*The Theory of Economics does not furnish a body of settled conclusions immediately applicable to policy.  It is a method rather than a doctrine, an apparatus of mind, a technique of thinking which helps its possessor to draw correct conclusions.*  [John Maynard Keynes](http://www.econlib.org/library/Enc/bios/Keynes.html)

*The economists' stock-in-trade -- their tools -- lies in their ability and proclivity to think about all questions in terms of alternatives.  The truth judgment of the moralist, which says that something is either wholly right or wholly wrong, is foreign to them.  The win-lose, yes-no discussion of politics is not within purview.  They do not recognize the either-or, the all-or-nothing, situation as their own.  Theirs is not the world of the mutually exclusives.  Instead, it is the world of adjustment, of coordinated conflict, of mutual gains.*  [James M.Buchanan](http://www.econlib.org/library/Enc/bios/Buchanan.html) (1986 Economics Nobel Laureate, not the 15th U.S. president)

One economist's approach to interdisciplinary teaching and exploration of sustainability

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An interdisciplinary approach to both research and teaching seems natural. Our departmentalized organization of education, while necessary for administration, seems to have led to a great deal of compartmentalized thinking. I was drawn to my own discipline, economics, because it is less about particular subject matter (though it does concentrate on society and social systems) and more of how one approaches that subject, the method of analysis.

For an economist, concerns about sustainability are at the root of the discipline. Economics is most commonly defined as the study of how humans act (and interact) in the face of scarcity of resources. To economists, all resources are scarce, just in different degrees. One of the earliest contributors to modern economics, Thomas Malthus, was concerned with the conflict between the exponential growth of human populations and the linear growth in food production.

In my own research, I have examined how the adoption of the secret ballot affected turnout in British Parliamentary elections, how school boards choose to have special elections for taxes to increase the chance of the tax passing, and how human social institutions, such as private property rights vs. open access, can lead to sustainability of the renewable resources or societal collapse.

Rather naturally, my research and teaching interests are interwoven, as well. Besides teaching basic introductory courses at my institution, I teach, three upper-level courses, health-care economics, public-sector economics and environmental economics.

While there is some tendency of students to compartmentalize knowledge, they do have some prior knowledge of areas outside of economics, and as an instructor, I find it useful to leverage that prior knowledge to introduce a concept that is new to them. For instance, many students taking introductory economics have had an introductory psychology class. I try to leverage their familiarity with Maslow’s hierarchy of needs, to get them to understand that human wants are limitless. When teaching the time value of money, I draw upon their knowledge of the potency of deferred vs. immediate gratification. I also draw upon their mathematical knowledge of slopes or rates of change and optimization to issues of profit maximization and cost minimization issues. Since most students have had at least high school chemistry or physical science, I use the gas laws to illustrate the difference between changing a variable and changing a relationship. Competition as a process (rather than a state of affairs) is an evolutionary process and so an understanding of how one species becomes dominant in a particular biogeographical area or comes to share that area with other species is helpful in understanding the competitive process.

In addition to using prior knowledge to leverage learning of new concepts, smilar leveraging is useful in terms of interest or curiosity. Many students have little innate interest in economics, mistakenly thinking that economics is only about issues such as international trade, inflation, or investing. A personal interest in healthcare issues, such as why their aunt cannot get her chemotherapy at the proper time because of current shortages can become an interest in economics if they learn in an economics class as why those shortages exist.

My primary examination of geosciences and sustainability are in the area of how different institutions and human behaviors lead to overuse and depletion or to more sustained access to key resources across generations. My research and teaching about the collapse of Easter Island, a useful metaphor for the earth itself, examines how open access rather than private property rights or other institutions (note the work of Elinor Ostrom on this) may prevent this sort of societal collapse. Similarly, non-renewable resources can be protected from overuse through limiting access with individual property rights and the actions speculators. One new area for me to examine both in teaching and in research is the sustainability of natural resources and the preservation of natural resource wealth for future generations using democratic institutions to control their use.