

School of Environment, Resources and Sustainability, University of Waterloo  
***ERS 301 Sustainability Thought***  
Fall 2017

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**Organization:** Lectures: Tuesdays 10:30-12:20, DWE 3516  
Tutorials: Tuesday 4:30-5:20, AL210 (#2)  
Wednesday 3:30-4:20, AL210 (#4)  
Wednesday 3:30-4:20, AL209 (#5)  
Wednesday 4:30-5:20, AL209 (#3)

### **Description and Rationale**

Humans with their big brains now dominate the planet. This is a mixed accomplishment. Some of the dominant trends of human activities and their effects are positive (uneven but generally greater infant survival, life-expectancy, literacy and access to goods and services, etc.). But other major trends (the combination of ecological stresses, climate instability, persistent poverty and expanding inequality) are towards deeper unsustainability. For our own foreseeable interests, certainly for those of our children and for many other life forms on the planet, we need to reverse the negative trends and find ways to life lighter, more equitably and better.

That entails intentional change – at a global as well as local and regional scale and for the long run as well as to deal with immediately pressing matters. We have not done much of that before. So we will have to rely to some extent on trial and error experimentation. But it will help to have a few well considered ideas about how to live well with each other and the rest of the biosphere. And some understanding of how ideas and practices are related.

The situation begs three large sustainability questions – about lasting wellbeing, complexity and change:

- What ways of living can provide the foundations for lasting wellbeing (respect the capacities of the biosphere, and match human capacities and aspirations)?
- How can we deal with the enormous complexity of living on Earth in a way that will help us achieve and maintain lasting wellbeing?
- How can we best push the changes needed to move towards more sustainable ways of living?

This course assumes that before leaping to answers, we should learn what we can from what we've done in the past. We should see what abilities and possibilities we've demonstrated, what mistakes we've made, what we've learned, what might be realistic as well as desirable in the future.

Accordingly, this course is about the history of ideas and practices, but the purpose is to illuminate what to do now. There is no assumption that the findings will point to a single set of answers. Exploring a diversity of understandings and strategies for change is probably a good thing, so long as we seek 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.

*Five 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, how to design appropriate socio-economic and political arrangements, and how to understand and treat the "natural" environment.
- In most societies, the assumptions involved are rarely presented and discussed openly. Often they are just accepted as the way things are. 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 leads to a particular way of seeing the world that inevitably influences how people 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. That position gives us a basis for examining the package of assumptions that prevails in our society today. We can compare our package to other options that have been tested in other places and times. And we can, if we wish, choose alternatives.

## **Readings**

The main readings for the course are listed in the full course syllabus and posted on the ERS 301 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.

More readings are listed here and provided on the D2L site than you are likely to read. It is a good idea to give most of them at least a very quick skim but focus on two or three meaty ones. The readings are listed in a rough order of importance and are meant to provide a diversity of perspectives, but you are free to use your own judgment about whether to focus on the first few readings on the list or pick what's most intriguing to you. 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.

## **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 course, especially 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 in the tutorials 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 (briefly) 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 be the lead discussant(s), who will provide a short (maximum 5 minutes) initial response to the weekly question or questions on the basis of an overview of the key insights from a selection of the readings.

### ***The reports***

The main purpose of the reports assignments is to encourage thoughtful reflection on the lectures, readings and tutorial discussions. Three reports are assigned – one for each of the main sections of the course.

All written assignments are to be submitted to the appropriate 301 course D2L dropbox by 11:59 pm on the deadline date. In the interests of equity, penalties will be assessed for late submission of written assignments. The grade given for a written submission will be reduced by .5 for each day late (a paper assigned 15/20 if received on time will get 14.5/20 if one day late), except in cases of documented illness or other extraordinary inability.

All three reports are to provide answers to the core question for the course: what can we learn from the past about what we should do now? Slightly more specifically, the reports are to address the three big questions about lasting wellbeing, complexity and

change set out in the course description and rationale section above. The particulars of each of the three report assignments are set out below.

These are short reports. Given that the course is covering a sizable chunk of the human experience, you cannot discuss everything. Be concise. 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 possible answers to the big questions set out at the beginning of this syllabus.

