

Environmental Humanities module: The ethics of sustainability Instructor's guide

Purposes of the Module:

- 1) To help students appreciate that sustainability is a moral and not merely a technical concept, in the sense that understanding and addressing it raises moral issues and requires moral commitment, and also in the sense that failure to think well about it or to address it is a moral failure.
- 2) To give students tools for thinking about and drawing conclusions about moral issues of the sort that sustainability presents.
- 3) To encourage students to see sustainability (and ethics in general) as a way of life.
- 4) To integrate this learning with the material of the class within which the module is embedded.

Elements of the Module, with resources for using them. They can be arranged in different order from that presented here.

Proposed first step (and a good introduction to the module): Show or remind students where we got this special use of “sustainability”.

- a. State the obvious: dictionary definition of “sustainable”: able to be sustained, kept going. (Applies to any state or activity that is desired but might be under threat.)
- b. Give the history: how the word acquired its environmental meaning in a longer form, as “sustainable development,” so development that can be kept going. The phrase came into common use through the Brundtland report (1987), *Our Common Future*. **The power point slides on sustainability provide some of this history, with some commentary.**
- c. The Brundtland Commission (the World Commission on Environment and Development) was appointed by UN Secretary General Javier Perez de Cuellar in December, 1983, and was chaired by Gro Harlem Brundtland, former prime minister of Norway, and also a physician.
- d. Context: two pressing felt needs: need to halt and even reverse environmental degradation, and need for poor nations to develop. How to do both at the same time?
- e. The Brundtland Report defines sustainable development in human-centered (“anthropocentric”) terms: “Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities.”
- f. The notion of sustainable development has persisted since that time in international discussions and conferences and in most work and reports of the United Nations Environmental Programme (UNEP), along with associated

- notions such as “ecosystem services.”
- g. Since then there has been a gradual transition to talk about “sustainability” without the attached notion of development, as a way of talking (often very loosely) about being environmentally responsible with some reference to the future. This use is common in business, in policy discussions within nation states, and more generally in popular culture around the globe.
 - h. By now *sustainability* has become such a complex and contested notion that one of the best books on the subject, the philosopher Bryan Norton’s *Sustainability*, ends with the claim that we can’t yet give it a final definition, but must work together to decide what we will mean by it.
 - i. Take-away: “sustainability” as originally defined implies protection of nature (“natural resources”) as it serves human purposes, with a goal to continued human flourishing. So it raises immediate questions about what additional reasons we might have to protect nature, what obligations we might have to protect nature *from* us, or how possible it is for us to live in harmony with nature into the future, and under what conditions that could happen. It is obviously a collective issue, so that it needs collective and political attention and can’t simply be a matter of individual behavior. (I.e., if we are going to live sustainably, it is something *we* have to do together.) This raises immediate questions about what you and I as individuals can and should do about it, and in what way it can be an ethical issue for you and me as individuals. Finally, it is obvious that sustainability raises lots of scientific and technical questions, and these are often what gets attention in discussions of sustainability. They are not the same as the moral questions that sustainability raises. It may require taking a step back and a new look to see what parts of the discussion are about facts and technical possibilities, and what parts are about what is actually best to do.

Associated reading: Read summary of Brundtland report (at the beginning of the report itself), starting with section at the beginning defining sustainable development.

Associated historical investigation: students could, and as time allows instructor should look into the historical background of the Brundtland report, find out who was on it, check out Herman Daly’s comments on sustainable development in *Beyond Growth* (Daly 1996, 1-23). Find out what has become of the Commission’s successor organization, Centre for our Common Future. (Start with Wikipedia, follow up with other sources.)

Second step: Clearing the decks:

1. Recognizing sustainability as both a technical and a moral concept.

Sustainability certainly is a technical concept, and this is how it is most commonly studied in the sciences. It is a very *complicated* technical concept. There is a lot of physical and life science involved in learning about climate change, biodiversity loss, population dynamics, waste sinks, carrying capacity and the like. There are many factual questions about each of these topics, and good decisions about what can be sustained, and how, depend on getting the best answers we can to those factual questions. There are also factual questions in the social sciences that may have less exact answers, but they are still technical questions. Some of these have to do with the possibility of continued global economic growth given the current and anticipated future size of the human population of the earth, the feasibility of a steady-state

economy, and the reliability of the correlation between the education of women and the rate of growth in population within a society. Instructors (and students) will be able to think of a great many more factual questions that demand answers in order to think well about sustainability and to reach good decisions. It is easy to get lost in discussion of these questions. Many heated discussions about sustainability are really about the facts of the case, and not about the issues of moral principle. Many more are a mishmash of differences on principle and differences about the facts, with no clear separation being made between them. One common and dangerous form of mishmash involves the various ways in which all of us accept evidence for what we want to believe, and ignore or are skeptical of evidence for what we don't want to believe. A prime example is the common belief that we can and must keep "growing the economy," even though this means increasing our depletion of natural resources and filling up the planet's waste sink, and that unspecified future technological developments will somehow rescue us from the hole we are digging for ourselves. These beliefs are not defensible – Herman Daly is merciless about them – but we cling to them anyway. So there are certainly moral issues about our attitudes toward facts (culpable ignorance). Fundamental convictions about principle can also drive discovery, so the relation between biases and factual knowledge isn't always negative. **Beliefs about growth are one possible topic for class discussion as part of the module. A starting point can easily be found in any day's news, since the orthodoxy of growth is pervasive.**

