Department of Environment and Resource Studies, University of Waterloo

ERS 310 Environmental Thought

(Environmental Analysis and Solutions V)
Fall 2013

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Tutorial leaders: Nicholas Belanger, Michelle Morris, Amy Robinson

Organization: Lectures: Tuesday 1:30-3:30, DWE 2527
Tutorials Wednesday 9:30-10:20, EV2 2022 and EV1 354
Wednesday 10:30-11:20, EV2 2022, EV1 354
Wednesday 11:30-12:20, EV2 2022, EV1 354

Description and Rationale

What we are doing on Earth is wrecking the place. The dominant trends of human activities and their effects are, by some human parameters, improving (uneven but generally greater infant survival, lifespan, literacy and access to goods and services, etc.). But in the bigger picture the major trends (especially in ecological stresses, climate instability, inequity and poverty) are towards deeper unsustainability. Probably for our own foreseeable interests, certainly for those of our children and for many other life forms on the planet (excepting cockroaches and their numerous ilk), we need to reverse direction. This suggests three large questions: What alternative ways of living would work better? How seriously different are they from current approaches? And how can we make the needed changes?

There are also more immediate and personal questions – chiefly, what can *I* do about this (and also have fun and make a decent living)? But clearly it would be useful if the answers to the immediate and personal questions fit reasonably well with the answers to the big ones. So we will start with those.

The first big question – what ways of living would work – requires some knowledge about what the planet can stand. But it also requires understanding of what humans are capable of doing and being, what they are naturally inclined to seek or favour, what they can comfortably accept as a good and fulfilling life, how they can see and treat the natural environment and its resources, and how they can deal with each other.

The second and third big questions are about social change, which necessarily involves changes in relations between people and nature. How does social and socio-ecological change happen? How can we push social and socio-ecological change in a desired direction?

There are plenty of underlying issues to consider:

- Are people mostly driven by economic motivations, or by desire for status and recognition, or belonging and contribution?
- Will people who are immersed in nature naturally value and protect it?
- Are humans mostly competitive or mostly cooperative, mostly individual or mostly social?
- Is it most important to change individual attitudes, or to build community, or to adopt ecologically informed prices, or to change laws, or …?
- Is small necessarily beautiful?

- Is a spiritual commitment crucial for progress towards a more desirable and lasting relationship with nature, or with other people, or not?
- Do we have an inherent (and eventually suicidal) drive to expand our powers and takings, or is any such behaviour just a cultural phenomenon and we can learn to live well and appropriately on our only planet?
- How can we deal with the enormous complexity of the realities and challenges here without frying our tiny little brains?

This course takes an historical approach to these questions and others. It looks for insights and answers over the great long sweep of the human experience on Earth, paying particular attention to the path of changes that led to the ideas and practices that prevail (and are challenged) today.

There is no assumption that the findings will point to a single set of answers. At least some diversity of understandings and strategies for change is probably a good thing. But we seek to encourage a better informed diversity, better understanding of the grounds for and doubts remaining about the big assumptions commonly made in sustainability circles of various sorts, and commonly made by individuals deciding what to do with their lives.

Six starting points: The course begins with the following observations:

- Pursuing sustainability is as much a social, economic and political challenge as an ecological one. It is about all these considerations and their many and complex interconnections, and involves all of our relations with each other and with nature.
- Different societies, past and present, have adopted different packages of relations among people and with nature, with different basic working assumptions about what defines the good human life, about how to design appropriate socio-economic and political arrangements, about how to understand and treat the "natural" environment.
- The assumptions involved have rarely been presented and discussed openly. Often they are just accepted as the way things are. And the resulting ways of seeing are embedded in, promoted and reinforced by society's main social traditions and institutions (customs and religion, government and economy, science and technology, etc.).
- Each particular package of assumptions on these basic matters establishes a particular way of seeing the world, and the way we see the world inevitably influences how we act. A way of seeing the world functions as a kind of filter on reality. It favours some perspectives and notices some possible solutions while obscuring or devaluing others.
- We are now in the unique historical position of being at least to some extent aware of many different possible ways of seeing and treating the world. We have a basis for examining the package of assumptions that prevails in our society (and others) today. And we can, if we wish, choose alternatives.
- One particular, more or less consistent way of seeing (or worldview) generally prevails today in the most economically powerful nations and has been spread widely through economic globalization. The first fundamental question for proponents of sustainability (who include, officially, the leaders of most governments and progressive corporations) is whether this modern worldview and the basic assumptions lying behind it are compatible with progress towards sustainability. Can the necessary changes be made through reforms without radically altering the fundamentals of modern ideology and practice, or is something basically wrong with how we have

been treating our environment and each other? The second, related question is what can we be reasonably sure about? What way or ways of seeing – what basic ideas about ourselves and the world, about the requirements for sustainability and the most promising strategies for change – can we defend and on what grounds?

Readings

The main readings for the course are listed in the full course syllabus and posted on the ERS 310 D2L website, except a few videos, for which URLs are provided. Participants are also encouraged to draw from other outside sources of insight (not just readings) for the course work, including the tutorials and written assignments.

To access the course D2L website, login at http://learn.uwaterloo.ca/ with your WatIAM/Quest username and password. Documentation is at http://av.uwaterloo.ca/uwace/training_documentation/index.html.

Many readings are listed in the syllabus and provided on the D2L site. You are not likely to read them all. It is a good idea to give all of them a quick skim and focus on two or three of your own choosing. The readings are listed in a rough order of importance but you are free to use your own judgement about that. You are, however, expected to be generally familiar with the material in the readings and lectures, and to demonstrate this familiarity in your assignments and seminar participation.

You might also borrow, buy or share a copy of Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), 132pp, and t read it early in the term. The book is short and engaging (it is the set of Massey Lectures that Wright delivered in late 2004); several of the core readings are excerpts from it and only a couple of those are on the D2L site.

Expectations and assignments

Participants in the course are expected to read several of the required readings for each week *before* the lecture session. Otherwise the lectures will be obscure and the discussions will not be as richly informed. The formal assignments are

- to participate knowledgably and actively in the weekly tutorial sessions; and
- to prepare and submit three reading journal reports.

Tutorial (and lecture session) participation

Each student is expected to participate actively in the tutorial discussions (and in the lecture sessions, to the limited extent possible with so many students). Our first priority is to encourage everyone to be involved thoughtfully in the discussions. Evaluation of participation will be based on the quality as well as the extent of contributions. Evaluation of participation quality will take seven criteria into account:

- understanding of the issues, concepts and historical developments introduced;
- evident familiarity with the readings (particularly the ones individually assigned)
- careful listening and thoughtful reflection before making comments;
- communication skills (clear and constructive questions, comments, etc.);
- synthesis, integration and drawing connections between and among immediate subject matter and ideas, issues and insights from the course materials or elsewhere;
- creativity in ideas, in drawing connections and in presenting/illustrating concepts; and

- identification and reasoned evaluation of the assumptions and values underlying the positions discussed.

There will be bonus marks for humour.

Weekly tutorial participation assignment: For each week of tutorials, except for the first and last ones, each participant will be responsible for representing one of the required readings, or a personality or position from one of the required readings for that week. The assignment of responsibilities will be made in the preceding week's tutorial session. Also for each of those weeks, one or two participants will be assigned to lead the discussion, centred on the weekly discussion question or questions.

The reading journal reports

The main purpose of the three reading journal report assignments is to encourage thoughtful reflection on the readings, lectures and tutorial discussions, and consideration of the overall implications of what you are learning in light of the current challenges for moving towards sustainability. Details about the expected contents of each report assignment are set out below.