In each of these assignments, you have options for form and style as well as substance. For the scholarly purposes of this course, however, you must provide suitable supporting references to the readings, lecture material and other sources in conventional scholarly referencing or in footnotes to the report. And remember that you are, at least implicitly, making an argument that should have sound logic supported by evidence.

The three reports are exercises in professional writing of some kind. Ensure that your readers will get the conclusions and know there is reliable backing evidence. Feel free to incorporate illustrative examples. You are being asked to address very big issues and cover very long periods and huge diversities of particular issues, experiences, understandings and explanations in short reports. You must focus on the highpoints, but your audience must be able to understand the practical significance of the points you make.

Depending on the option chosen, the report format will vary. Nevertheless, every submission should include

- 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);
- reasonable adherence to the conventions of grammar, whatever “report” format you choose; and
- proper bibliographic references to written materials and other sources you’ve used, applying a recognized referencing style – for referencing style guides see [http://reference.uwaterloo.ca/display.cfm?categoryID=15&catHeading=Citation/Style Guides](http://reference.uwaterloo.ca/display.cfm?categoryID=15&catHeading=Citation/Style%20Guides).

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.

*The reports assignment details: three reports from the emissary*

You are an emissary from interstellar authorities based in a distant star system with advanced technology for exploring space and time. Your leaders have sent you to Earth to find out more about humans. They want to know whether humans have any potential for living sustainably on their planet without interstellar help and, if so, what would be the foundations in ideas and understandings for that sustainable future on Earth that would work given what is realistically possible for humans. As an alien, you should have no particular bias in favour of any particular sub-group of humanity, or for that matter for any particular group of Earthly beings, but you recognize that humans are the big problem and will have to be the main players in transition to a sustainable future.

For resources, in addition to time travel and the ability to abduct and conduct brain scans of individual humans from various places and eras, you have the lecture materials and readings for ERS 301 and access to the larger corpus of human literature.

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

Your first report is to focus on the nature and fates of human societies in human history from the dawn of the species to the times when human societies began to be influenced by modern ideas of science, economics, progress, etc. (late 1400s in much of Europe, later elsewhere). Over that period, there were three major different approaches to making a living (and getting along with each other and the rest of the environment). These were hunter-gatherer-forager cultures, small scale farming cultures, and the initial large farming civilizations.

Your report must explain to what extent each of human ways of thinking and acting these was sustainable or unsustainable, and why. Preliminary reports from earlier emissaries suggest that three factors contributed to or undermined the sustainability of human societies, for example by encouraging or blocking learning from mistakes and/or finding ways to adjust in the face of emerging difficulties or new circumstances. They are

- the basic nature of what the societies did for a living (hunting, farming, etc.);
- the way they organized their lives and actions through institutions of various kinds (economic structures, established ways of making collective decisions, entrenched habits and customs, etc.); and
- their underlying beliefs and understandings.

You should consider the importance of these factors, though you may also notice other factors that your predecessors missed.

Options: Your report can be organized as

- a standard briefing note report from a bureaucrat to his or her superior;
- a scholarly paper designed for publication in the interstellar academic *Journal of Primitive and Wayward Planets*;
- a popular magazine article enlivened with illuminating excerpts from material gathered from brain scans of abducted humans from some of the societies examined;
- a public lecture to an academic congress held at the Restaurant at the End of the Universe; or
- the transcript of a deep space Skype report to and conversation with your superiors.

Requirements: For the scholarly purposes of this course, you must nevertheless provide suitable supporting references to the readings, lecture material and other sources. You may choose to use footnotes to the report for this purpose. The report can be a maximum of 1200 words (not including references). The submission is due on Wednesday, October 4.

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

In much of the historical human 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 301). However they are clearly interrelated (as is evident in the materials for weeks 6 and 7) and the combination has clearly been powerful in changing the character of human activities, relations and effects on the planet.

Your task in this second report is to explain why and how the rise and effects of these two phenomena were interrelated and what implications they had for the quality of

human lives and the potential sustainability of human activities on the planet. Some attention to the contrast between the new ideas and those that preceded them (see report 1) would enrich the discussion.

Options: Your report can be organized in any of the ways suggested for the first report. The analysis may feature

- perspectives from a sampling of humans who played major promotional roles in the advancement of modern ideas and practices, plus some who represent those most affected, positively and negatively;
- perspectives from non-human residents of the planet;
- illustrative examples of combined scientific and economic innovations and initiatives that had significant effects and point to larger issues;
- particular attention to the theme of conquest.