The fact remains that while science can tell us what the world is like, and what steps to take to reach certain goals, it ultimately can't tell us what goals to have, or why we should have them. It can't tell us what principles to have. That is the domain of ethics (and more broadly, of the formulation of a world-view and a form of life). **A good place to stop and reflect: consider current public discussions about sustainability (have the class identify some). Then try to tease apart the technical from the ethical issues, including places where they are tangled together, and places where bias about facts may present a moral problem.**

2. **Figuring out how to identify and talk about ethical issues.**
 - a. **What is ethics anyway, and how do we discuss it?** Material here is for instructor orientation. Use judgment as to how and how much to use it with students. Usually best to start by asking students what they think, and using these resources to help guide discussion.
 - b. **A starting point: Ethics is obvious.** *Ethics is about pursuing what is good and avoiding what is bad, about doing the right thing and avoiding the wrong, about living the kind of life that is best for human beings.* As such, it is basic, obvious and unavoidably necessary for human life. Without it, life is "nasty, brutish and short," and we are reduced to what Thomas Hobbes called "the war of all against all." As such, asking what ethics is is like asking what food and water is.
 - c. **So why is it hard to talk about? Several reasons.**
 - d. **First obstacle: Ethics is about what is *hard* for us,** like being patient with a troublesome person, telling the truth about something we're

ashamed of, speaking truth to power, letting go of something we want to keep, refraining from actions we'd like to take because they'd be unfair or harmful to others, delaying gratification now in order to live a more ultimately fulfilling life over time. It gets personal! We have a tendency to want to be left alone, and not to "judge" others. We naturally want to avoid talking about things we think we should do, but don't want to. Part of moral courage is to be willing to face and talk about such things anyway. Another part of the solution to this difficulty is relational, involving finding common ground, building trust, accepting & respecting self and others, and learning how to prize and affirm our own and each other's best. Result is to encourage excellence, hold ourselves to account, and welcome the input of others even when critical, because it's in the context of love. I think this really is one reason people have trouble talking about ethics in the way that matters. An instructor can't turn a classroom into a love fest, that's not why students are there. And an instructor can't "make students good." You *can* create an atmosphere of vulnerability, affirmation and mutual respect within which some of this desired community begins to develop, by modeling these characteristics, and calling out violations of the ground rules of respect. The more you do this, the more the classroom becomes a learning laboratory for addressing collective moral problems like sustainability within participatory pluralistic democracy.

- e. **Second obstacle: Leave it to the experts.** Faculty in particular may be reluctant to address ethical issues in class because you have not been trained in ethics, and think you need the guidance of an expert. **In fact there are no experts in ethics; it's just you and me!** There are certainly wise, mature, self-aware and altruistic individuals who generally make good decisions when they're on familiar ground. It's not a bad idea, when faced with a tough decision, to ask such a person, "what would you do in this situation?" You could say these are the real ethical experts. But everyone has the capability to join their ranks. Ethics is not like physics or accounting, where you have to have special training to be good at it. The training for ethics is living a good human life!

Of course there *are* people with advanced degrees in the study of ethics. As a member of that group, naturally I think we have something to contribute! We have expertise in ethical theory, and can be helpful in guiding reflection on ethical issues. Our training and research may also give us specialized knowledge about certain ethically challenging situations that helps us see things others might miss. (Those, and years of teaching environmental ethics, are my qualifications for creating this module.) But having a degree in the field does not make you an ethical person, and it is no guarantee that I will be any better than you or your students at seeing or doing the best or right thing.

In an important sense, then, there really aren't any experts in ethics in the way that there are in medicine or solid state physics, and we can't pass off the responsibility to reflect, decide and act ethically

onto experts. That responsibility belongs to each of us, and each of us has the ability to exercise it. One goal of this module is to convince students (and faculty!) of this, with the end in view of living it out together.

- f. **Third obstacle: Everyone has a right to their opinion (but don't try to push yours onto me! It's all relative.)** We live in a pluralistic democracy, where we don't have a common vision of the good. (That's part of what *defines* a pluralistic democracy.) It is common to hear claims like "Values are up to the individual. They are subjective and relative. They are matters of private opinion." Perhaps those who say this are tired of disputes about values, especially when they are based in religious differences. Such disputes can indeed be tiresome as well as painful (think of the long running arguments in the United States about abortion and choice). But pretending that they don't exist, or that they don't matter, can be even worse. In my opinion, that approach privatizes and trivializes exactly the sort of deeply held, principled convictions and motivations that are essential for resisting the juggernaut of consumer society (see TED talk by Jon Alexander, listed below, about consumerism vs. citizenship).

