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## Environmental Studies: Origin, Evolution, and Manifestation

Environmental studies (ES) programs at American colleges and universities can trace their beginnings to growing national sentiment surrounding environmentalism. As Dr. Clay Schoenfeld, Professor at the University of Wisconsin-Madison, wrote in 1979 however, “No clear date marks the beginning of what has come to be called ‘the environmental movement’ in the United States.”<sup>1</sup> Still, several historical events increased student activism and set the stage for the creation of environmental programs and departments at institutions of higher education, including Bowdoin College.

## Part I: The Field of ES

Rachel Carson’s book *Silent Spring* in 1962 marked an influential moment for environmentalism.<sup>2</sup> Its pages warned of the harmful effects that pesticides, most notably dichloro-diphenyl-trichloroethane (DDT), and their widespread overuse were causing. *Silent Spring* made waves, selling over 100,000 copies the first year it was published. It’s even considered to have contributed to the creation of the U.S. Environmental Protection Agency in 1970. Carson kickstarted a movement that would only gain traction in the years to come.

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<sup>1</sup> A. Clay Schoenfeld, “The University-Environmental Movement Marriage,” *The Journal of Higher Education* 50, no. 3 (1979): 289, <https://doi.org/10.2307/1980658>.

<sup>2</sup> Gwendelyn Geidel and William E. Winner, “Environmental Science: The Interdisciplinary STEM Field,” *Journal of Environmental Studies and Sciences* 6, no. 2 (June 2016): 337, <https://doi.org/10.1007/s13412-015-0339-4>.

In addition to national public discourse, local environmental crises provided many schools with a visible and urgent reason to train students in environmentalism. One of the earliest examples is the 1969 Santa Barbara oil spill. In direct response to the disaster, twenty-one faculty members from a variety of departments at the University of California at Santa Barbara (UCSB) came together and created a new program in Environmental Studies.<sup>3</sup>

Many environmental studies programs had to overcome hurdles during their inception to justify their existence. Opponents, especially those in disciplines like biology, chemistry, and economics, argued an interdisciplinary course of study on the environment couldn't achieve the depth of content required to be a stand-alone major. To answer, many programs, such as Tufts University, had students claim an already existing first major to pair with environmental studies.<sup>4</sup> This requirement is common, due to similar criticism and the interdisciplinary nature of the subject.

The field of study can go by many names. In a review of over one thousand environmental programs and departments, most went by the names "Environmental Science" or "Environmental Studies."<sup>5</sup> When they didn't stand alone as departments, environmental programs were also found under departments of biology, ecology, conservation, policy, analysis, planning, and geology, demonstrating the discipline's interdisciplinary nature. This diversity is reflected in the lack of uniformity of guiding principles or consensus on what an environmental studies curriculum should contain, leading to considerable differences from institution to

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<sup>3</sup> "Building a Movement: 50 Years of Environmental Studies at UCSB," UC Santa Barbara Environmental Studies Program, n.d., <https://es.ucsb.edu/>.

<sup>4</sup> Norton H. Nickerson, "Environmental Programs at Tufts University—Leading the Way In Environmental Studies," *Journal of College Science Teaching* 21, no. 3 (1991): 169.

<sup>5</sup> Aldemaro Romero Jr, "Not All Are Created Equal: An Analysis of the Environmental Programs/Departments in U.S. Institutions of Higher Education From 1900 Until March 2014," *International Journal for Innovation Education and Research* 4 (June 19, 2016): 99, <https://doi.org/10.31686/ijer.vol4.iss5.542>.

institution.<sup>6</sup> Aside from variations in focus or content, most, if not all, programs' creations were fueled by social, political, and economic milestones of the larger environmental movement.

Environmental Studies saw notable changes over the course of its maturity. Perhaps unsurprisingly the number of ES programs has increased significantly over time. One study from 2016 that investigated environmental programs in higher education across the U.S. found two large waves of creation.<sup>7</sup> The first occurred in the late 60s to mid-to-late 70s, coinciding with many events of the environmental movement described above. The second wave came in the late 80s, around the same time as significant federal environmental laws like the Clean Air Act Amendment of 1990 were being passed. While it's difficult to argue one caused the other, nothing happens in a vacuum and both are likely related to shifting public opinion.

Opinion within academia has also changed. Initially, ES programs were sometimes looked down upon as the field was viewed as somewhat radical. This may not have been fair, but understandable. Self-proclaimed "tree huggers" were calling for sweeping changes long before recycling was hip. Luckily the scientific evidence continued to mount and support their bold calls for action, cementing environmental studies' place alongside STEM and humanities alike.