Requirements: Again provide suitable supporting references to the readings, lecture material and other sources, and may use footnotes for this purpose. The report, in whatever form, can be a maximum 1500 words (not including references). It is due on Wednesday, November 1.

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

Your final report before returning to your home planet is to present your concluding advice to your superiors at interstellar command. You recall that your official mandate was to determine whether humans have any potential for living sustainably on their planet without interstellar help. You recognize that, no matter what you find, the authorities are not likely to intervene in such a backwater little planet and in any event the intervention teams have messed up more planets than they have helped. So you have chosen to write a report that would be mostly useful for humans and find some way of leaving a few copies behind.

Your report is to be on the fundamentals of what humans need to do, drawing from the lessons of the human record, with special attention to the last few centuries of experiments with and debates about the nature of progress and the possibilities for achieving futures that are both desirable and sustainable. Your report should identify the

- the main human possibilities and limitations evident from the long history and variety of human societies and cultures surveyed in this course;
- the strengths and deficiencies or risks of the standard modern combination of modern scientific and economic ideas, considered in light of the various critiques and proposed alternatives; and
- the basic positive lessons that you would draw from this history about what would work – what the essential characteristics are of societies and cultures that could be generally desirable and at least potentially viable over the long run.

Options: Your report to your superiors is not the one you will be submitting for the course. Instead your submission will be the version that you leave behind for earthlings. The form of the report is your choice. You may, for example, choose to

- insert a (report length) subliminal message in the brains of a set of briefly abducted global political and/or business and/or religious leaders;
- prepare a TED Talk with you disguised as credible human;
- write a series of brilliant blogs designed to go viral;
- draft a radio script for CBC Ideas and the equivalents in other jurisdictions;
- or ...

You must, however, include a brief justification for your choice of mode.

Requirements: Again your report must include suitable supporting references to the readings, lecture material and other sources, and you may use footnotes for this purpose. The report can be a maximum of 2000 words (not including references). It is due on Monday, December 4.

Reports grading rubric

The grading of the reports will be based primarily on evidence of

- attention to the purposes and particulars of the reports assignment (see above) and familiarity with (or mastery of) the concepts and sources, ideas and implications covered by the course, including in the lectures, tutorial sessions and readings (though discussion of other relevant books or articles, from other sources, is welcome) (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%).

In the second and third reports, we will expect increasing concentration on identifying connections or conflicts among the ideas considered.

**Evaluation summary**

Participation	20% (10% weeks 1-6; 10% weeks 7-12)
Tutorial leadership	5%
Report 1	20% (covering weeks 1-3, due October 4)
Report 2	25% (covering weeks 4-7, due November 1)
Report 3	30% (covering weeks 8-12 in light of the earlier material, due December 4)

**The course schedule**

*Beginnings*

Week 1. September 12 The Big Picture: practical choices and underlying ideas for sustainability; different views of the world and different routes to saving it

- Week 2. September 21 Contrasts: hunter-gatherer societies and modern western societies; differences; explanations for the shift from hunting and gathering
- Week 3. September 26 New understandings: philosophy, religion and the roots of the Western tradition

*Into the modern world*

- Week 4. October 3 Science: nature as knowable and manipulable
- Week 5. October 12 Economics: the rise of markets, individuals and a world of commodities
- Week 6. October 17 Modernity: the union of science and economics and a new image of humanity
- Week 7. October 24 Conquest: the domination of nature and the colonization of the globe

*Criticisms and possibilities*

- Week 8. October 31 Early critics: conservative, feminist, socialist and romantic responses to modern industrial society
- Week 9. November 7 Progress and its discontents: reason, technology and doubts in the twentieth century
- Week 10. November 14 Greens: the first century of environmental critique and response
- Week 11. November 21 Sustainability: the integration of environment and development under conditions of complexity
- Week 12. November 28 Lessons: implications of an inquiry into the historical and cultural roots of our current environmental situation and our possibilities for change

**Important UW policies and services on key course-related topics**

*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 or 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), should visit the on-line tutorial at <http://www.lib.uwaterloo.ca/ait/> and seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean.

