateral, and that bonds were being sold on slaves – and that gives
14 a whole new notion of bonds – and that the slavery was not only the basis of the
15 Southern economy, it was also the basis of the burgeoning US economy.
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21 Donna

22 The structure of the whole economy.
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26 Scott

27 And that is the “half not told”.
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31 Donna

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33 So partly, you know, partly what happens is we proliferate these stories. Jim Clifford
34 talks about needing a big enough story (Clifford 2013:86). And that is a story that
35 does not close down. All of our stories, whether it is the Anthropocene, or the
36 Capitalocene, or the Plantationocene or my current new lover, the Chthulucene, with
37 whom I am now in bed... in tentacular embrace. Never mind!
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43 Everyone

44 [Laughter]
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48 Donna

49 All of these stories threaten to become too big very fast. They threaten to collect up
50 every thing. We have the habit of mind of going for a theory of everything very fast,
51 and we need to un-cultivate that habit. It should therefore be the job of all of our
52 stories to remind us of how terribly contingent each one of them is. Things did not
53 have to be that way, but they were that way. And they may yet be otherwise. I think
54 one of the habits of mine that emerges from serious storytelling is remembering
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3 mortality and contingency, and that the world might yet be otherwise, but it is not. It
4 is that Marxist premise, that critical theoretical Marxist premise that the established
5 disorder is not necessary, but it sure as hell is! The implicit question for me is always
6 the counterfactual; again, it is a science fiction practice. It is like Kim Stanley
7
8 Robinson's wonderful alternate history novel *The Years of Rice and Salt* (2003). What
9 if the great plagues had destroyed Europe? What if? What if this tiny little thing had
10 been a little bit different? What might have been the consequences? And I think that
11 helps us. Not so much to be optimists, which I am not interested in. But the "what if"
12 helps keep things in play. It helps us to be not quite so hoodwinked by the notion of
13 necessity. Including the necessity of tragic domination of the secular project of phallic
14 man, which I think the Anthropocene is a name for.
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23 Everyone

24 [Laughter]
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28 Anna

29 True, you need to have a sense of humor.
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33 Nils

34 Humor, mixed with concern, anger, curiosity, and the imaginative insertion, every so
35 often, of a "what if". I think that is a perfect place to end, for now at least, our
36 conversation about the promises and dangers of the Anthropocene. Thank you so
37 much for agreeing to play.
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