"We" in pluralistic democracies have no agreed framework or set of criteria for deciding such disputes, and no obvious way of making progress toward such a framework. *We could* conclude from this that ethics is like taste, where standards of a sort prevail within particular social groupings, while no reasonable person thinks these standards have any validity beyond their reference group. (I owe this formulation of a logically consistent and coherent version of moral relativism to Philippa Foot, see Foot 1978.) But I take this to be a counsel of despair when it comes to serious moral issues, such as those raised by sustainability. Addressing them requires courage, standing up to be counted, even having something one is willing to die for. Mere taste or personal preference doesn't meet that bar. You have to *believe* in something to put yourself on the line in that way. And the lack of commonly agreed criteria does *not* imply that there is no truth of the matter! Moral relativism of the sort just described is also not consistent with what most people actually think in connection with moral issues, although it's often what they'll say they believe. Surely Hitler had bad values, not just for "us", but for Hitler. Surely the outrage expressed by the "Me Too" and the "Black Lives Matter" movements makes a claim on all of us, and not just on the victims of violence against women and people of color. What has been done to them is *wrong, unjust*. They deserve justice, the behavior needs to stop, and all of us need to do what we can to make sure that happens. Likewise, we surely *owe* it to future human and non-human generations to leave them a planet on which they can flourish.

One reason public disputes about such matters keep coming up is that it's not always possible for government to remain neutral about them. Do such fundamentally irreconcilable differences of principle

arise in connection with the ethics of sustainability? I believe they do, but not in any way that should obstruct principled collaboration to promote sustainability.

An ecological model for successful classroom work in ethics: Most classrooms are good laboratories for developing an alternative to shoulder-shrug relativism or exclusive, “my way or the highway” absolutism. The one I have landed on follows an ecological model. It doesn’t involve favoring one world-view and way of life over another; in a mixed group, that’s a recipe for unwinnable arguments and hostile relationships. Nor does it suggest that there is no truth of the matter where they disagree; that trivializes many people’s most basic and strongly motivating convictions. Instead it imagines an ecosystem of values and world-views, or rather of people who hold to them, and a rolling set of compromises among them when action is required and policies must be formed. Rather than conforming to the common wisdom of polite society (don’t talk about religion or politics), this approach gives people permission to own and speak from their most basic convictions, and shows respect for those convictions, so long as they don’t press them on others. (It’s important for the instructor to set ground rules about this right off the bat, since agreement to abide by those rules makes free discussion and mutual discovery possible.) From that place it is usually possible to find many alliances in action, even though the most fundamental motives for choosing a certain action may be quite different. On sustainability, there are plenty of examples of such alliances. (For further discussion of this model see Clowney 2013, 2014). Explicit adoption of this model in the classroom is good practice for active future citizenship in our pluralistic democracy, as mentioned above.

This is my way of dealing with the bug-bear of ethical relativism. I hope it proves helpful. In any case, since the topic does often come up, I recommend having some strategy on hand to address it. How much time to allot to the topic in this module will depend on the amount of time allotted to the module.

Associated class discussions: Take 5 minutes to share with a class-mate what your most fundamental loyalties and motivations are with regard to sustainable living, who has influenced you, what your hopes are for the future, also what prevailing rules or standards you find most disturbing or irritating. Then listen to your classmate do the same. Finally, each might report to the class on what the other shared. Instructor guides the class and uses results to illustrate or illuminate the topic at hand. **More focused versions of this exercise:** a) What do I/we owe to future generations, and why? b) what do I/we owe to non-human life, and why? c) What do I/we owe to people on the other side of the world, and why? d) What responsibility do I bear for current environmental problems?

Third Step: Laying out your tools.