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Within the Faculty of Environment, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties that may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion.

*Grievances:* 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. See Policy 70 – Student Petitions and Grievances, [www.adm.uwaterloo.ca/infosec/Policies/policy70.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm). When in doubt please contact your Undergraduate Advisor for details.

*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 or she has a ground for an appeal should refer to Policy 72 – Student Appeals, [www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm).

*Disabilities:* The AccessAbility Office, 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 AccessAbility Office at the beginning of each academic term.

*Mental Health:* The University of Waterloo, the Faculty of Environment and our Departments consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges – physical and/or emotional. Mental health is a serious issue for everyone and can affect your ability to do your best work. *Help is available.* Counselling Services (<http://www.uwaterloo.ca/counselling-services>) is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

*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.

*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>.

## **Weekly readings and tutorial topics**

### **Part 1: Beginnings**

#### **Week 1. September 12 Ideas and sustainability: practical choices, underlying assumptions; different views of the world, different routes to saving it**

*Introductory clips, etc.:*

Ployp, *Speechless: World History Without Words*,

[http://www.polyp.org.uk/onetreeisland/onetreeisland\\_1.html](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>

Claire L. Evans, “The evolution of life in 60 seconds,”

<https://www.youtube.com/watch?v=YXSEyttblMI>

*Core readings:*

- Lester Brown, "Learning from past civilizations," *Grist* (July 2009),  
<http://grist.org/article/2009-07-29-learning-from-past-civilizations/>.
- 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](http://gramvikas.org/uploads/file/Publications/In_Gandhis_footsteps.pdf)
- Steve K. Katona, "Worms, germs and sperms: celebrating our shared past and common future," Commencement address, College of the Atlantic, 2009.
- Ronald Wright, *A Short History of Progress* (Toronto: Anansi, 2004), pp.32-35.
- United Nations Sustainable Development Knowledge Platform, *Sustainable Development Goals*, on-line, multi-layer site, <https://sustainabledevelopment.un.org/?menu=1300>  
[also check out the background information provided in United Nations, *Transforming Our World: The 2030 Agenda for Sustainable Development* (New York: UN, 11 August 2015), esp. paragraphs 14-38 (pp.4-8).  
<https://sustainabledevelopment.un.org/post2015/transformingourworld.>]
- World Business Council for Sustainable Development, "Vision 2050 – summary," (Geneva: WBCSD, 2010), esp. pp.2-3 and 4-9,  
<http://www.wbcsd.org/pages/edocument/edocumentdetails.aspx?id=219&nosearchcontextkey=true>
- World Hunger Education Service, "2013 world hunger and poverty facts and statistics,"  
[http://www.worldhunger.org/articles/Learn/world\\_hunger\\_facts\\_2002.htm](http://www.worldhunger.org/articles/Learn/world_hunger_facts_2002.htm)
- WWF (World Wildlife Fund) et al., *Living Planet Report 2014*, esp. pp. 8-13, (Gland: WWF, 2014), [http://assets.worldwildlife.org/publications/723/files/original/WWF-LPR2014-low\\_res.pdf?1413912230&\\_ga=1.259505930.1816577443.1439771196](http://assets.worldwildlife.org/publications/723/files/original/WWF-LPR2014-low_res.pdf?1413912230&_ga=1.259505930.1816577443.1439771196)

*Tutorial questions:*

Is it not difficult to establish that what humans are doing on this planet is not sustainable. Unfortunately, choosing an appropriate response is not so easy. What should be done, how quickly, by whom and with what resources? Not surprisingly, the most common responses focus on adjustments to current ideas and practices – seeking greater sustainability through more or less conventional economic and technological means (using economic motives and developing more advanced technologies for much more efficient resource use, less pollution, etc.).

In contrast, others believe it is necessary and desirable to replace central aspects of the prevailing political economy (e.g. consumerism, increasingly ambitious technologies and artificial environments, market globalization, inequitable distribution of benefits, etc.) with fundamentally different alternatives (e.g. nega-growth and regenerative economies, redistribution of power and opportunity, more local and/or global control, small-scale technologies, voluntary simplicity, etc.). Some activists rely heavily on use of the existing economic system, while others try to subvert and transform it. Some work to change laws, policies and educational systems, while others promote conviviality, spirituality and aesthetics. 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, different understandings of what is desirable and possible, different objectives and priorities as well as different strategies for change. The readings about current unsustainability and possible responses present a variety of alternative ways of seeing people, the environment and proper relations between them.