The reading journal reports are to be written as if you were a researcher for Ideas, the CBC Radio 1 documentary program. The producers are in the early stages of planning a new series on making transitions to sustainability. One of the series themes is to be lessons from the past and your job is to report and assess some key background information in three reports that happen to parallel the three sections of ERS 310 this term.

In each case, your report is to have two components: an initial brief overview summary followed by a set of journal entries, one for each week covered in the assignment. The weekly entries provide the founding ideas and evidence from which you build the argument in the overview summary. This is an exercise in professional writing, where your readers want the key conclusions in capsule form first, but also want to know there is reliable backing evidence. In preparing your reading journal report, you should start with the weekly journal entries and treat the overview summary as your conclusions from the weekly entries taken together. But in the submitted version put the overview summary at the beginning.

The overview in each report must address the big issue for the particular report, as set out below, drawing from the material included in your weekly journal entries. The overview component is expected to be quite short (overview word limits are included in the report details below).

The weekly journal entries should be prepared with the relevant big issue in mind. While the journal format is flexible, each weekly entry should include

- brief summaries of the main contents or main relevant points made or questions raised in at least two of the week's readings (you may choose to discuss the two or more readings jointly or as separate items);
- relevant points from the class lectures/discussions and other readings;
- considered comments on the significance and implications of these points or questions (particularly with regard to the big issues being addressed in the week and for the assignment); and, as the term progresses;
- increasing concentration on connections or conflicts among the ideas considered week to week.

You must use proper grammar but may include bullet point lists. Each weekly journal entry should 400 words or less.

In general, the reading journal reports should offer evidence of familiarity (though not necessarily agreement) with the key points raised in the lectures, tutorial sessions and readings (though discussion of other relevant books or articles, from other sources, is also encouraged). Each report must include a bibliography (not included in the word limits) with proper references for all sources, using a recognized referencing style – one standard option is set out inhttp://library.concordia.ca/help/howto/turabian.pdf.

Three reading journal reports are to be submitted:

- the first report, including the overview summary and the weekly journal entries, should be no more than 1500 words (400 words at most for each of the three weekly journals and 300 words at most for the overview; no limit for the bibliography). The submission is due on Tuesday, October 1;
- the second report, including the overview summary and the weekly journal entries, should be no more than 2000 words (400 words at most for each of the four weekly journals and 400 words at most for the overview; no limit for the bibliography). The submission is due on Tuesday, October 29;
- the final report should include five weekly journal entries covering weeks 8 through 12. The report should be no more than 2600 words (400 words at most for each of the four weekly journals and 600 words at most for the overview; no limit for the bibliography). The submission is due on Monday, December 2.

For each of the report assignments, please put the topic, your name, your tutorial group time and the name of your tutorial leader at the top of the first page. A separate title page is not necessary and printing on good-one-side re-used paper is encouraged. We do need paper submissions; emailed submissions are not sufficient.

As is the case with all writing assignments, participants are expected to be familiar with the rules against plagiarism and aware of the penalties for offences. See the note on academic offences, below.

All written submissions must be submitted to the instructor or your tutorial leader in person, or to the instructor's mail slot in the ERS mail room (EV2 room 2028) by 4:30 p.m. on the due date. It is wise to keep an electronic copy of all submissions, in case the odd one should go astray.

Given that the course is covering a sizable chunk of human history, you cannot discuss everything. In choosing what to include in the reports, give particular attention to what you consider to be most significant, surprising and illuminating for building a better understanding of the weekly lecture and tutorial issues and possible answers to the three big questions set out at the end of the first paragraph at the beginning of this syllabus.

Be concise. These are short reports. Remember that you are, at least implicitly, making an argument. The considerations noted above will be incorporated in the following rubric for grading the reports, recognizing that the three categories and components in them overlap and interact:

- familiarity with (or mastery of) the concepts and sources, ideas and implications covered by the course (40%);
- coherence (or brilliance) of argument, including insightful understanding, logical flow, emphasis on most significant points, effective use of evidence (with appreciation of its

limitations), integration of ideas, attention to implications, and appropriate credit to sources (40%); and
• clarity (or elegance) of writing, taking into consideration the structure and organization of thoughts and argument, effective linking of broad ideas to special illustrations or examples, proper grammar and syntax, concise presentation, and ease of understanding (20%).

Evaluation

Participation	20% (10% weeks 1-6; 10% weeks 7-12)
Reading journal report 1	20% (due October 1)
Reading journal report 2	25% (due October 29)
Reading journal report 3	35% (due December 2)

In the interests of equity, penalties will be assessed for late submission of assignments. The grade given for a written submission will be reduced by .5 for each day late, except in cases of documented illness or other extraordinary inability.

The reading journal reports assignment details

The reading journal reports are to be written as if you were a researcher for Ideas, the CBC Radio 1 documentary program. The producers are in the early stages of planning a new series on making transitions to sustainability. One of the series themes is to be lessons from the past and your job is to report and assess some key background information in three reports that happen to parallel the three sections of ERS 310 this term.

In each case, your report is to have two components: an initial brief overview summary followed by a set of journal entries, one for each week, that provide details in support of the argument you make in the overview summary. This is an exercise in professional writing, where your readers want the key conclusions in capsule form first, but also want to know there is reliable backing evidence. In preparing your report, however, you should start with the weekly journal entries and treat the overview summary as your conclusions from the weekly entries taken together.

The overview in each report must address the big issue for the particular report, as set out below, drawing from the material included in your weekly journal entries. Especially for the first two reports, the overview should be very short (overview word limits are included in the report details below).

The weekly journal entries should be prepared with the relevant big issue in mind. Each journal entry is also expected to report, and where appropriate compare, the key insights from at least two of the weekly readings, with reference to the lecture materials and tutorial discussions. Drawing from the lectures and other readings is expected. Drawing more broadly from other sources is welcome. Each weekly journal entry should 400 words or less.

Each report must include a bibliography (not included in the word limits).

First reading journal report (covering weeks 1-3, "beginnings")

Your first report is to focus on how the aboriginals and ancients struggled with the problem of sustainability and what we can learn from that. The relevant material relates to practical approaches to making a living, getting along with each other and dealing with

the rest of the environment, but it also includes how people understood the world and their place and role in it.

The big issue to address in this first report is

• what can we learn from the ideas and practices of the aboriginals and ancients that defined how they understood their place in the world, and how they interacted with each other and the larger environment?

For our purposes here, the aboriginals and ancients include the variety of human societies from the dawn of the species up to the times to the beginning of influence by modern ideas of science, economics, progress, etc. (roughly the late 1400s in much of Europe, later elsewhere). That covers the hunting/gathering/foraging cultures and early herding and farming cultures, including those that supported early cities, and the spiritual, religious and philosophical belief systems that rose in these cultures – in other words, the subjects of weeks 2 and 3.

In addressing this big issue, you should consider what aboriginal and ancient ideas and practices were most fundamental, what changes these people made, what worked for them (helped them to survive, have fulfilling lives and maintain sustainable relations) and what did not, and what human inclinations, capacities and limitations are revealed by the nature and results of these ideas and practices.

You should identify important aboriginal and ancient ideas and practices that may still be useful today, even though many circumstances are now quite different. You should, however, also dig deeper into what the long period of "beginnings" tells us about what people can do, what qualities of life in community and environment seem necessary for humans in any culture or time period, and what sorts of ideas, institutions and practices might be both feasible and desirable now.

Feel free to rely heavily on illustrative examples. You are being asked to address a very big issue and cover a very long period and a huge diversity of particular cultures, in a short report. Moreover, you are preparing background material for radio documentaries that will need to be enlivened by engaging illustrative examples.

