Environment at Clark

A history of addressing the climate problem

Walter Wright, May 2016

Clark has a long history of exploring the relations between human beings, technologies, and the natural world. Founded in 1921, the university's ***Graduate School of Geography*** is the nation's oldest sustained program for the study of human-environment relations. In those early days, how humans influenced the environment was not the central question, even though the potential danger of greenhouse gasses like CO^2 had been known since Arrhenius's 1896 paper. Instead, the "influences" were most often seen as traveling in the other direction: coming from the environment to shape human cultures and individuals. The Graduate School of Geography has always been a constant source of innovative thinking. Its faculty and students have pioneered fields as diverse as humanistic geography, hazards and risk assessment, critical geography, animal geographies and feminist geography; a spirit of collaboration results in a strong community and unique research.

Over time, Clark's focus turned toward more critical examinations of human-environment relations. In 1972 Physics Prof. Christopher Hohenemser launched a program called "***Technology and Man***".[1] Hohenemser joined colleagues like Rob Goble, Roger Kasperson, Bob Kates, and others to establish an interdisciplinary space for fully understanding human impacts on the environment. As a new undergraduate major, "Technology and Man" focused on helping students develop the scientific, technical, and critical skills necessary to understand and address issues raised by the these impacts. Working with Hohenemser and Rob Goble, students from *Technology and Man* quickly made several innovative suggestions about campus energy use, including installing timers on classroom lights and building a co-generation plant.

In 1974, having become provost, Roger Kasperson initiated a parallel MA degree program in ***Environmental Affairs.***[2] EA brought together courses and faculty from several disciplines to form a new degree program focused on sustainability, adding a stronger emphasis on environmental policy. These two programs became the matrix

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[1] In 1975 *Technology and Man* was renamed *Science, Technology, and Society* (STS), a title that was both less problematic and more descriptive of the program's aims.

[2] EA joined a group of other Master's programs that included an attached BA/MA track.

from which later developments would emerge; indeed they anticipated and prepared the way for the next 40 years.

Science, Technology, and Society and *Environmental Affairs* continued as related but distinct graduate and undergraduate programs until the mid 1980's when they merged into a new joint UG/MA program named ***Environment, Technology, and Society***. The arrivals of Halina Brown and Ortwin Renn in the same period brought new energy and focus to environmental issues. Connecting high quality environmental science with cutting edge social science to give direction for policy-making came even more strongly into the center of environmental research and teaching. Ultimately, the name ***ETS*** was changed again to ***Environmental Science and Policy***[3] a designation that continues until today.

The university's trajectory on environmental matters shifted again in 1987, Clark's centennial year. Responding to a suggestion by Bob Kates, Bill Turner and a small group of colleagues began meeting in 1982 to plan an international symposium titled ***The Earth as Transformed by Human Action***. Five years in the making, the symposium ran from October 25 to October 30, 1987. Holding an average of four sessions each day, participants explored "the effect of human activity on the global environment for the previous three hundred years." In the words of the conveners, 'humanity continues to face fundamental questions … about the fate of the biosphere and the capacity of both nature and society to sustain life." Cambridge University Press published the proceedings in 1990 under the same title. Together with policy, the full range of humans impacts on the environment was now decisively on the table.

In 1993 Roger Kasperson – again serving as Provost – launched another new venture. He convened an interdisciplinary faculty group and charged them with developing "a bold and innovative educational experience for undergraduates." More specifically, the group was asked to promote "a holistic approach to the relationship between humankind and the environment." In 1995 the first students matriculated into a new ***Environmental School*** whose program offered a "core curriculum" organized around nine specific courses, plus an additional two upper level courses from a student's major.

Writing for a 1998 *Self Study*, the School's director, Halina Brown, perfectly described the School's goals and the issues facing it. She recognized that "establishing a sustainable way of living … challeng[es] the existing institutional structures and economic systems."

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[3] I have not yet been able to date this name shift precisely.

The initial hope was that the ES would create "an emerging intellectual community concerned with the issues"; that it would "offer <students> an educational experience that is different from our own." After four years of leading the ES, Halina concluded that education for sustainability "must be complemented with a strong experiential problem-solving component drawn from the messy, uncontrolled, conflicted and contradictory world outside the world of abstract ideas." Although the ES experienced some growing pains along the way, the *Self Study* judged the School's program to have met its goals. It also noted that students surveyed for the study wanted ES to be "more than courses," to include "more experiential learning," and to provide a stronger "sense of community." The *Study* is optimistic about the School's prospects and offers a number withthe administration decided to terminate the ES. The example of the Environmental School contains important lessons about building ambitious new programs. As a case study, its history might prove valuable.

In 2000, Clark birthed yet another merger. ES&P was joined with another of Clark's distinctive and excellent programs, *International Development*, to create a new interdisciplinary venture **International Development, Community and Environment** (IDCE). Bill Fisher was hired from Harvard to shepherd this new creature. IDCE is "focused on removing the barriers between traditional academic departments and combining disciplines creatively." Their mission is "to produce practical approaches to longstanding social, environmental, and economic problems, always mindful of the practitioners and communities we serve. We prepare activists, practitioners, scholars and change agents to think critically, act collectively and engage responsibly." The graduate component of ES&P became one of four MA tracks in IDCE.