- 1) **Three perspective framework.** A framework for thinking about moral issues called “Three points of view on ethics”. This is a question generator, meant for use in opening up the moral dimensions of an issue. It has some relation to the traditional division of ethical theories, each of which tends to favor one of the viewpoints as more basic than the others. But they are offered as of equal validity. Like different seats at a ball game, each shows something that the other might miss. The framework is presented in a brief printed selection from *Earthcare: An Anthology in Environmental Ethics* (Rowman & Littlefield, 2009), and also in a powerpoint presentation. Both are included in the module resource packet. Have students read the Three Perspectives handout, use the power-point presentation as desired or make it available to them. Basics of the three viewpoint perspective come from the three ways of describing ethics introduced above. The written material shows how to generate some questions from each perspective about biodiversity loss. The short exercise gives practice in telling one perspective from another. The power point gives further explanation. **First perspective: Basic concepts: Results, benefit and harm.** Ethics is like cost-benefit analysis. It is about doing good rather than harm. Scope out the situation, find out who has what at stake. Basic question: what will bring the best results and the least harm for all who will be affected by this decision. **Second perspective: Basic concepts: Duty, rights, fairness, principles, rules.** Ethics is like law. Basic question: What are we absolutely required to do in this situation? What (that might tempt us) are we absolutely prohibited from doing? What is the fair thing to do? What rights are at stake? **Third perspective. Basic concepts: personal and relational integrity, character, motivation.** Ethics is like community. Basic questions: What kind of person am I, are we? Who do we most want to be? What would that kind of person do in this case? What does the presence of the other call out from me? Can I respect myself if I do this? Can I face my friends if I do it? What’s motivating me here?
- 2) **The Ethics as Design idea.** (Borrowed from Carolyn Whitbeck, *Ethics in Engineering Practice and Design*, pp. 52 – 68) Recommend keeping these on hand, using them along with the three perspective question generator. Notice the functioning of all three perspectives throughout Whitbeck’s “ethics as design” proposal.
 - a. You have to figure out what to do, not just make pronouncements about what’s right and wrong.
 - b. There is usually no one best solution, but many better and worse ones, and some that won’t work at all.
 - c. Any solution must 1) achieve the desired end, 2) meet specs, 3) be safe, 4) be consistent with background constraints. (E.g., cost of materials, regulations, obvious moral rules).
 - d. "Consider unknowns and uncertainties in the situation" Engineering problems often change while you are working on them. The problem definition will likely change as you start trying to find a solution; and the solution may need to be a flexible one, because of remaining uncertainties. The same goes for ethical problems.
 - e. Finding a solution is different from defining a problem, and may require more information. (p. 63) (Contrast the famous Heinz case whose use by Lawrence Kohlberg (psychologist writing about moral development) was famously criticized by Carol Gilligan (fellow

psychologist, feminist author of *In a Different Voice*); In that case, a child (usually a girl) who tries getting more information before announcing a solution instead of accepting the dilemma as presented is ranked at a lower developmental stage, because the researcher assumes that once the problem is defined, nothing but an ethical judgment is required.)

- f. Time pressure may require pursuit of several solutions simultaneously, so that when one fails, another may still be completed.
 - g. Ethical problems are dynamic; hence both they and their solutions will change over the course of trying to deal with them.
- 3) **A power-point presentation on the ethics of sustainability.** This could be presented to the class, or could serve as part of the instructor's guide. It could be used at the very beginning – I've referred to it above – since it gives useful information about the recent historical origins of the environmentally specialized use of the term "sustainability," and a survey of ethical issues related to sustainability.
- 4) **Practice exercises for applying the framework to issues of sustainability. (see below)**

Fourth Step: Using the tools to identify moral issues raised by sustainability, and to participate in the process of addressing those issues.

Sustainability certainly does raise moral issues. There are issues about what we owe to future generations, and why. There are issues about what we in developed societies owe to poorer citizens in the developing world right now, along with issues about how to pay whatever debt we might owe. There are issues about what we owe to non-human life, and why. And there are issues about how we, as individuals, share responsibility for collective action or inaction and for our collective character, especially when our contributions to collective harms are made up of small, apparently inconsequential daily activities. The work of ethical reflection is to identify such issues, separating them out from the factual and technical questions that are the domain of the sciences and engineering, and to find ways of addressing them. If possible it is best to draw a list of these issues from the students rather than presenting the list to them. If the three viewpoints and the ethics as design tools are presented first, they can be used to generate the list. But in case the pump needs to be primed, here are a few of them, with my reflections on them, in case they prove helpful:

What should be sustained, for whom, and why? Discussions of environmental ethics frequently distinguish between anthropocentrism, biocentrism, and ecocentrism. It is often thought that anthropocentrism is the problem, and that one of the other two views must be the solution. This topic could be raised and discussed within this module. It will probably come up, and whether or not it is officially on the docket, it will be good to have some analytic tools on hand for addressing it, as it is more complex than it at first appears. There are several inter-related questions hiding within it:

How should we value nature? Is it only valuable as it supports us, or does it have a value of its own (often called intrinsic value), so that something besides human beings (nature in general? Ecosystems? Non-human life forms? Other sentient creatures? Anything with an interest of its own?) has a value that entitles it to (protection? Non-interference? Respect? Rights?)

Where do values come from, anyway? Do they come from valuers, so that they are subjective, or do they somehow exist objectively, independent of valuers?

Note that these (How should we value nature, and where do values come from) are separate questions, though they are often conflated. Here are some thoughts about them:

It may be true that values come from valuers (one might ask where else they could come from). It does not follow that they are *arbitrary*, or that they are a mere matter of whim. An egg, for example, will be valuable to a chicken in order to hatch chicks (so left to herself, a hen will hide in a safe nest and protect her eggs – not that she’s *thinking* about this as we would, since she’ll do it whether or not she’s recently been chummy with a rooster). The egg will be valuable to snakes, foxes, and other predators, including humans, for food. It will be valuable to a farmer for its sale price, to a painter for its appearance and to a poet for that plus its symbolism. Note that these values are relational, many are functional, and they “come from valuers” in the sense that they are values (not always consciously held) *to some valuer*. So you could call them “subjective.” But they are not mere matters of whim. You could also say that they are “intrinsic” and “objective” in a way, in that they are built into the way living creatures relate to one another. For example, you and I can hardly avoid valuing food and drink, or for that matter affection, because we *need* those things to survive and flourish. The difference between us and the chicken is our ability to think, be inventive, and make life-plan choices about what we value. Some other living creatures seem to fit that description as well. Language-enabled great apes and cetaceans are able to tell us so by expressing valuations (DeGrazia 2006). Saying that values come from valuers doesn’t decide the question of how to weigh human and non-human values against each other. Finally, even if human valuations get the last word, *that is not the same thing as anthropocentrism*. As Katie McShane points out, it may make sense for us to care about all sorts of things “for their own sake,” so that we want to see the chicken get the chance to lay fertilized eggs and raise chicks, even if the “source” of that value is our preferences and not the chicken’s conscious wish. Human valuing of nature can in that sense be a source of its value, without the content of that valuation being “what we can get out of it.” (McShane 2007).