Lastly, a shift in perspective has shaped the curriculum of ES. Several programs can trace their creation to a local need for environmental mindedness (like the UCSB Environmental Studies Program) but since their creation, new environmental challenges have become more apparent. The 90s were the golden age of climate modeling.<sup>8</sup> The United Nation's Intergovernmental Panel on Climate Change (IPCC) was created in 1988 and published its First Assessment Report in 1990 which warned of anthropogenic emissions and their warming effect.<sup>9</sup>

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<sup>6</sup> Romero Jr, 107.

<sup>7</sup> Ibid.

<sup>8</sup> Paul N. Edwards, "History of Climate Modeling," *WIREs Climate Change* 2, no. 1 (January 2011): 128–39, <https://doi.org/10.1002/wcc.95>.

<sup>9</sup> "First Assessment Report," 1990. Intergovernmental Panel on Climate Change.

Since then, climate change has received more attention and is seen (by most) as an emergency. The IPCC has created six Assessment Reports in total, the latest for 2022. While ES programs are more widely recognizing global environmental concerns like sea-level rise and greenhouse gases, they aren't losing focus of their local surroundings that, after all, they know best.

Among these changes, there's one characteristic that has remained largely constant. ES has and continues to be a predominantly interdisciplinary discipline. Whether that stems from new programs requiring the help of other legacy departments to gain their footing or the blurred ways in which environmental problems become tangled in all facets of human life is up for debate. I argue it's a bit of both. Whatever the case, the departmental cross-talk inherent to the subject makes it a truly unique domain where titles become less important than the creative solutions students and professors work to generate.

## Part II: ES at Bowdoin

Signs of changing attitudes and growing concern for the environment began in the 60s on Bowdoin College's campus, a decade before Environmental Studies' official start. In 1962, Professor of French John Mckee joined Bowdoin's faculty.<sup>10</sup> He eventually met Museum of Art Director Marvin Sadik and shared his passion for photography. The two began planning an exhibition at the museum, with Mckee allocating time to take pictures during the summer of 1965, eventually traveling over 5,400 miles in their collection.<sup>11</sup>

In the spring of 1966, "As Maine Goes" was unveiled.<sup>12</sup> It included forty-five original photographs of Maine's coast, both beautiful and abominable. The exhibit's catalog showed pristine images of nature in color jarringly contrasted with littered beachscapes, polluted air, raw sewage piped into the ocean, and seaside housing developments in black and white.<sup>13</sup> It was intended to "lend support" to those who are trying to remedy these problems, be a "revelation" to those unaware of the extent to which the coast is being despoiled, and "refute" those who deny the existence of any threat. The public's response to the images was shock. Seeing the Maine many knew as Vacationland in this way was alarming. The exhibition even drew the attention of Maine Senator (and later Secretary of State) Ed Muskie, who visited the exhibit firsthand.

Beyond pollution, Mckee's photos also highlighted the even lesser-known problem of land ownership. Images of signs nailed to trees and attached to chains blocking paths reading "PRIVATE," "KEEP OUT," and "NO TRESPASSING" showed how the natural landscape of Maine was being commodified and privatized. Under one of these photos, words read "Maine's

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<sup>10</sup> Matt O'Donnell, "As Maine Goes," News, March 5, 2018, <https://www.bowdoin.edu/news/2018/03/as-maine-goes.html>.

<sup>11</sup> John Mckee. "As Maine Goes," 1966. Bowdoin College Archives (Call Number TR647.M3, Catalog ID 2547238). George J. Mitchell Dept. of Special Collections & Archives, Bowdoin College Library, Brunswick, Maine.

<sup>12</sup> A big thank you to Ms. Marieke Van Der Steenhoven for pointing me towards this resource.