The varieties reflect different answers to the three interrelated core questions for this course:

- What ways of living can provide the foundations for lasting wellbeing (step 1: respect the capacities of the biosphere and human beings; step 2: match the two)?
- How can we deal with the enormous complexity of living on Earth in a way that will help us achieve and maintain lasting wellbeing?
- How can we best push the changes needed to move towards more sustainable ways of living?

And the three together pose a fourth big question

- 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. So your tutorial question for this week is as follows:

- What are the two most important changes that 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 19 Foundations: hunter-gatherer societies, agriculture and sedentary civilizations; explanations for their differences, their successes and failures, their evolution and their legacy to us**

### *Introductory clip*

John Green, [The Agricultural Revolution: Crash Course World History #1](http://www.youtube.com/watch?v=Yocja_N5s11&feature=player_embedded),  
[http://www.youtube.com/watch?v=Yocja\\_N5s11&feature=player\\_embedded](http://www.youtube.com/watch?v=Yocja_N5s11&feature=player_embedded)

### *Core readings:*

Clive Ponting, *A New Green History of the World* (London: Penguin, 2007), “Ninety-nine percent of human history” (on hunting and gathering), pp.17-23; and “The first great transition” (on agriculture), pp.36-42; also recommended “Destruction and survival” (on soil and forest depletion), pp.67-77 [all of pp.19-115 is excellent].

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

Jill Oakes, “Raw seal and the spirit of plenty, *Alternatives Journal* 15:1 (1987), pp.78-79.

- Bronislaw Malinowski, *Argonauts of the Western Pacific* (1922), excerpt on gift exchanges, from *Lapham's Quarterly* 8:3 (2015), pp.97-98.
- Vandana Shiva, *Monocultures of the Mind* (London: Zed, 1993), pp.12-15 and 19-21.
- Thomas Hobbes, "Of the naturall condition of mankind as concerning their felicity, and misery," in *Leviathan* (1651), pp.84-88.
- Margaret Alic, "Goddesses and gatherers: women in prehistory," in *Hyptia's Heritage: a history of women in science from antiquity to the late nineteenth century* (London: The Women's Press, 1986), pp.12-19.
- 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.
- 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.
- 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>
- 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>.

*Tutorial questions:*

Different ways of seeing the world entail different ways of treating it. And probably vice versa. Perhaps the biggest contrast has been between how hunters-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 hunters, gatherers and foragers. Hobbes' piece, from 1651, provides an 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 departure from hunting, gathering and foraging was entirely beneficial and chiefly led by technological advance, which until recently has typically been credited to certain unknown men who were particularly inventive leaders. Margaret Alic corrects the crediting only men part. But the darkness to light view of human progress 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 and raising the possibility that hunting and gathering cultures may represent humanity's best arrangements in society and in nature. Some such accounts are included in the readings for this week.

Clive Ponting's version of the story suggests a mixed package with humans driven to spread more extensively and exploit more ambitiously for many reasons, including mistakes and external pressures, and 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, gathering and foraging, and the shift to sedentary agriculture and 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, gathering and foraging 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-forager 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, several big questions follow for discussion in the tutorials this week (you may not get to all of them in any detail):

- What did "lasting wellbeing" mean for hunter-gatherer-forager people and what were their strategies for maintaining it?

- How did they deal with the enormous complexity of getting along with each other and with their surrounding environment?
- What led to the change away from the hunter-gatherer-forager society into herding and farming and how did that affect their conception of wellbeing and ways of getting along with each other and with their surrounding environment?
- What are the implications for today concerning how humans can define the good life, get along with each other and with the natural environment, and make big changes?

### **Week 3. September 26 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 [the King James Bible's version of all of Genesis is on the course website]; Psalms 8 and 102, verses 25-28; 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](http://www.youtube.com/watch?v=a7TFBqUmfNw&feature=player_embedded)].

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

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

*The Bagavadgita*, excerpt, "The be all and end all," excerpt, *Lapham's Quarterly* 7:4 (2014), pp.92-93.

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.