It remains the case that valuing nature for the way it serves our purposes, and valuing it for its own sake, are different things. Do they

lead to the same result? This is not an easy question to answer, because practical, scientifically informed concern for long-term human welfare will result in preservation of a great deal of non-human nature. An informed opinion on the matter may be found in the Millennium Ecosystem Assessment (MA 2005). The MA's anthropocentric concerns are clear from its title (*Ecosystems and Human Wellbeing*), and also from its systematic and detailed use of the concept of "ecosystem services." All the same, its authors are careful to point out that nature may have value independent of its usefulness to us. In their opinion, the amount of nature we would save if we valued it for its own sake would indeed be greater than the amount we would save to ensure our own well-being (MA 2005b v., 7).

This set of issues is a good one for discussion, and an excellent one for recognizing the value of the "ecosystem of world-views and values" approach. Without getting too far into the philosophically tangled weeds of the previous couple of paragraphs, it will become apparent, if students feel free to express their feelings, that many have a commitment to the value of nature, and think of living things as having rights, even though they may have no clear theoretical base for this feeling, and those who do have a base for it will differ in what that base should be. Some may hold a theistic stewardship view, some may be Wiccan, for many (perhaps most) the matter will have nothing to do with religion. Some will be vegetarian or vegan, and advocates of animal rights. Others will be hunters or (non-organic) farmers. But they may still be able to agree on the need to protect biodiversity "for its own sake," in the sense that they are motivated by a respect and care for it.

What do we (westerners) owe to other human beings on the planet? This is the most central issue in the ethics of sustainable development. It might be best to start with it, and save valuing nature and questions about where value comes from for later, or for research projects for the philosophically inclined. We often see images of suffering people around the world. We see starving, malnourished children in areas suffering from famine, or in wartime (as right now in Yemen and Syria). We see victims of natural disasters such as hurricanes, earthquakes, and tsunamis. There are regular campaigns raising money for disaster relief in response to these events. What we generally *don't* see is the interconnection between our way of life and that of many of those people we see on television. A few examples to jog your thinking:

- The clothes on your back were almost certainly globally produced. Natural fibers grown in one country, synthetic fibers manufactured in another, fabric woven in another country, garments cut out and sewn in yet another. Not just inexpensive but relatively more expensive brands are assembled in sweatshops like the ones that regularly burn down in Bangladesh, killing garment workers trapped inside. This is what it takes to get you inexpensive, mass-produced off-the-rack clothes. Are you helping those people by keeping them in jobs you

wouldn't be caught dead doing? Are you hurting them? What do you owe them, and how can you own your connection to them? See TED talk by Olivia Tyler on Supply Chains and Sustainability, check out <http://equalexchange.coop/action-forum>

- Populated islands like Kiribati, Tuvalu, Vanuatu, the Maldives and the Solomon Islands will be underwater in a few years, because of rising sea levels. Those are a direct result of melting glacial ice in the Arctic and Antarctic. That, in turn, is a result of yours and my (our) use of fossil fuels.

So is sustainability a moral issue for me? How can it be, if I can do so little about it? This is perhaps the biggest and hardest problem in the ethics of sustainability for the average citizen, and even more so for the average student. We're left doing small "sustainable" things and perhaps carrying a bit of guilt or taint for not doing more or for being part of a society that does so much harm. The first two perspectives introduced above sharpen the problem a bit, prompting you to recognize or seek out more of the range of ways in which sustainability is indeed a moral issue. But it's only with the third perspective, opening up the relational nature of ethics, that hope for real moral agency for you and me begins to emerge in this picture, along with hope for some real solutions. **Sustainability is a collective action problem. It can only be achieved by collective action.** The stakes are very high. If we don't do anything about it, life will be very bad for future humans, and many forms of non-human life won't survive. It is *our* problem. It is *we*, by our way of life, who are warming the planet, poisoning the air, degrading the soil, draining the water table, trashing, over-fishing, and raising the level of the ocean, and causing the most rapid and potentially the largest die-off of life forms that the earth has ever seen. It is one of *our greatest* moral problems. And yet it also seems that it is no-one's problem in particular. It seems not to be *my* problem, because there is very little I can do either to achieve or prevent a sustainable future. Sustainability doesn't seem to be a crisis for *me*, and what I do doesn't seem to make any real difference. Ronald Sandler calls this **the problem of inconsequentialism** (Sandler 2010, 168; see also Clowney 2014, 316). If students come out of this module able to own sustainability as *their* moral challenge, and believing that they can make a difference, the module will have accomplished one of its major purposes.

