Teaching Sustainability Through History

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Our environmental studies department was created 20 years ago with the *specific intention* of interdisciplinarity in its design but due to resource constraints (i.e. few faculty trained in interdisciplinary methods) its curriculum remained largely disciplinary through its first decade. That changed in 2002, when we first developed an introductory course in environmental studies (ENVR 150: Introduction to Environmental Studies) that was explicitly interdisciplinary. Since then we've built a major and a department around the premise that environmental /sustainability problems in the real world can only be addressed through interdisciplinary approaches. Consequently, all of our faculty are asked to teach with that in mind, even in disciplinary courses, and to make the links between and among disciplines an explicit part of their courses.

My own background as an environmental historian has led me to use history as the thread that links science and sustainability in my classes. Across a range of courses I teach, asking "how was this done in the past and what can we learn from that history?" has become my primary means of pushing students to think outside the disciplinary or topical lens. For example, when looking at issues related to natural resource management in the US National Parks, we start with Stephen Pyne's book *How The Canyon Became Grand*, which is as much a history of 19th c. American geological sciences as it is of the canyon itself. When exploring the impact of residential water use on local aquifers and rivers, I start with readings on the history of American indoor plumbing systems. And when talking about landscape design we read Aldo Leopold.

My basic goal is to help students realize that the problems we face today all have historical precedents from which we can learn. Geothermal heating and convective cooling have been used for centuries. So have passive solar design, green roofs, local materials, etc. A course on green building would then start with historical background not only on the aesthetics of architecture and design, but on the technical aspects of building systems that most attract students today (HVAC, energy, insulation, solar design, etc.). By exploring historical examples and examining change over time we can better understand how things came to be the way they are—to interrogate the assumptions we make about what a house should look like, how large it must be, what is "comfortable" indoors, how to heat/cool, where to get water, what to do with sewage, how it sits on the land, etc. Simply looking at data on the average square footage of new home construction across the 20th century can be quite informative; even better is to learn about the first William Levitt and Sons development in Long Island and how their decision to build in a potato field—rather than in the city –radically changed our expectations of what "home" should look like.

Historical context exists for every aspect of sustainability. The ecological is easy; we have everything from climate records to FEMA maps to tell us about how the land around us changed over time. Economic data similarly exists for almost every level of society, at least through the 20th century. Social information can be harder to come by but then qualitative data (memoirs, interviews, popular culture, etc.) can open doors that lead to questions that might otherwise go unasked.