#### *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 Abrahamic religious traditions (Judaic, Christian and Muslim) 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 – many more influences were involved in 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 Abrahamic 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 Abrahamic and Greek approaches with those of preceding

traditions (hunter-gatherer-forager, early farming, ancient city/farming civilizations), the various eastern traditions (Buddhist, Hindu, Taoist, Confucian, etc.), and prevailing modern views. The following questions may help to guide your thinking and reading, as well as the tutorial discussions:

- What were the main understandings about humans and the environment, and about the workings of a complex world, at the centre of the Abrahamic religions and Greek rationalist philosophy? How well do they fit together?
- How did these understandings differ from the understandings that prevailed before (e.g. in hunter-gatherer-forager societies) and from the understandings that characterize Hinduism, Buddhist and other major religions that had less influence on the development of the western tradition?
- What aspects of the Abrahamic/Greek combination provide openings from more exploitive treatment of the non-human environment, and what aspects would seem to discourage such an attitude? (But sure to consider both the direct relationship between humans and nature and the indirect effects of, for example, attitudes to the accumulation of wealth and the nature of the good life.)
- Which do you think are more likely to affect behaviour that is environmentally significant: religious or philosophical ideas about the human place in nature, or religious ideas about the pursuit of wealth?

## **Part 2: Into the modern world**

### **Week 4. October 3 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.

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

Edward Dolnick, *The Clockwork Universe* (New York: HarperCollins, 2011), “The end of the world,” pp.13-19; “God at His drawing table,” pp.34-42; “A play without an audience,” pp.90-96; “All in pieces,” pp.97-102.

*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://www.gutenberg.org/ebooks/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 this week 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, especially as a way of dealing with the evident complexity of the world?
- How did the new scientific view of nature and its purpose build upon or depart from the Abrahamic and Greek 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, and for tutorial discussion, 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 12 Economics: the rise of markets, individuals and a world of commodities [\*\*\*NB: The lecture is on a Thursday \*\*\*]**

*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]
- Avner Offer, "Between the gift and the market: the economy of regard," *Economic History Review* 50:3 (1997), pp.450-476, <http://www.nuffield.ox.ac.uk/economics/history/paper3/gift3.pdf> {you can skim much of this one and get the main ideas}.
- Mark Casson and John S. Lee, "The origin and development of markets: a business history perspective," *Business History Review* 85 (Spring 2011), pp.9-37 [also skimmable].

*Tutorial questions [if we had tutorials this week, but they have been eliminated by the new UW schedule]:*

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:

- What were the underlying ideas of modern market economics concerning the basic nature of human beings, proper relations among people, the role of the natural environment, and the foundations for human wellbeing? And how did these ideas deal with the challenge of complexity?
- How did an economy that expanded the role and range of market exchange differ in practice 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 Abrahamic traditions?
- 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. science, religion, 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, and for tutorial discussion, the big question is similar to last week's 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 17 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.

There are two main general questions here:

- What were the central principles of modern scientific and economic thinking that the three attempted to apply to human subjects?
- How well did that work?

In considering these questions, 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 (and the complexities of both).

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 and economic 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?

All of these questions can and should be considered in the tutorial discussion, but you might start with this one:

- how well do the assumptions about human beings made by Malthus, Darwin (or his followers) and Taylor describe you (and if not so well, what is missing or misguided in their depictions)?

## **Week 7. October 24 Conquest: the domination of nature and the colonization of the globe**

### *Introductory clip:*

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

John Green, "Imperialism: Crash Course World History #35,"

<https://www.youtube.com/watch?v=aJaltUmrGo>

### *Core readings:*

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, *A New Green History of the World* (London: Penguin, 2007), "The rape of the world," pp.137-145; and "The foundations of inequality," pp.171-181.

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 Jeffrey 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](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 (and since). 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 and deficiencies of modernism, others may have occurred because the modern ideas were not applied energetically enough and pre-modern approaches prevailed.

The following questions may help to guide your reading and thinking:

- 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 agenda?
- Were the destructive and cruel aspects of colonization due to the application of modern ideas, or pre-modern ones, or both in some combination?
- What would a purely modern scientific and economic programme of conquest involve? What qualities would be desirable? What negatives aspects and risks would you anticipate?
- 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 colonization 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?