Recent work in the science of social networks provides a different perspective on the problem of inconsequentialism. Stanley Milgram's idea that there are six degrees of separation between any two human beings on the planet turns out to be approximately correct. More important for moral purposes is the fact that *social influence* is detectable out to three degrees of separation, although of course it diminishes with each of those degrees. (Watts 2003; Christakis & Fowler, 2009). Pretty much whatever you think or do, your friends' friends' friends are more likely to think or do those same things than they would be without you in the equation. So your individual actions are never just yours. When it comes to sustainability, that means that your *influence* is probably more important than your actions by themselves. If you live in a sustainable way, that will influence others to do the same, especially if you obviously enjoy and benefit

from living in that way. It will do that when you are intentional about it, and when you are not. You won't see a lot of that influence; but you can be sure that it's there. You make more of a difference than you are likely to think you make. That means that sustainability really is your moral responsibility and mine, not just "ours" in some way that doesn't involve us individually. It also means that each of us can do more about it that we are usually inclined to think that we can. Finally, it means that when deciding what to do, *and about how you live*, you should be thinking not just about your personal sustainable actions, but about your effect on others. **Use Christakis TED talk about social networks here.** What will produce the necessary changes? Only very large scale action around the globe. What will bring that about? Only lots of individual and small group changes that start a cascade. Then voting behavior will change, new people will be in office, new laws will be passed, new technology will emerge, etc. **Use example of environmental legislation in the '70's**, the way that momentum built, the way that consciousness began to change, the way that various motives coalesced on common goals, the way that corporate America fought the new environmental legislation and the environmental messengers like Rachel Carson tooth and nail, but was eventually, if temporarily brought to heel.

Integrating the module, using it in a class

In this module I have tried to provide a variety of resources, and some helpful frameworks, to guide class instruction and reflection on the ethics of sustainability. There is certainly more than enough here to take up one class period. Much of it, I hope, can simply be instructor resources. The best use of it will involve lots of student interaction with the material, using the tools to work on particular problems and cases. These should be chosen to fit the subject matter of the class. The examples below are just suggestions of the sort of thing that might work.

- 1. Personalizing connection to future generations: a Joanna Macy exercise.** (Approximately 20 minutes – requires an open floor with folding chairs). Have the class arrange their chairs in two concentric circles, the inner circle facing out and the outer facing in. Assign half the class to sit in the inner circle of chairs, and simply to be themselves. The other half of the class sit facing them in the outer circle of chairs, and impersonate 5th generation descendants of the students they are facing. The outer circle tells the inner circle what life is like for them, and what kind of world the inner circle has passed on to them. After ten minutes, the inner circle has opportunity to respond. At the conclusion of the exercise, leave time for participants to share their experience of the exercise with the group. My personal experience of this exercise stunned me.
- 2. Actualizing connections with people elsewhere on the planet.** Lots of ways to do this. Students from other countries *may* be comfortable sharing some of their experience. Important to check with them first, usually best to use them as agreed additional resources.

In any engineering class at Rowan, this module could tie in to the Engineers Without Borders program. Any example that would include a direct, mutually useful connection between students in the class and students or others in another country could work really well. Example of connections

between Tirimbina Reserve in Costa Rica and schools in the Milwaukee area. Several Engineering professors have ties with communities and research stations in other countries that could be a resource. Consult Professor Kauser Jahan, others. Good advance prep might open some opportunities in which the class can engage. Check example of Dan Janzen working between UPenn & Guanacasta Conservation Area in Costa Rica

<http://www.gdfcf.org/daniel-janzen>

- 3. Localizing sustainability at Rowan.** A goal of this module is to lead students to think about ethics in general, and sustainability in particular, as a way of life rather than as a series of problems to be solved. Several of the listed TED talks provide examples of what this can mean; those by Majora Carter and Ray Anderson are particularly powerful. Guided group discussions might be useful as well. Especially helpful would be specific applications to the lives of students in the class. These could be of two sorts. One might be class involvement in some campus sustainability project, e.g., attempts to clean and protect the stream, or to develop sustainability resources and educational resources around campus. Another would be discussions of whether there is a culture of sustainability on campus, and how students might promote or sustain or participate in such a culture, also how students might draw others into such a culture, and leave more behind them on the campus than they found when they arrived. (A mini-model of what all of us must do for future generations!) There is a lot to this project, if any faculty member wants to take it on. One could start by going to this website, <http://secondnature.org/> and checking Rowan's (non)participation in the commitments entailed by the carbon-neutrality pledge that started the organization. <http://secondnature.org/climate-guidance/the-commitments/> and here: <http://reporting.secondnature.org/> Then one could ask about the recent rapid development of the campus, and its satellite campuses (the new ones acquired by negotiated mergers with county colleges), the net sustainability effect of Rowan Boulevard, the future of Rowan sustainability, the relative roles of students, faculty, professional and support staff, administrators, Board members, and NJ State government in making decisions and following through on them in regard to practicing sustainability in Rowan's whole identity and mission, and in its impact on southern NJ. Approach this material with an open mind, as a citizen of a community with a history and a presence of which you are part and on which you and your friends and classmates have some influence.