<sup>13</sup> Mckee.

non-urban coastline is 2,612 miles in length. Of this, all but 34 miles is private property. Camps, cottages, houses, estates-and everywhere a No Trespassing sign.”<sup>14</sup> Mckee’s exhibit was even the inspiration for a Bowdoin symposium later that year. In October of 1966, Bowdoin hosted “The Maine Coast: Prospects and Perspectives” which held five panels of expert discussions in Daggett Lounge of Thorne Dining Hall.<sup>15</sup>

Mckee’s work and the symposium that followed helped contribute to increased awareness about Bowdoin’s local environment. The final line of Museum Director Sadik’s foreword to “As Maine Goes” catalog ends with “If this exhibition presents a rather somber view of the Main coast, some solace can be found in that the problems here depicted are not incurable. There is still time.”<sup>16</sup> In 1970, Professor of Biology Thomas Settlemyre assigned students to test the water quality of the badly polluted Androscoggin River.<sup>17</sup> The water would literally change colors depending on the dyes being used in the textile mills that week causing near-zero dissolved oxygen content in the water and massive fish kills. The abysmal results were sent to Senator Muskie who considered them when introducing the Federal Clean Water Act of 1972.<sup>18</sup> In addition to informing landmark federal environmental policy, the critical state of Maine’s second-longest river prompted the creation of Bowdoin’s first official course in Environmental Studies.<sup>19</sup> In its proposal, “The Androscoggin” is described as suited for students “with advanced skills in separate disciplines” interested in working collectively on the problems at hand as

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<sup>14</sup> Ibid.

<sup>15</sup> O’Donnell.

<sup>16</sup> Mckee.

<sup>17</sup> O’Donnell.

<sup>18</sup> Ibid.

<sup>19</sup> “10 Longest Rivers in Maine,” Maine Vacations, n.d., <https://www.etravelmaine.com/top-ten/longest-rivers-in-maine/>.

opposed to being focused on “a general topic or survey of topics” like most courses.<sup>20</sup> The course was eventually approved and offered in the fall.

Environmental Studies became an official interdisciplinary major in the fall of 1972, making Bowdoin part of the first wave of those created.<sup>21</sup> It wasn't until 1985 that the ES program found a more permanent physical home. The Environmental Studies Center opened in the Curtis Pool Building, present-day Studzinski Recital Hall with a “director’s office, program office, student resource room, and classroom.”<sup>22</sup>

The interdisciplinary approach has been central to many Environmental Programs. Bowdoin is no exception. An early survey in 1971 showed ten departments (Art, Biology, Economics, Chemistry, Geology, Government, History, Mathematics, Physics, and Sociology) offered one or more courses that were “relevant, or could easily be made so, to an environmental studies program.”<sup>23</sup> This cross-department involvement was pivotal. From the program’s beginnings in 1972, one could only earn a major in Environmental Studies alongside a major from a second department. The same is true today. This makes Bowdoin’s Environmental Studies program ideal for preparing students for real-world, complex, and multifaceted problems. For example, Mckee shed light on issues of land ownership. An Environmental Studies - Government and Legal Studies coordinate major could draw from both fields while advocating for public land use and responsible land development initiatives. A list of courses in the 1986 Annual Report of the Environmental Studies Committee includes examples of important

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<sup>20</sup> “Androscoggin Course Proposal,” February 15, 1971. Bowdoin College Archives (Environmental Studies Committee minutes). George J. Mitchell Dept. of Special Collections & Archives, Bowdoin College Library, Brunswick, Maine.

<sup>21</sup> Romero Jr

<sup>22</sup> “Studzinski Recital Hall,” Bowdoin Sustainability, n.d., <https://www.bowdoin.edu/sustainability/sustainability-initiatives/green-buildings/studzinski-recital-hall.html>.

<sup>23</sup> “Androscoggin Course Proposal.”

interdisciplinary offerings like “Politics, the Ecological Connection” in partnership with the Government department.<sup>24</sup>

Today, the impacts of Bowdoin’s commitment to the study and care for the environment are felt in many ways. Bowdoin Dining’s efforts to buy local,<sup>25</sup> the Organic Garden, Schiller Coastal Studies Center, Roux Center for the Environment, the new John and Lile Gibbons Center for Arctic Studies now under construction, and the recently announced Sustainable Bowdoin 2042 clean energy plan are all testaments to this belief. Most importantly, this dedication is felt through the Environmental Studies program and coordinate major that has been educating environmentally-minded leaders for fifty years this fall. The Bowdoin Environmental Studies example demonstrates the characteristics of what every institution should strive to be: being critical of the status quo, providing the education their community needs, and living the ideals they teach.

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<sup>24</sup> “Annual Report of the Environmental Studies Committee,” January 1986. Bowdoin College Archives (Box #1 Environmental Studies Program, Environmental Studies folder). George J. Mitchell Dept. of Special Collections & Archives, Bowdoin College Library, Brunswick, Maine.

<sup>25</sup> “Local Purchasing,” Dining, n.d., <https://www.bowdoin.edu/dining/sustainability/local-purchasing.html>.