And these two may provide an initial agenda for the tutorial discussions:

- What are the main lessons to be drawn from experience with conquest in modern times?
- What are the main alternatives to conquest as means of organizing relations among people and with the natural environment?

### **Part 3: Criticisms and possibilities**

#### **Week 8 October 31 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>.

Louis Menand, "Karl Marx, yesterday and today: the nineteenth-century philosopher's ideas may help us to understand the economic and political inequality of our time," *The New Yorker*, 10 October 2016 (abridged), 9pp.

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 Experience* (1794).

William Blake, "The garden of love," in *Poems of Experience* (1794); also as put to music by Rodney Money, <http://www.youtube.com/watch?v=h6avqJDRiYY>.

William Blake, "Jerusalem," from the preface to a longer poem *Milton: a poem* (1810); also as put to music in the hymn/anthem by Hubert Parry, <https://www.youtube.com/watch?v=qKDBGHmH7Hw>

Samuel Taylor Coleridge, "The Rime of the Ancient Mariner," (1798), Project Gutenberg eBook [or Richard Burton *et al.* version:

<https://www.youtube.com/watch?v=RGH4p4z4s5A> (and 2 following uploads)].

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 modern economics 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 can 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. They cover a range of quite different positions. And not surprisingly, the perspectives of these early critics of industrialism, like the characteristics of the dominant social, economic and political arrangements in industrializing societies, combined both modern and pre-modern, or at least non-modern, ideas. So it's all more than a little confusing.

Nonetheless, you should be able to come up with answers to the following questions:

- What did the socialist, conservative, feminist and romantic critics consider to be fundamentally wrong with modern industrial society at least in Britain?
- What did they propose as alternative positions on nature of human beings, proper relations among people, the role of the natural environment, and the foundations for human wellbeing? And how did their ideas deal with the challenge of complexity?

And your answers to the two questions above can inform your answer to the following question for the tutorial:

- Given all of these options – the ideas underlying the dominant modern industrial approach and the views of the critics – what positions or combinations of positions do you find most likely to serve well to guide moves towards more sustainable institutions and practices today?

## **Week 9. November 7 Progress and its discontents: reason, technology and doubts over the past century**

*Core readings:*

William Butler Yeats, "The second coming (1919),"

<http://www.poetryfoundation.org/poem/172062>

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.

Zygmunt Bauman, "The practice of the gardening state," *Modernity and ambivalence* (Cambridge: Polity, 1991), pp.26-30.

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

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

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].

Graeme Maxton, "The end of progress and the start of the age of endarkenment," an excerpt from *The End of Progress, how modern economics has failed us* (Wiley, 2011), <http://www.clubofrome.org/cms/wp-content/uploads/2013/02/ValuesQuest-Graeme-Maxton-The-Age-of-Endarkenment.pdf>

### *Background*

Edward Dolnick, "The end of the world," in *The Clockwork Universe* (New York: HarperCollins, 2011), pp.13-19 [included in readings for week 4].

### *Tutorial questions:*

The last hundred years have been remarkable for extraordinary highs and lows. There has been unprecedented advance in many areas, most obviously in technology and wealth generation, but also in other social and political fields. But also unspeakable cruelties and appalling destruction. In addition to environmental damage, the evils of the twentieth century included brutal totalitarian regimes, creation and application of highly destructive technologies and expansion of inequities alongside increased wealth and economic capacity. So far in the twenty-first century the record has been equally mixed.

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 worldview 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. They are also among the products of the Enlightenment, which gradually opened the way to much greater tolerance for new and competing ideas and options than was evident in most previous eras. 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. Late twentieth and early twenty-first century sustainability concerns have also led many observers to conclude that the dream of infinitely continuing

material progress, and the assumption that economic growth would automatically eliminate both poverty and pollution, are both over.

And so, the big question is

- How do we retain the highly desirable aspects of modern “progress” while also making necessary changes to recognize material limits, address deep inequities, be more respectful of complex interactions that we do not understand well, and maybe adopt a broader concept of human wellbeing?

That involves considering,

- What are the main limitations and errors in the core ideas that underlie the modern project (especially ideas about the nature of human fulfillment and wellbeing, how to get along with others and the natural environment, and how to deal with the complexities of the world), and what better ideas could correct or replace them?