Second report (weeks 4-7, "into the modern world")

In much of the historical literature, the rise of modern science and the rise of market economies are discussed more or less separately (as in weeks 4 and 5 of ERS 310). However, they are deeply interrelated (as is evident in the materials for weeks 6 and 7) and the combination has been powerful in changing the character of human activities, relations and effects on the planet.

The big issue to address in this second report is

• how did the rise of the ideas and practices that came with and from modern science and economics change how people understood their place in the world, and how they interacted with each other and the larger environment and to what extent did the shift enhance and/or diminish prospects for lasting wellbeing?

For our purposes here, we are considering the gradual rise of modern ideas from the Middle Ages into the 19th century, chiefly in Europe but with some sources and many effects elsewhere (the subjects of weeks 4 through 7).

In addressing this big issue, you should consider in what ways the ideas, assumptions and understandings that underlie modern science and economics are (and/or are not) fundamentally different from those that prevailed among the aboriginals and ancients;

what evident implications the new ideas did and could have for the quality of human lives and the potential sustainability of human activities on the planet; what were the main strengths and limitations of the modern ideas, insofar as these strengths and limitations may have been visible in the period covered.

You may find it useful to approach the big issue in part by identifying and focusing on one or more major issues – for example, how pre-modern and modern ideas have conflicted and combined, or what the main similarities and differences are between the transition to agriculture and the transition to modern scientific and economic practices. Or you might adopt one or more illuminating perspectives – for example, implications for women, or minorities or ecosystems. Recognize, however, that any such approach should assist coverage of the big issue, not replace it.

Again, feel free to rely heavily on illustrative examples of the many influential ideas and applications, players, practices and effects.

Final report (focusing on weeks 8-12, "criticisms and possibilities," but covering the whole course)

Your final report is, naturally, to be about the lessons from this romp through history. It is to consider the practical implications of long record of human ideas and practices concerning how to protect and/or enhance wellbeing on a single, inevitably limited planet. You should include matters addressed in your first two reports, but give particular attention to the ideas, critiques, applications, and happy and tragic results over the past couple of centuries, which we have explored in the final five weeks of the course.

The big issue to address in this final report overlaps with the substance of the final tutorial session. It is

- what basic positive lessons should we draw from our historical experience and apply to reversing dangerous current trends and building societies and cultures that could be generally desirable, just and at least potentially viable over the long run?

For the purposes of this report, you might think of the past as having revealed and tested a variety of alternatives. These have included different ideas and practices packaged in different cultures, institutions, ways of making a living, ways of defining good lives, successful communities, desirable futures. And these, in turn, have rested on different basic assumptions – about the essential character, capacities, inclinations and potentials of human beings, as individuals and communities; about the nature and purpose of the larger environment; and about proper relations between individuals and communities, humans and the biosphere, us and them, now and before and yet-to-come.

In addressing the final big issue, you should consider what we can conclude, however tentatively, from the historical record about the options and underlying assumptions that seem most promising (and least dangerous). You should also consider, briefly whether adopting such assumptions and associated ideas and practices would entail fundamental changes to prevailing basic approaches to how we organize our lives, economies, societies, and governing institutions, etc. And you should consider what historical (or other) grounds can you give to support your conclusions, and how confident you can be that your position is sound.

The course schedule

Beginnings

Week 1.	September 10	The Big Picture: practical choices and underlying ideas for sustainability; different views of the world and different routes to saving it
Week 2.	September 17	Contrasts: hunter-gatherer societies and modern western societies; differences; explanations for the shift from hunting and gathering
Week 3.	September 24	New understandings: philosophy, religion and the roots of the Western tradition

Into the modern world

Week 4.	October 1	Science: nature as knowable and manipulable
Week 5.	October 8	Economics: the rise of markets, individuals and a world of commodities
Week 6.	October 15	Modernity: the union of science and economics and a new image of humanity
Week 7.	October 22	Conquest: the domination of nature and the colonization of the globe

Criticisms and possibilities

Week 8.	October 29	Early critics: conservative, feminist, socialist and romantic responses to industrial society
Week 9.	November 5	Progress and its discontents: reason, technology and doubts in the twentieth century
Week 10.	November 12	Greens: the first century of environmental critique and response
Week 11.	November 19	Sustainability: the integration of environment and development under conditions of complexity
Week 12.	November 26	Lessons: implications of an inquiry into the historical and cultural roots of our current environmental situation and our possibilities for change

Important UW positions on key course-related topics

Unclaimed assignments: Assignments that are not picked up by students will be retained for four months after the course grades become official in Quest. After that time, they will be destroyed in compliance with UW's procedures for confidential shredding: https://uwaterloo.ca/central-stores/confidential-shredding.

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. See http://www.uwaterloo.ca/academicintegrity/. Every student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about rules for group work/collaboration should visit the on-line tutorial at http://www.lib.uwaterloo.ca/ait/.

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offences and types of penalties, students should refer to Policy 71: https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71. For typical penalties, check Guidelines for Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm

Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties, which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion. ENV students are strongly encouraged to review the material provided by UW's Academic Integrity office; see: http://uwaterloo.ca/academicintegrity/Students/index.html.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable has the right to grieve. Refer to Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm.

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals), www.adm.uwaterloo.ca/infosec/Policies/policy72.htm.

Disabilities: The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Religious observances: A student needs to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

Weekly readings and tutorial topics

Part 1: Beginnings

Week 1. September 10 Ideas and sustainability: practical choices, underlying assumptions; different views of the world, different routes to saving it

Core readings:

Ployp, *Speechless: World History Without Words*, http://www.polyp.org.uk/onetreeisland/onetreeisland_1.html

World History For Us All, *History of the World in Seven Minutes,* http://www.youtube.com/watch?v=4pnmZalx9YY

Lester Brown, "Learning from past civilizations," July 2009; http://grist.org/article/2009-07-29-learning-from-past-civilizations/.

David Orr, “Shelf life,” *Conservation Biology*, 23:2 (April 2009), pp. 248-251.
Geeta Vaidyanathan, "In Gandhi's Footsteps: two unusual development organizations foster sustainable livelihoods in the villages of India," *Alternatives Journal* 28:2 (spring 2002), pp.32-37; gramvikas.org/uploads/file/Publications/In_Gandhis_footsteps.pdf.
Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), pp.32-35.
World Business Council for Sustainable Development, "Sustainable livelihoods: business case" (Geneva: WBCSD, 2004), 2pp.
WWF, *Living Planet Report 2012* (Gland: WWF, 2012), pp.8-13 [the whole report is on D2L].
World Hunger Education Service, “2013 world hunger and poverty facts and statistics, (worldhunger.org)

Tutorial problem:

What humans are doing on this planet is not sustainable. Usually this leads thoughtful people to consider what should be done, how quickly, by whom and with what resources. But common answers to these questions reveal profound differences. Some seek sustainability through more or less conventional economic and technological means (using economic motives and developing more advanced technologies to ensure much greater efficiency in resource use, less pollution, etc.). Others believe it is necessary and desirable to replace central aspects of the prevailing political economy (e.g. consumerism and market globalisation) with more or less radical alternatives (e.g. local control, small-scale technologies, voluntary simplicity, integration into regional ecologies, etc.). Some use the existing economic system while others try to subvert it. Some work to change laws, policies and educational systems, while other promote greater spirituality. Some seek alliances with corporate leaders, while others work with the poor. And so on.

On the surface, these are just disagreements about what strategies for change will work best. But at the roots are basically different ways of seeing the world, which entail different understandings of what is desirable and possible, different objectives and priorities as well as different strategies for change. The readings present quite a variety of alternative ways of seeing people, the environment and proper relations between them. All of the authors could be called more or less green, or greens of some shade. The differences here reflect different answers to two, closely related, basic questions:

- What do people want and need for a good life; what does nature need, at least if it is to continue providing the key ecological services upon which human life depends; and what are the proper connections between these two considerations?
- How differently do we need to think and act, and how differently do we need to design our institutions and order our priorities so we can move towards a world that is happier and more sustainable, etc.?