A library of resources for thinking about sustainability.

(Note that the on-line resources are available at no cost. Many others are articles or brief selections that could be scanned or photocopied for class use without violating fair use standards. The books cited are excellent resources that should be in any academic library, and could be put on reserve.):

Sustainability science and policy:

The Brundtland Commission Report: *Our Common Future: Report of the World Commission on Environment and Development*. Available at

<http://www.un-documents.net/our-common-future.pdf> This is the report that brought the phrase “sustainable development” into world-wide use. Reports of the Intergovernmental Panel on Climate Change: <http://www.ipcc.ch/> Since a sustainable future depends on dealing with climate change, these reports are essential resources. They are available free of charge, and are constructed so as to be useful to a wide variety of audiences. Readers without much time or training can get the over-all picture from the Summary for Policy Makers; those wanting more detail and depth can drill down all the way to the technical reports, which summarize and provide a bibliography of the primary science on which the reports are based.

Millennium Ecosystem Assessment:
<https://www.millenniumassessment.org/en/Index-2.html> Similar to the IPCC reports in depth and breadth, but focuses specifically on biodiversity, ecosystem health, “ecosystem services,” sustainability and human well being. Regrettably not scheduled for regular updates like the IPCC reports.

NOAA Global Climate Report: 2017
<https://www.ncdc.noaa.gov/sotc/global/201713> Covers similar ground to the IPCC reports, gives an independent confirmation of the conclusions of those reports.

United Nations Environmental Programme: Sustainable Development Goals
<https://www.unenvironment.org/explore-topics/sustainable-development-goals> Whole UNEP website is worth exploring (it’s vast). This link gives the latest on sustainable development, with special reference to developing countries.

Other useful sources

- Brennan, Andrew, and Yeuk-Se Lo, 2015. “Environmental Ethics.” Entry in *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/ethics-environmental/>, Accessed 5/24/2018.
- Christakis, Nicholas, & James H. Fowler, 2009. *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. NY: Little, Brown & Company. *Excellent summary of recent research on the spread of influence in social networks.*
- Clowney, David W., 2014. “Collective Environmental Virtue”. *Environmental Values* 23.3: 315-353. *Develops the idea of collective character in connection with environmental ethics.*
- _____, 2013. “Biophilia as an Environmental Virtue”. *Journal of Agricultural and Environmental Ethics*, 26.5, 999-1014. *Describes an individual and collective virtue important for a sustainable way of life, and makes suggestions about how it might be cultivated in pluralistic democracies.*
- Daly, Herman, 1996. *Beyond Growth: The Economics of Sustainable Development*. Boston: Beacon Press.
- _____, 2014. *From Uneconomic Growth to a Steady-State Economy*. Cheltenham, UK, & Northampton, MA, USA: Edward Elgar Publishing.

- Gardiner, Stephen, 2011. *A Perfect Moral Storm: The Ethical Tragedy of Climate Change*. NY: Oxford University Press.
- DeGrazia, David, 2006. "On the Question of Personhood Beyond *Homo Sapiens*" in *In Defense of Animals: The Second Wave*. Ed. Peter Singer (Oxford: Blackwell). *Argues that language-enabled great apes and cetaceans are persons, including the ability to make value judgments just as we do.*
- Foot, Philippa, 1978. "Moral Relativism". In Krausz & Meiland, eds., *Relativism, Cognitive and Moral*. Notre Dame: University of Notre Dame Press, 1982, pp. 152-166.
- Gardiner, Stephen, 2011. *A Perfect Moral Storm: The Ethical Tragedy of Climate Change*. NY: Oxford University Press.
- Gowans, Chris, 2015. "Moral Relativism". Entry in *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/moral-relativism/>. Accessed 5/24/2018. *Thorough treatment of the subject. SEP is a free on-line resource of high quality.*
- Hawken, Paul, 1993, 2010. *The Ecology of Commerce (revised edition)*. NY: Harper, Collins
- _____, and Tom Steyer, 2017. *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. NY: Penguin/Random House.
- Jamieson, Dale, 2003. "Values in Nature." In *Companion to Applied Ethics* (Oxford: Blackwell), 650-662. *Great survey of the theoretical terrain, relating discussion of where values come from to questions about the value of nature.*
- Janzen, Daniel, 1998. Gardenification of wildland nature and the human footprint. *Science* 279: 1312-13.
- Klein, Naomi, 2014. *This Changes Everything: Capitalism vs. the Climate*. NY: Simon & Schuster.
- MA 2005a. *The Millenium Ecosystem Assessment*. Washington, DC: World Resources Institute. Available at www.milleniumpassessment.org/en/index.aspx
- MA 2005b. *Ecosystems and Human Well-Being: Biodiversity Synthesis*. Washington, DC: World Resources Institute. Available at www.milleniumpassessment.org/documents/document.354.aspx.pdf
- McDonough, William, and Michael Braungart, NNNN. *Cradle to Cradle*.
- McShane, Katie, 2007. "Why Environmental Ethics Shouldn't Give up on Intrinsic Value." *Environmental Ethics* 29:43-61.
- Norton, Bryan, 2005. *Sustainability: A Philosophy of Adaptive Ecosystem Management*. Chicago: University of Chicago Press.
- Speth, James Augustus, 2008. *The Bridge at the Edge of the World: Capitalism, The Environment, and Crossing from Crisis to Sustainability*. New Haven, CT: Yale University Press.
- _____, 2012. *America the Possible: Manifesto for a New Economy*. New Haven, CT: Yale University Press.
- Sylvan, Richard (nee Routley), 1973. "Is there a Need for a New, and Environmental Ethic?" In *Proceedings of the Fifteenth World Congress of Philosophy*. Varna, Bulgaria: Sophia Press.
- Watts, Duncan J., 2003. *Six Degrees: The Science of a Connected Age*. NY: W. W. Norton. *Another excellent presentation of the science of social influence.*