And for a start in the tutorial discussion,

- If you suddenly had enormous influence over the world’s major decision makers, what would be your first priority for initiating long term positive change towards a more sustainable approach to living on Earth? What core ideas lie behind this change? How do they differ from the now dominant modern package of ideas?

## **Week 10. November 14 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.

Aldo Leopold, "The land ethic," in *A Sand County Almanac*,

<http://home.btconnect.com/tipiglen/landethic.html>, esp. “The Outlook,” pp.12-14.

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.

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, updated 2012), pp. 4-7  
<http://www.globalgreens.org/globalcharter-english>.

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

*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 and twenty-first century worries discussed over the last three weeks.

All 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?

For the tutorial discussion, the opening question is,

- What were the most promising (and perhaps subversive) new ideas and associated possibilities introduced by the greens?

## **Week 11. November 21 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).

Kate Raworth, "Want to get into the doughnut? Tackle inequality," *Exploring doughnut economics* (2014), <http://www.kateraworth.com/2014/10/16/doughnut-inequality/>

- United Nations Environment Programme, "Drivers," *Global Environmental Outlook 5* (UNEP, 2012), chap. 1, esp. "The great acceleration after the Second World War," p.22, <http://www.unep.org/geo/geo5.asp>.
- United Nations Sustainable Development Knowledge Platform, *Sustainable Development Goals*, on-line, multi-layer site, <https://sustainabledevelopment.un.org/?menu=1300>,\* and the background materials available at United Nations, *Transforming Our World: The 2030 Agenda for Sustainable Development* (New York: UN, 11 August 2015), esp. paragraphs 14-15 (pp.4-5) and paragraphs 18-38 (pp.5-8) <https://sustainabledevelopment.un.org/post2015/transformingourworld> (also in readings for week 1).
- 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 poachers to give up their guns in Zambia," *Solutions: for a sustainable and desirable future* 2:4 (1 August 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).
- OECD, "Advancing sustainable development," *OECD Policy Brief* (March 2006), pp.1-8, [www.oecd.org/greengrowth/36277332.pdf](http://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, "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 (aka the Brundtland Commission) 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 now comes in two parts – the first is to be reasonably clear about what the problem to be addressed, and the second is to identify the basics of the needed solutions.

You will notice that most of the readings for this week (and most of the huge heap of writings on sustainability available today) focus on proposed solutions. They offer differing answers, which is fine (probably a diversity of answers and approaches to sustainability is desirable). But it may not be immediately obvious whether there are any fundamental differences among the ideas and assumptions upon which the various proposed solutions rest. So we should look deeper.

For the tutorial discussions, we can begin by identifying the basic ideas and assumptions underlying the various readings. The most important basic ideas and assumptions are those about the nature of wellbeing, how to organize societies and economies to deliver lasting wellbeing, and how to deal with all the big complexities while doing so. The following three questions expand on these points a little:

- 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?
- What ways of living and seeking fulfilling lives can provide the foundations for lasting wellbeing (respect the capacities of the biosphere, match human capacities and aspirations, and respect how little we know about the enormous complexities of life on Earth)?
- How can we best push the changes needed to move towards more sustainable ways of living?

You can apply your thinking about these three points in answering the following two tutorial discussion questions:

- What (if anything) do the authors of the reading think is basically wrong with the current ideas, structures and behaviours that contribute to (or fail to correct) continued mistreatment of the biophysical environment, persistent economic inequities, social injustice and other adverse influences on the quality of life?

but the answer to that question must be accompanied by attention to the flip side:

- What to they say, or assume, about the key positive characteristics and valued contributions of current ideas, structures and behaviour and how we might preserve them?

## **Week 12. November 28 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 what changes are most needed now.

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 the nature of humans wellbeing, how we can best get along with each other and the natural environment and how we can best deal with complexity – that underpin dominant human political and economic institutions today are current versions of modern that human institutions first began to adopt maybe 500 years ago.

Last week, after considering the experience of the past hundred years or so, we asked about the viability of the fundamental assumptions of modernism and the nature of possible replacements for the purposes of sustainability. 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). The following four are the main questions for a detailed analysis:

- 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?

Unfortunately we won't have enough tutorial time to go through all of these directly. So we will leave it to you to consider these matters in preparing your new answer to the old week one question:

- What are the two most important changes that 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.)