Throughout the term we will develop a better historical foundation for answering these questions. But we will begin by establishing the starting positions of the participants.

In the course of the next twelve weeks, your views may be confirmed or altered. We will see. The questions will be considered again in the last two tutorials. Here at the beginning we are only looking for initial positions, and short answers. Since these are very big questions, offering temptations for elaborate responses, it is perhaps wise to start with a few basic suggestions:

- What are the three most important changes that you think are needed in the world over your anticipated lifetime to start moving us to a more durable, just and agreeable future? (Please restrict yourself to changes that could conceivably occur.)

Week 2. September 17 Contrasts: hunter-gatherer societies, agriculture and sedentary civilizations; explanations for their differences, their successes and failures, their evolution and their legacy to us

Core readings:

John Green, The Agricultural Revolution: *Crash Course World History* #1, http://www.youtube.com/watch?v=Yocja_N5s1I&feature=player_embedded

Hugh Brody, *The Other Side of Eden: hunters, farmers and the shaping of the world* (Vancouver: Douglas and McIntyre, 2000), pp.11-15.

Jared Diamond, "To farm or not to farm," in *Guns, Germs and Steel: the fates of human societies* (New York: Norton, 1997), pp.104-113.

Marshall Sahlins, "Notes on the original affluent society," in Richard B. Lee and Irven DeVore, ed., *Man the Hunter* (Chicago: Aldine, 1968), pp.85-89; from http://www.udel.edu/anthro/ackerman/economics.pdf.

Vandana Shiva, *Monocultures of the Mind* (London: Zed, 1993), pp.12-15 and 19-21.

Margaret Alic, "Goddesses and gatherers: women in prehistory," in *Hypatia's Heritage: a history of women in science from antiquity to the late nineteenth century* (London: The Women's Press, 1986), pp.12-19.

Thomas Hobbes, "Of the naturall condition of mankind as concerning their felicity, and misery," in *Leviathan* (1651), pp.84-88.

Mary E. Clark, *Ariadne's Thread: the search for new modes of thinking* (London: Macmillan, 1989), pp.179-181.

J. Donald Hughes, "Kakadu, Australia: the primal tradition," in *An Environmental History of the World: humankind's changing role in the community of life* (London: Routledge, 2001), pp. 19-22.

Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), pp.14-18, and 40-45.

Laurel Sefton MacDowell, "Encountering a new land" (excerpt), in *An Environmental History of Canada* (Vancouver, UBC Press, 2012), pp.11-20 [of longer piece on D2L].

Additional readings:

Joachim Radkau (trans. Thomas Dunlap), "In the beginning was fire," and "Humans and animals," in *Nature and Power: a global history of the environment* (Cambridge U. Press, 2008), pp.41-55.

Paul Nadasdy, "'Property' and aboriginal land claims in the Canadian Subarctic: some theoretical considerations," *American Anthropologist* 104:1, March 2002, pp.247-261.

Nicole Gombay, "Shifting identities in a shifting world: food, place, community and the politics of scale in an Inuit settlement," *Environment and Planning D" Society and Space,* 23 (2005) pp.413-433.

Steven Robins, "NGOs, 'Bushmen' and double visions: the ≠khomani San land claim and the cultural politics of 'community' and 'development in the Kalahari," *Journal of Southern African Studies* 27:4 (December 2001), pp.833-853

Richard B. Lee and Richard Daly, "Foragers and others," *The Cambridge Encyclopedia of Hunters and Gatherers* (Cambridge: Cambridge University Press, 1999), http://www.udel.edu/anthro/ackerman/hunter.pdf

Tutorial questions:

Different ways of seeing the world entail different ways of treating it. Perhaps the biggest contrast has been between how hunter-gatherers/foragers and people in modern industrial societies see and treat the world. Unfortunately, this comparison is not easy to make. We live in a modern industrial society and might be reasonably familiar with the basic ideas our society reflects and encourages – about human nature, the good life, how nature is to be treated, etc. But these are not matters often discussed in everyday conversation and it is hard to get a perspective on something that we are immersed in.

Getting a good sense of the hunter-gatherer-forager worldview is also difficult, though for other reasons. For most of the human experience, life was in hunting and gathering communities. That reality is mostly past and those few communities that remain are vulnerable, perhaps atypical, and in any event more or less seriously affected by their relations with the industrial world. Moreover, it is hard to imagine a way of seeing the world that is very different from our own.

The Vandana Shiva reading gives some sense of the contrast. The other readings present a variety of perspectives on hunter-gatherers/foragers. Hobbes' piece, from 1651, provides a early and influential version of what came to be the dominant western viewpoint – that the shift from hunting and gathering communities to modern industrial society was a move from ignorance to knowledge, from childhood to maturity, from subjugation (esp. to nature and custom) to freedom, from poverty to comfort. Also in the usual depiction, the beneficial departure from hunting and gathering was chiefly led by technological advance, which until recently has typically been credited to certain unknown men who were particularly inventive leaders. This view rests on a particular understanding (or misunderstanding) of history and prehistory, and on a particular set of conclusions or assumptions about humanity, nature and their interrelations.

There have long been alternative views. Rousseau's concept of the noble savage is one example. More recently, anthropologists and aboriginal people themselves have been presenting challenges to the conventional position. Some of these are included in the readings for this week.

Finally Ronald Wright suggests a sort of double negative third option. He suggests that humans have always been driven to expand and exploit, but that the eventual development of sedentary agricultural and industrial civilization was at best a mixed and perilous achievement.

Among the questions raised by all this are the following:

- Which of these various depictions of hunting and gathering/foraging, and the shift to more "civilized" life, seems most plausible and reliable?
- What are the implications if this depiction is correct?

The standard modern view of progress from hunting and gathering is part of a larger picture of history as a more or less continuous line of upward advancement, led by

technology, consequent economic improvements and related gains. An other-end-of-the-spectrum alternative would present hunter-gatherer communities as the ideal and natural human social and ecological arrangement and consider moves away from it to be largely regrettable. Between these two options lies a range of possibilities seeing various combinations of gains and losses – or in Wright's case, just losses.

In light of this spectrum of possibilities, some questions follow:

- What pressures and motivations led people to shift from hunting and gathering to more sedentary, socially unequal and environmentally manipulative ways of living? Was the shift the result of necessity or choice or error or some automatic mechanism or some combination or something completely different?
- What was gained and what was lost in the move away from the hunter-gatherer society into herding and farming (considering the changes in livelihood activities, social relations, relations with nature, understanding of how the world works, etc.)?
- What are the implications for today concerning how humans can live (the available realistic possibilities for how people can live with each other and with the natural environment) and how big changes can happen?

Week 3. September 24 New understandings: philosophy, religion and the roots of the Western tradition

Core readings:

Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), pp.65-79.

J. Donald Hughes, *An Environmental History of the World: humankind's changing role in the community of life* (London/New York: Routledge, 2001), pp.30-33 and 52-59.

The Holy Bible, Genesis, Chapter 1, especially verses 20-28; Psalms 8 and 102, verses 25-28 [the King James Bible's version of all of Genesis is on the course website]; Matthew, Chapter 6, verses 19-21 [bonus item: Hope Mennonite Church, Winnipeg, 350 earth friendly verses in the Bible http://www.youtube.com/watch?v=a7TFBqUmfNw&feature=player_embedded].

Thomas King, *The Truth about Stories* (Toronto: Anansi, 2003), pp.10-25.