At this time, Clark had a welter of undergraduate environmental education options that begged for reorganization. This was accomplished through a series of moves that revised the Geography undergraduate major, moved the undergraduate component of ES&P, and connected the environmental aspects of Biology into a new, single ***Environmental Science*** major. This major has three tracks (a) *Earth System Science*; (b) *Environmental and Conservation Biology*; and (c) *Environmental Science and Policy*. Each of these tracks includes issues linked to climate. ESS focuses on connections between the Earth System's components (the lithosphere, atmosphere, hydrosphere and biosphere). It stands "at the heart of some of our most pressing physical science and nature-societal issues, including global climate change, water availability, and the loss of biological diversity." Conservation biology focuses in turn on "the biological knowledge necessary to preserve biodiversity". And finally, ES&P retains its historic role of linking natural and social science with policy concerns. It asks "how human activity is impacting the natural

environment, along with … perspectives on how these impacts can be managed and mitigated."

Beyond the academic curriculum, Clark's Centers and Institutes have also contributed significantly.

Through the *Difficult Dialogues Initiative* and several *Dialogue Symposia* on related themes[4], the ***Higgins School of Humanities*** has contributed to a growing campus conversation on anthropogenic climate change. For Higgins, "humanistic inquiries and practices are crucial to our development as intellectually curious, socially engaged, and ethically-oriented beings." The "humanities and arts ground our capacity to engage with societal complexities — by developing historical, cultural, literary, linguistic, and philosophical consciousness, and encouraging empathic and aesthetic ways of knowing." Also, the ***Council on the Uncertain Human Future***, based at Higgins (and funded by the Mellon and Kaiser Foundations), is an innovative and effective model for building deeper understanding of climate challenge. A national Council group (2014 and continuing), a Council at the University of Edinburgh (2016), and two Clark faculty Councils (2015, 2016) have taken place, and several others (and related projects) are planned or underway.

The George Perkins Marsh Institute focuses on research related to the question, "What is and ought to be our relationship with nature?" The Institute studies the natural, technological and socioeconomic systems that link humans and their surrounding environments, coordinating resources from Clark University and elsewhere to study human transformation of the environment and responses to this change. Many of its projects involve the question of global climate change. It also brings regular public programming relevant to the topic.

The Mosakowski Institute for Public Policy's mission is "to improve the effectiveness of government and other institutions in addressing social concerns through the successful mobilization of use-inspired research." Climate change is one theme that the institute addresses. In collaboration with Marsh, Mosakowski sponsors student internships with NOAA each summer; it also sponsors regular lectures and events.

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[4] For example, see "Climate Change" (S08); "Old Forms Give Way, Visioning the New" (F09); and "The End of Things" (F12). Many other Symposia (when not fully focused on climate change) have included at least one event that addressed it.

Other Clark departments also have spaces within their majors that allow questions about climate change to arise. Biology comes to mind immediately. But ***Economics*** does as well. It examines the "tradeoffs inherent in addressing issues confronting us today: problems like income inequality, food scarcity, industrial pollution, labor exploitation, resource depletion, climate change, and the rising cost of health care." ***Geography*** and ***Global Environmental Studies*** are two more. The former offers four concentrations: earth system science; nature-society; globalization, cities and development; and geographic information science; and the later asks "how different economic practices, laws and policies, cultural values, and social norms across the globe guide peoples' relation to the planet." (Climate Change Science and Policy is one possible subfield).

In short, Clark has a long, multifaceted history of addressing the challenge of climate change. So where are we now?

In the last two years, ***A new Earth conversation*** developed from foundations laid by a **Clark faculty *Council on the Uncertain Human Future*** (winter 2015) and the first **Climate Change Teach-in** (March 2015). De-briefs with Faculty and students, as well as interest from President David Angel, resulted in the formation of a yearlong initiative (Oct 2015 to Oct 2016) to ask some fundamental questions: *Given that the planet has entered a process of profound change, can we face it together? Given its gravity and uncertainty, how will we as educators show up? Can we re-envision the work of our community, given this reality?*

The NEC has invited the entire faculty to join a range of opportunities to address these concerns together: a second faculty UHF Council (winter 2016), faculty TRIO conversations, a series of public events including a Teach-in keynote by Naomi Klein, three Next Steps lunches and a second **Climate Change Teach-in** (March 2016) in which over fifty faculty members participated in presentations or panels.

So we are, again, poised to ask

What is and ought to be our relationship with nature? (Marsh)
What is the fate of the biosphere and the capacity of both nature and society to sustain life? (Earth Transformed)
Given that the planet has entered a process of profound change, can we face it together? Can we re-envision the work of our community, given this reality? (NEC)