Quite accessible, while also providing a road into more rigorous study of this fascinating new field.

Weston, Anthony, 2017. *A 21st Century Ethical Toolbox, 4th edition*. NY: Oxford University Press. An *excellent* introduction to ethics, with lots of practical, useful exercises, and a great deal of common sense and student-centeredness in the writing. A good source for instructors to draw on in preparing this module for use. First or second chapter could be assigned as a reading. The definition of ethics on page 7 and the box on relativism (pp. 53-56) might be especially helpful for this module.

Yale Program on Climate Change Communication.

<http://climatecommunication.yale.edu/> *The place to go to find out about how to communicate about this crucial sustainability issue across the divides that characterize the United States.*

... and almost anything published by Island Press. Students could browse their site, and find a source to report on, or report on the press itself.

TED talks related to sustainability

TED talk by William McDonough, Green architect

https://www.ted.com/talks/william_mcdonough_on_cradle_to_cradle_design

TED talk by Majora Carter, founder of Sustainable South Bronx – “Greening the Ghetto”

https://www.ted.com/talks/majora_carter_s_tale_of_urban_renewal

TED talk by Majora Carter on local eco-entrepreneurship

https://www.ted.com/talks/majora_carter_3_stories_of_local_ecoactivism

TED talk by the late Ray Anderson, founder of Interface Carpet Company and leader in sustainable business practices

https://www.ted.com/talks/ray_anderson_on_the_business_logic_of_sustainability

TED talk by Olivia Tyler on supply chains and sustainability

https://www.ted.com/talks/olivia_tyler_the_complex_path_to_sustainability

TED talk by Jon Alexander about sustainability and consumer society.

<https://www.youtube.com/watch?v=Mor2CZj3KZQ>

TED talk by Nicholas Christakis about social networks and influence

https://www.ted.com/talks/nicholas_christakis_the_hidden_influence_of_social_networks

Exercises for applying 3-viewpoint framework. (Full disclosure: the author of this module, David Clowney, is a member of CCL.)

1. As a warm-up, consider the following comments from the field of business, and associate each of them with the perspective that they best represent.
 - a. We believe that honesty is the best policy, because if you lie to customers, you'll get caught, and you'll lose business.
 - b. In this business, we all work as a team. Why? Because we all get more satisfaction and out of doing our jobs when we work in that way.
 - c. Of course we use sex to sell products! Our product is perfume. Perfume is about being sexy. Good advertising should relate to what the product is actually about. Then it's less manipulative. When your product is about sex anyway, using sex to sell it is perfectly all right.
 - d. If we're going to survive as a company, we must be perceived as environmentally responsible. That's why we're going to recycle as much of our waste as we can, and advertise the fact loudly to the public. It doesn't hurt, either, that recycling will save us money!
 - e. If I blow the whistle on the things my company is doing, I'll lose my job. But I'd rather do that than live with myself if I keep quiet.

2. A longer exercise, to be done at home. Decide how much time you want students to spend doing it, and give them that as a guideline. Can be an "ungraded" assignment, = you get points if you do it, none if you don't, quality of your work is not evaluated, it forms a base for class discussion.

Go to the Citizens' Climate Lobby site, and read their proposal for a rising fee on carbon, with dividend returned to households on a monthly basis, and a border adjustment to encourage other economies to follow suit, and keep American companies globally competitive with others who don't follow suit. Find it here: <https://citizensclimatelobby.org/basics-carbon-fee-dividend/>

Use the three perspectives to evaluate the CCL proposal by generating questions about it from each perspective, and trying to answer them. Use the CCL site to research your answers, don't just guess! Use the sample generation of questions about biodiversity loss in the attached materials as a model for how the three perspectives should be used.