Mary E. Clark, *Ariadne's Thread: the search for new modes of thinking* (London: Macmillan, 1989), pp.194-204.

Merlin Stone, "Return of the Goddess: new thoughts on gender," in *Journal of Wild Culture* 1:3 (May 1988), pp.26-27.

Stephanie Lahar, "Roots: rejoining natural and social history (excerpt)," from Kent Peacock, ed., *Living with the Earth: an introduction to environmental philosophy* (Toronto: Harcourt Brace, 1996), pp.313-316.

The Rig Veda, "Creation Hymn," translated by V.V. Raman.

Tutorial questions:

The ideas, institutions and practices that characterize the modern western approach to the world are the products of a long evolution. It is often said that the foundations of western thinking lie in the Judaeo/Christian religious tradition and in the development of Greek rational philosophy, which began more or less separately but which were combined in the middle ages. As we will see, these "foundations" were only part of the story – much

more changed with the rise of modern science and economics, industrialization, adoption of the idea of progress, etc.

It will be difficult to evaluate the relative significance of the Judaeo/Christian and Greek contributions until after we have examined later influences and have developed a clearer understanding of the fundamental ideas that now rule the world. However, we can learn much by comparing the Judaeo/Christian and Greek approaches with those of preceding traditions (hunter gatherers, earlier civilizations), the various eastern traditions (Buddhist, Hindu, Taoist, Confucian, etc.), and prevailing modern views. The following questions may help to guide your thinking:

- What are the main similarities and differences between prevailing modern assumptions and the ideas about humans and the environment that lie at the centre of the Judaeo-Christian religion and Greek philosophy, or that lie at the centre of Hinduism, Buddhist and other major religions that had less influence on the development of the western tradition?
- How different (from each other and from the ideas that prevailed before and in the East) were the ideas about humans and the environment introduced by the Judaeo-Christian religion and Greek philosophy?
- In what ways did the Judaeo-Christian/Greek combination threaten to have or to allow undesirable changes in the treatment of the environment? What aspects of this combination discouraged such changes?
- Which do you think are more likely to affect behaviour that is environmentally significant: religious ideas about the human place in nature, or religious ideas about the pursuit of wealth?

Part 2: Into the modern world

Week 4. October 1 Science: nature as knowable and manipulable

Core readings:

Hugh Kearney, *Science and Change 1500-1700* (Toronto: McGraw-Hill, 1971), pp.17-48.

Morris Berman, *The Re-enchantment of the World* (New York: Bantam Books, 1984), pp.34-35.

Yasmeen Mahnaz Faruqi, "Contributions of Islamic scholars to the scientific enterprise," *International Education Journal* (2006), pp.391-399.

Carolyn Merchant, "Dominion over nature," from *The Death of Nature: women, ecology, and the scientific revolution* (San Francisco: Harper and Rowe, 1980), pp.164-191, esp.164-173.

James R. Gaines, *Evening in the Palace of Reason: Bach meets Frederick the Great in the Age of Enlightenment* (New York: HarperCollins, 2005), pp.45-52.

Lewis Mumford, "The monastery and the clock," *Technics and Civilization* (London: Routledge, 1934), pp.12-18.

Lynn Steen, "The measure of reality," notes based on Alfred W. Crosby, *The Measure of Reality: quantification and western society 1250-1600* (Cambridge: Cambridge University Press, 1997), http://www.stolaf.edu/other/ql/crosby.html.

Patricia Fara, "Magic," in *Science: a four thousand year history* (Oxford: Oxford University Press, 2009), pp.121-128.

Additional readings:
Patricia Fara, "Europe," (medieval science) in *Science: a four thousand year history* (Oxford: Oxford University Press, 2009), pp.81-91.

For curiosity:
Nicholas Copernicus*, On the Revolutions of the Heavenly Spheres* (1543) http://webexhibits.org/calendars/year-text-Copernicus.html
Leonardo Da Vinci, *The Notebooks* (1519ff), http://gutenberg.org/etext.5000
Andreas Vesalius, *De Fabrica* (1543), especially the dedication of Charles V, http://vesalius.northwestern.edu

Tutorial questions:
The two immediate foundations of the modern worldview lie in the ideas and practices of modern science and modern economics. The two are interrelated. They arose together, were pushed by overlapping historical forces and events, and were influenced by a similar set of other influences. Probably they are best considered as parts of a package.

But as a first step we can examine the essentials of the scientific contribution, especially that of the mechanical tradition, and try to identify what changes in thinking and action led to it and what contribution made to development of the modern worldview.

The relevant questions include the following:

- How did the mechanical tradition differ from competing scientific approaches to understanding and treating nature, especially those of the organic and magical traditions?
- How did the new scientific view of nature and its purpose build upon or depart from the Greek and Judaeo/Christian traditions?
- How was the rise of the mechanical view linked, ideologically and practically, with other aspects of thought and life (e.g. religion, economic organization, gender politics, social hierarchies) at the time?
- How crucial does the mechanical tradition in science seem to have been in the formation of our modern way of seeing the world and to what extent do the central concepts of the mechanical tradition still prevail?

For us now the big question is:

- What was gained and what was lost in the rise of the mechanical, scientific worldview and what are the implications for how we should think about science and about the nature and use of scientific knowledge today?

Week 5. October 8 Economics: the rise of markets, individuals and a world of commodities

Core readings:
Robert L. Heilbroner, *The Worldly Philosophers,* fourth edition (New York: Simon and Schuster, 1972), pp.16-39.

Adam Smith, *The Wealth of Nations,* (originally published, 1776), Book I, chapter 2.
John Locke, "The second treatise of government (excerpts)," (originally published, 1690) from Lori Gruen and Dale Jamieson, eds., *Reflecting on Nature: readings in environmental philosophy* (New York: Oxford, 1994), pp.20-21.
Karl Polanyi, *The Great Transformation* (Boston: Beacon, 1957), pp.43-47.
Mary E. Clark, *Ariadne's Thread: the search for new modes of thinking* (London: Macmillan, 1989), pp.261-268.
Erica Schoenberger, "The origins of the market economy: state power, territorial control and modes of war fighting," *Comparative Studies in Society and History* 50(3), 2008, pp.663-691.
Carolyn Merchant, "Dominion over nature," from *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper and Rowe, 1980), pp.177-180 [also included in readings for week 4]

Tutorial questions:
The second immediate foundation of the modern worldview was provided by the rise of the market as the organizing framework for economic exchange and, increasingly, the organizing framework for ideas about human character, social organization, wellbeing, improvement, etc.

As noted last week, the rise of markets and acceptance of the pursuit of gain happened over the same period as the rise of modern science and acceptance of the pursuit of domination and control. This combination of changes was not just coincidence and it will be important to consider how the ideas and practices involved were connected and mutually supporting.

First, however, we should be clear about the essentials of the new economic approach, why it arose and what effects it had:

- How did an economy that expanded the role and range of market exchange differ from previous approaches to organizing production and allocation?
- In what ways did the ideas underlying the new economic approach build upon or depart from the Greek and Judaeo/Christian traditions, and in what ways did the change affect how people and nature were seen and treated?
- Why did markets and the pursuit of gain expand and win acceptance? What factors were influential? Was this change the product of an inevitable process, or an historical accident, or something else?
- How was the rise of markets linked, ideologically and practically, with other aspects of thought and life (e.g. religion, science, gender politics, social hierarchies) at the time?
- How crucial does the rise of market economic seem to have been in the formation of our modern way of seeing the world and to what extent do the central concepts of market economics still prevail?

For us now the big question is similar to the question about modern science:

- What was gained and what was lost in the rise of modern market economics and what are the implications for how we should think about the pursuit of wealth, the roots of consumer behaviour and the nature of "the good life" today?

Week 6. October 15 Modernity: the union of science and economics and a new image of humanity

Core readings:

Anthony Flew, "Introduction," to T.R. Malthus, *An Essay on the Principle of Population,* A. Flew, ed. (Harmondsworth: Penguin, 1970, originally published 1798/1830), pp. 17-31.

Donald Worster, "The ascent of man," from *Nature's Economy: the roots of ecology* (New York: Doubleday, 1979), pp.170-179.

J.C. Greene, "Darwinism as a world view," (excerpt) from *Science, Ideology and World View* (Berkeley: University of California Press, 1981), pp.128-135.

Frederick Taylor, *Scientific management* (originally published 1911)*,* Project Gutenberg eBook (excerpts).

John Ralston Saul, "Taylor, Frederick" and "Taylorism" in *A Doubter's Companion* (Toronto: Penguin, 1994), pp.279-281.

Tutorial questions:

Malthus, Darwin and Taylor were in many ways quite different individuals whose work, stretching from the end of the eighteenth century into the beginning of the twentieth, addressed quite different immediate questions. Each in his own way, however, attempted to apply the principles of modern scientific thinking to matters of human social, economic and political importance.

The general main question here is

- What were the central principles of modern scientific thinking that the three attempted to apply to human subjects?

In considering this question, it may be useful to consider three things: what were they trying to learn or illuminate? how did they use a "scientific" research method? what big assumptions did they make about nature and/or people.

There are repugnant aspects to the conclusions drawn by Malthus, Darwin and Taylor and their followers. Their efforts were used (and in some places still are being used) to justify social policies and industrial practices that were, and are, evidently inhumane and insensitive, if not utterly heartless and cruel. This begs the following questions:

- Are these the result of inappropriate scientific principles or poor application of these principles?
- Do they suggest there is something basically wrong with the scientific project involved (trying to identify the natural laws applying to humans and identify their social and economic implications)?
- Do human motivation and behaviour reflect the operation of natural laws of human nature in roughly the same way as billiard balls obey the rules of Newton's physics?
- In Frederick Taylor's case, is there anything fundamentally misguided about his application of a mechanical view of human motivation to industrial management?
- Is Taylor's objective (the efficient delivery of material satisfactions) necessarily the central concern of political and economic activities in industrial societies?

And a big question: how well do the assumptions about human beings made by Malthus, Darwin (or his followers) and Taylor describe you?

Week 7. October 22 Conquest: the domination of nature and the colonization of the globe

Core readings:

Eddie Izzard, "Do you have a flag?" http://www.youtube.com/watch?v=hYeFcSq7Mxg.

Eduardo H. Galeano, *Memory of Fire: Genesis* trans. C. Belfrage (New York: Pantheon, 1985), pp.45-48, 51, 54-55, 57.

Andrew Jackson, "Humanity has often wept," from Derek Wall, *Green History: a reader in environmental literature, philosophy and politics* (London: Routledge, 1994), p.137.

Clive Ponting, "Creating the Third World," from *A Green History of the World* (London: Sinclair-Stevenson, 1991), pp. 194-223.

Vandana Shiva, "Two myths that keep the world poor," *Ode* 28 (2005).

Vandana Shiva, excerpt from *Staying Alive: women, ecology and development* in Lori Gruen and Dale Jamieson, eds., *Reflecting on Nature: readings in environmental philosophy* (New York: Oxford, 1994), pp.35-36.

Thomas R. Dunlap, "Creation and destruction in landscapes of empire (excerpt)," in Jeffry M Diefendorf and Kurk Dorsey, eds., *City, Country, Empire: Landscapes in Environmental History* (Pittsburgh: University of Pittsburgh Press, 2005), pp.207-212.

Stephanie Lahar, "Roots: rejoining natural and social history (excerpt)," from Kent Peacock, ed., *Living with the Earth: an introduction to environmental philosophy* (Toronto: Harcourt Brace, 1996), pp. 316-322.

William A. Dobuk, "Killing the Canadian Buffalo 1821-1881," in David F. Duke, ed., *Canadian Environmental History: Essential Readings* (Toronto: Canadian Scholars Press, 2006), pp.240-257.

Laurel Sefton MacDowell, "Encountering a new land" (excerpt), in *An Environmental History of Canada* (Vancouver, UBC Press, 2012), pp.25-29 [of longer piece on D2L].

William Cronon, "Kennecott Journey: the paths out of town," in William Cronon, George Miles and Jay Gitlin, *Under an Open Sky: rethinking America's western past* (New York: Norton, 1992), pp. 28-51. http://www.williamcronon.net/writing/Cronon_Kennecott_Journey.pdf.

Tutorial questions:

The significance of the modern worldview lies in the practical effects of its application and we would expect these effects to be most obvious in the defining aspects of the modern era – in the joys and ugliness of industrialization and global conquest.

This expectation will be fulfilled. We will see next week how the domestic effects of industrialization inspired critiques of the modern agenda and assumptions, long before the rise of the present environmental movement. And the readings for this week reveal much about how the application of modern scientific and economic ideas has, through the programme of conquest, affected the world.

However, conquest is not an exclusively modern phenomenon. Nor are patriarchy and misogyny, racism, national bigotry, slavery and its equivalents – all of which accompanied and influenced the application of modern ideas during the European conquest. It is worth considering, therefore, to what extent the nastier effects of industrialism and conquest are the effects of applying the modern worldview and to what

extent they arise from different factors. While some of these evils may reflect excesses of modernism, others may have occurred because the modern ideas were not applied energetically enough and pre-modern approaches prevailed.

Hence the following questions:

- Did the European nations' efforts to conquer and control the rest of the world (its lands, people and resources) reflect the same motivations and assumptions as the western scientific and economic effort to conquer nature?
- Were the destructive and cruel aspects of colonialization due to the application of modern ideas, or pre-modern ones, or both in some combination?
- What would a purely modern programme of conquest involve? Would it be desirable?
- In the colonial agenda, how did the perception and treatment of people and nature (resources) in colonized territories compare with the perception and treatment of poor and working people and (nature) resources at home during the rise of industrialism?
- Are there parallels between the European colonialization of the globe and the domination of women?
- To what extent are programmes of conquest (economic and technological as well as military) today tied to the ideas that underlay colonization?

Part 3: Criticisms and possibilities

Week 8 October 29 Early critics: conservative, feminist, socialist and romantic responses to industrial society

Core readings:

E.J. Hobsbawm, "The human results of the industrial revolution," from *Industry and Empire* (Harmondsworth: Penguin, 1969), pp. 79-95.

Mary Wollstonecraft, *A Vindication of the Rights of Woman* (1792), excerpts from chapters 1, 2 and 8; from http://www.bartleby.com/144/.

Thomas Carlyle, "Signs of the times (1829)," in Derek Wall, *Green History: a reader in environmental literature, philosophy and politics* (London: Routledge, 1994), p. 143.

Karl Marx, "Estranged labour (excerpt)," from *Economic and Philosophic Manuscripts of 1844, http://www.marxists.org/archive/marx/works/1844/manuscripts/labour.htm*.

Richard Holmes, "Dr. Frankenstein and the soul (excerpt)," in Richard Holmes, *The Age of Wonder: how the Romantic generation discovered the beauty and terror of science* (London: Harper, 2008), pp.330-335.

Theodore Roszak, "Romantic perversity," from *Where the Wasteland Ends* (Garden City, NY: Doubleday, 1973), pp. 255-271.

William Blake, "The Tyger," in *Poems of Innocence and Experience* (1789).

William Blake, "The garden of love," with music by Rodney Money, http://www.youtube.com/watch?v=h6avqJDRiYY.

Samuel Taylor Coleridge, "The Rime of the Ancient Mariner," (1798), Project Gutenberg eBook [or Orson Welles' version: http://www.youtube.com/watch?v=4EpuaCaPML8].

Edmund Burke, *reflections on the Revolution in France 1791* (excerpts); http://www.fordham.edu/halsall/mod/1791burke.asp.

Tutorial questions:
Industrialization is the archetypal expression of the modern approach to the world. It sits at the conjunction of applied economic law and applied science and technology, treating people (labour) as well as nature as resources in the service of material progress. But early industrial nations also reflected pre-modern influences, including the effects of old class divisions and patriarchal attitudes. We can therefore ask:

- Were the negative effects of industrialization, especially in Britain where industrialization began, due to the application of modern ideas, or pre-modern ones, or both in some combination?
- Were these negative effects avoidable within the context of the prevailing economic and scientific ideas?

Or, beginning from the premise that industrialization also brought significant material benefits upon which we have now rely, we could approach the same matter from a slightly different perspective:

- Is it possible to conceive of an industrial society that is based on modern scientific and economic assumptions and enjoys its benefits, but avoids the negative effects of historical industrialization?
- Alternatively, could the positive effects of industrialization have been achieved on a different foundation of basic ideas? Can the benefits of industrialization be maintained now without the basic foundations in the modern economic and scientific ideas?

One approach to answering these questions would rely on views expressed by the critics represented in the required readings, who cover a range of quite different positions. Not surprisingly, the perspectives of these early critics of industrialism, and of the dominant social, economic and political arrangements in industrializing societies, combined both modern and pre-modern, or at least non-modern, ideas.

- What did the socialist, conservative, feminist and romantic critics consider to be fundamentally wrong with modern industrial society at least in Britain?
- What were the main differences and similarities among their views?
- More generally, was the industrial revolution an offence against humanity and nature or a necessary step in human progress?

Week 9. November 5 Progress and its discontents: reason, technology and doubts in the twentieth century

Core readings:
Walter Benjamin, "Theses on the philosophy of history (excerpt re Klee painting, Angelus Novus)," http://www.sfu.ca/~andrewf/CONCEPT2.html.
Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), pp.109-115 [also recommended: pp.3-7; chap. 3, esp. 65-79 (see readings for week 3); all of chap. 4].
Brian Fawcett, "Universal Chicken," in *Cambodia: A book for people who find television too slow* (Vancouver: Talonbooks, 1986), pp. 57-68.
Brian Fawcett, "Universal Chicken," in *Cambodia: A book for people who find television too slow* (Vancouver: Talonbooks, 1986), pp. 57-68.
Zygmunt Bauman, "The practice of the gardening state," *Modernity and ambivalence* (Cambridge: Polity, 1991), pp.26-30.

Reinhold Niebuhr, "Progress denied (excerpt)," from W. Warren Wagar, ed., *The Idea of Progress Since the Renaissance* (New York: Wiley, 1969), pp. 130-136.

Joanne Kates, "A fairy-tale ending to the food crisis," *Toronto Globe and Mail,* October 7, 1987.

Loren Eiseley, *The Invisible Pyramid: a naturalist analyses the rocket century* (New York: Scribners, 1970), pp. 149-156.

Franz Kafka, "An imperial message," an excerpt from the short story "The Great Wall of China" (1917), http://records.viu.ca/~johnstoi/kafka/imperialmessage.htm.

Vandana Shiva, *Monocultures of the Mind* (London: Zed, 1993), pp.12-15, 19-21 [included in readings for week 2].

Tutorial questions:

The twentieth century was remarkable for its extraordinary highs and lows. There was unprecedented advance in many areas, most obviously in technology and wealth generation, but also in other social and political fields. But there were also unspeakable cruelties and appalling destruction. In addition to environmental damage, the evils of the twentieth century have included brutal totalitarian regimes, creation and application of highly destructive technologies and expansion of inequities alongside increased wealth and economic capacity.

Certainly there is good reason to think carefully about the causes of, and the possible links between, the gains and the losses. As a start, we might ask,

- Were the evils of the twentieth century the products of the modern world view or do they reveal the residual influence of pre-modern, or at least non-modern ideas? In other words, have we had too much modernization or not enough?

The main elements of applied modernism – the economic market and the specialized and competitive world of science and technology – have in some ways demonstrated admirable diversity and adaptability. Nonetheless, many critics have expressed fears that the combination of global free market economics and technological advance is leading to a new kind of totalitarianism that is dehumanizing and ecologically destructive.

- Is this a legitimate fear and, if so, what are the implications for acceptance, rejection or modification of the central modern assumptions about humans, nature and relations between them?

Late twentieth century environmental concerns also led many observers to conclude that the dream of infinitely continuing material progress is over or, at least, that it needs to be altered in important ways.

- Is this part of the general twentieth century questioning of the faith in historical advance and material progress, or do such environmental concerns add something new and different?
- Can the fundamental assumptions of modernism still be viable and still play a useful role in a world that recognizes material limits? And if there are doubts, which of the key modern assumptions now seem most questionable and what alternatives might there be?

Week 10. November 12 Greens: the rise and evolution of environmental critique and response

Core readings:

John Bellamy Foster, "Expansion and conservation," in *The Vulnerable Planet: a short economic history of the environment* (New York: Monthly Review Press, 1994), pp.69-84.

Laurel Sefton MacDowell, "Early cities and urban reform" (excerpt on public health and urban greening), in *An Environmental History of Canada* (Vancouver, UBC Press, 2012), pp.86-93.

Aldo Leopold, "The land ethic," in *A Sand County Almanac,* http://home.btconnect.com/tipiglen/landethic.html, esp. "The Outlook," pp.12-14.

Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage, 1961), pp.443-448.

Global Greens, "Principles," in *Global Green Charter* (2001), pp. 3-6, http://www.globalgreens.info/globalcharter.php.

David W. Orr, "Love," in *Earth in Mind: on education, environment and the human prospect* (Washington: Island, 1994), pp.43-47.

Ramachandra Guha, "Going green," in *Environmentalism: a global history* (New York: Longman, 2000), pp.1-9.

Paul Kingsnorth, "Confessions of a recovering environmentalist: a personal account of a journey through environmental politics," *Dark Mountain* 1 (May 2010); http://paulkingsnorth.net/journalism/confessions-of-a-recovering-environmentalist/.

Robert B. Gibson, "Diversity over solidarity: what we have learned and where we have come in 30 years of ecoactivism," *Alternatives Journal* 26.4 (Fall 2000), pp.10-12.

Bonus background on the Canadian environmental movement:

Laurel Sefton MacDowell, "The environmental movement and public policy," in *An Environmental History of Canada* (Vancouver, UBC Press, 2012), pp.243-267.

Survey:

Peter Dauvergne, "Introduction," in Peter Dauvergne, *Historical Dictionary of Environmentalism* (Scarecrow Press, 2009): xli-lviii http://www.politics.ubc.ca/fileadmin/template/main/images/departments/poli_sci/Faculty/dauvergne/History_of_Environmentalism.pdf.

Tutorial questions:

While there is evidence of environmental abuses and environmental critics stretching back to the beginnings of human history, the origins of environmentalist criticism of various kinds are usually traced to the nineteenth century – initially with health concerns related to urban and industrial pollution (e.g. in Britain) and later with concerns about resource depletion and the disappearance of wilderness (esp. in North America), plus advocacy of humane treatment of animals, of spiritual and aesthetic links to nature as a garden, and even the beginnings of a more systemic (or what we would now call ecological) perspective.

Throughout the twentieth century these themes were restated and elaborated in various forms, gradually to cover a broad set of concerns at the global as well as local and regional scale. Like all the other ideas we have discussed, these arose in an historical context. They responded in various ways to the prevailing modernist thinking and practices and they reflected the contributions of other critics, including the eighteenth and nineteenth century thinkers, the critics of colonialism and the representatives of other twentieth century worries discussed over the last three weeks.

Both of these matters are worthy of consideration:

- Did the environmental concerns that emerged in the late nineteenth century and continued in the twentieth pose any fundamental challenges to the dominant character of industrial society and the ideas underlying it?
- Were the basic concerns of the early environmentalist critics essentially the same as those that had been raised by the other critics of industrial ideology and practice, or did the environmentalists introduce something new?
- What were the new understandings of possible and desirable human behaviour – in relations with other people as well as relations with the natural environment?

Week 11. November 19 Sustainability: the integration of environment and development under conditions of complexity

Core readings [just scan the longer ones]:

Robert B. Gibson, "Sustainability: the essentials of the concept," chapter 3 of *Sustainability Assessment* (London: Earthscan, 2005).

United Nations Environment Programme, "The great acceleration after the Second World War," *Global Environmental Outlook 5* (UNEP, 2012), p.22, www.unep.org/geo/.

World Business Council for Sustainable Development, *Changing pace: public policy options to scale and accelerate business action towards Vision 2050* (Geneva: WBCSD, 2012), esp. pp.1-10, http://www.wbcsd.org/changingpace.aspx.

Tim Jackson, "The transition to a sustainable economy," in *Prosperity without Growth* (2009), pp.171-185.

B.D. Sharma, "On sustainability," in Michael Tobias and Georgianne Cowan, eds., *The Soul of Nature* (New York: Continuum, 1994), pp. 271-278.

Chris McLaughlin, "Thinking like an ecosystem: the inherent uncertainty of natural systems calls for the integration of resiliency and diversity in environmental management," *Alternatives Journal* 34:4 (2008), http://www.alternativesjournal.ca/articles/thinking-like-an-ecosystem.

Dale Lewis, "Getting poaches to give up their guns in Zambia," *Solutions: for a sustainable and desirable future* 2:4 (1August 2011), http://www.thesolutionsjournal.com/node/960.

Geeta Vaidyanathan, "In Gandhi's Footsteps: two unusual development organizations foster sustainable livelihoods in the villages of India," *Alternatives Journal* 28:2 (spring 2002), pp.32-37 (also in readings for week 1).

Hunter Lovins and Walter Link, Rocky Mountain Institute and Global Academy, "Insurmountable Opportunities? Steps and Barriers to Implementing Sustainable Development," http://www.rmi.org/sitepages/pid178.php - B01-18.

OECD, "Advancing sustainable development," *OECD Policy Brief* (March 2006), pp.1-8, www.oecd.org/greengrowth/36277332.pdf.

Basic background:

World Commission on Environment and Development, Gro Harlem Brundtland, chair, "From one earth to one world: an overview," from *Our Common Future* (Oxford/New York: Oxford University Press, 1987), pp. 1-23.

The United Nations Conference on Environment and Development, "The Rio declaration on environment and development," June 1992 [downloadable from http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163]

United Nations Environment Programme, *Global Environmental Outlook 5* (UNEP, 2012), www.unep.org/geo/ (the full report).

United Nations Environment Programme, "Integrating environment and development: 1972-2002," in *Global Environmental Outlook 3* (London: Earthscan, 2002), pp.1-27, http://www.unep.org/geo/geo3/english/pdf.htm

Tutorial questions:

The term "sustainable development" was introduced to popular use by the World Commission on Environment and Development in 1987. The WCED and sustainable development represented a coming together of two of the main agenda items of the UN family of global governance bodies – development as a means of overcoming poverty and enhancing economic well being, which had been a major focus of international policy and activity since the late 40s, and environmental protection at a world scale, which had arisen as a recognized concern in the early 70s.

The idea of linking environment and development was counter intuitive for many people, including some committed environmentalists, and to some extent it remains so today. Throughout the early years of the recent environmental movement, growth – of human numbers, resource extraction activities, consumption and waste – was considered the key problem and development was frequently used as just another word for more growth. At the same time, however, most environmentalists saw that any useful long term strategy would have to deal with the links between socio-economic conditions and environmental behaviour, and include plausible means of addressing social and economic as well as more narrowly environmental concerns.

In this way the old ecological principle that everything is connected to everything else has come to be applied in socio-ecological thought. Campaigns for environmental responsibility have been more often linked to efforts to improve social justice, prevent armed conflict, reduce gender inequity, improve child health, and so on. This does not make things easier, especially when combined with appreciation of scientific uncertainty and cultural diversity. However, it seems that more narrow and partial approaches are unrealistic. It has proved impossible, for example, to protect endangered species without protecting their habitat, and impossible to protect wildlife habitat without involving the local communities and finding complementary ways of enhancing their wellbeing.

The challenge, then, really is to get some defensible working answers to the questions posed back in week one:

- What (if anything) is basically wrong, not just here but all over, not just with treatment of the environment but with social justice and other influences on the quality of life on the planet?
- What do people want and need for a good life; what does nature need, at least if it is to continue providing the key ecological services upon which human life depends; and what are the connections between these two considerations?
- How differently do we need to think and act, and how differently do we need to design our institutions and order our priorities so we can move towards a world that is happier and more sustainable, etc.?

One more condensed way of asking these questions is, "what are the most important considerations and principles to keep in mind in efforts to improve sustainability?" The authors of the readings this week, offer differing answers. Probably some diversity of answers and approaches to sustainability is desirable. But some areas of broad agreement would be helpful. We can discuss.

Week 12. November 26 Lessons: implications of an inquiry into the historical and cultural roots of our current environmental situation and our possibilities for change

Core readings:

Donald Worster, *The Wealth of Nature: environmental history and the ecological imagination* (Oxford: Oxford University Press, 1993), pp. 206-219, 242-243.

Ursula Franklin, "Beautiful, functional and frugal, *Alternatives 33:2* (2007), p.56.

Albert Camus, *The Rebel* (New York: Vintage, 1956), pp.288-289.

Ian G. Simmons, "Context for environmental history," *Encyclopedia of Earth* (2008).

Tutorial questions:

After this quick tour through the history of ideas and their effects, we can return to our first tutorial questions about the viability of the basic prevailing assumptions about people, the environment and proper relations between them. Consider again the big question that you answered in the first tutorial session:

- What are the three most important changes that you think are needed in the world over your anticipated lifetime to start moving us to a generally more durable, just and agreeable future? (Please restrict yourself to changes that could conceivably occur, perhaps including ones to which you could contribute.)

In preparing your answer this time, please consider our exploration of the nature of pre-modern and modern ideas, recognizing that the basic ideas about humans, the environment and proper relations between them that now generally prevail are modern ones. Last week, after considering the experience of the twentieth century, we asked about the viability of the fundamental assumptions of modernism and the nature of possible replacements. Now we can look at this more closely, in light of the whole sweep of prehistory and history that we have reviewed (a bit quickly, admittedly).

- As we begin the work of living in the twenty-first century, left to correct the damages of the past and hoping to build a generally more durable, just and agreeable future, what are the key lessons we should take from our historical experience?

- In particular, what (if any) basic ideas about humans, the environment and proper relations between them should be adopted individually, locally and/or globally?
- Would this entail fundamental changes to prevailing basic assumptions and attitudes, as well as fundamental changes to how we organize our production and consumption and our institutions of learning and decision making?
- What historical (or other) grounds can you give to support your position; and how firm are these grounds – in other words how confident are you that your position is sound?
- Insofar as significant changes are needed, how might they be encouraged most effectively? What can we learn from how big changes happened in the past?