Teaching the Environmental Humanities

International Perspectives and Practices

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Abstract This article provides the first international overview and detailed discussion of teaching in the environmental humanities (EH). It is divided into three parts. The first offers a series of regional overviews: where, when, and how EH teaching is taking place. This part highlights some key regional variability in the uptake of teaching in this area, emphasizing important differences in cultural and pedagogical contexts. The second part is a critical engagement with some of the key challenges and opportunities that are emerging in EH teaching, centering on how the field is being defined, shared concepts and ideas, interdisciplinary pedagogies, and the centrality of experimental and public-facing approaches to teaching. The final part of the article offers six brief summaries of experimental pedagogies from our authorship team that aim to give a concrete sense of EH teaching in practice.

Keywords environmental humanities, teaching, experimental pedagogies, interdisciplinary

Introduction

The environmental humanities (EH) is an interdisciplinary field of enquiry that brings the insights and approaches of the humanities—centered on questions of meaning, value, and ethics—to bear on some of the most pressing challenges of our time. The field is grounded in the growing recognition that diverse human understandings about, and activities in, the environment are critical factors in making sense of, and responsibly

inhabiting, a dynamic more-than-human-world. The traditional separation between those disciplines concerned with "nature" and those that examine "culture" has led to increasingly atomized science-based responses to environmental dilemmas. Work in EH seeks to develop and support alternative framings, approaches, and solutions that operate outside the dichotomized understandings of society and the environment which have underpinned diverse forms of colonialism, militarism, globalism, extractivism, and erasure. Living as we are in the midst of these violent global transformations, work in EH seeks to find modes of addressing environmental change that take seriously issues of justice, inequality, and oppression, and that value and support diversities of all kinds. Despite its common, unifying name the field contains much diversity, with different disciplinary emphases and agendas dominating within various regions and institutions.

EH is a rapidly growing and changing field of both research and teaching. Arguably, however, the development of dedicated EH teaching programs has not taken place at the same pace as research in the field, including research centers, journals, and book series. Across both research and teaching, however, the field is growing in very different ways, and to varied extents, in different parts of the world. While there have been several reviews of the emerging EH research landscape, to date there has been little discussion of the specific forms that teaching is taking in this area.[1] Notably, this discussion shows that growth in dedicated EH teaching programs has tended to take place more readily in Anglophone educational contexts—in particular, in Scandinavia, the United States, and Australia—although there are individual exceptions to this pattern and in recent years programs have begun to emerge in many other parts of the world.

This article focuses explicitly on *named* environmental humanities teaching offerings: courses, majors, and degrees (including direct translations of the term *environmental humanities* into other languages[2]). There is, of course, a wide range of other names under which humanities approaches to the environment might be taught and indeed have been taught, in some cases for a long time. To discuss them all, however, would have required a significantly longer article and would also have prevented us from really seeing what this particular term, *environmental humanities* (and its translations), means and is coming to mean in teaching programs around the world. In addition, any review of "related" teaching programs would necessarily rest on a specific interpretation of this emerging field. In contrast, our focus on named EH programs rests on a more open sense of the field as its self-identified practitioners are defining it. As is discussed below, in some parts of the world EH is not currently a popular label for teaching programs. In these cases we have drawn on insights from EH researchers from these regions to

1. Forêt, Hall, and Kueffer, "Developing the Environmental Humanities"; Nye et al., "Emergence of the Environmental Humanities."

2. We should remember that we are speaking of dozens of different languages from disparate language families and the equivalents for both the English words *environmental* and *humanities* can have important differences in meaning in these linguistic contexts.

consider why this might be the case. We have also explicitly aimed not to simply present a story of absence in these geographical areas—places "lacking" EH programs—and instead highlighted some of the alternative areas of teaching that might be fulfilling similar roles.

There are three main parts to this article. The first offers a series of regional overviews of EH teaching, when and how it is taking shape around the world. The second part is a discussion and critical engagement with some of the key challenges and opportunities that are emerging in EH teaching. This part consists of four sections. The first, "What Is in a Name?," situates recently emergent EH teaching in the context of a range of related environmental programs. It explores how the field is coming to be defined in part through its teaching as well as the challenges associated with teaching in an area that is not yet widely recognized by students or employers. The second, "Is There an Environmental Humanities Canon?," outlines some of the central ideas and approaches that are beginning to characterize teaching in EH. While they do not constitute a canon in any full sense of the term, they do point toward some significant common ground across diverse EH teaching programs, some partially shared and overlapping sets of terminology, understanding, and commitment. The third section, "Mixing It Up," focuses on the interdisciplinarity that is at the heart of EH with a particular emphasis on working with STEM disciplines. Finally, the fourth section, "Welcome to the Teaching Lab," explores the emphasis within emerging EH teaching programs—both inside and outside the university—on experimental, engaged, creative, and public-facing pedagogies. The third part of the article offers six brief summaries of "experimental pedagogies" that give a concrete sense of some of the ways in which our authorship team has been teaching in the field. Our hope is that these entries might serve as inspirational examples for future innovations in EH teaching.

Part 1: Regional Overviews of Environmental Humanities Teaching

1.0 Introduction

This part of the article provides regional overviews of the current state of EH teaching around the world, divided into the following sections: Oceania, Asia, North America, Latin America, UK and Ireland, Northern Europe, Continental Europe, Africa. It is important to note that these overviews are necessarily partial. Each section was initially drafted by two or more scholars who are actively working and teaching in that particular region and was then supplemented by feedback from other coauthors. Although we have made an effort to canvas widely within each of these regions, it is unavoidable that we will have missed EH courses, majors, and perhaps even whole programs. Furthermore, the rapidly evolving state of the field will also likely mean that this overview will be out of date by the time of publication. Despite these limitations, this part of the article makes an important contribution to our understanding of EH teaching, offering the first concise, relatively comprehensive, global overview of the state of the field today.

1.1 Oceania

Across Oceania, EH is being taken up as a label for teaching in varied ways and to quite different extents. However, there are some common hallmarks to the way in which the field is taking form. These are, in large part, a response to the distinctive histories and current challenges of this region: (1) diverse forms of colonization and struggles for Indigenous sovereignty, (2) inequality and environmental injustice in relation to a range of issues including nuclear legacies and access to lands and waters, and (3) the related challenges of climate change in this region, which is already becoming one of the front lines of both rising sea levels and extreme weather events.

In Australia, EH has its roots in the work of the Ecological Humanities Group at the Australian National University (ANU) in Canberra from the early 2000s, led by Deborah Bird Rose, Libby Robin, Val Plumwood, Tom Griffiths, and others.[3] EH took root there as a distinctively *interdisciplinary* field, with scholars from a diverse range of disciplines in the humanities and social sciences—as well as collaborators from beyond the academy—drawn into close conversations with one another. These collaborations have characteristically included a central engagement with histories and ongoing realities of colonization. These features have carried through to teaching in the area. At present there are three named EH teaching programs in Australia, all in the greater Sydney area and all taking the form of undergraduate majors. The first of these was established in 2013 at the University of New South Wales (UNSW), the second in 2017 at Macquarie University, and the third in 2018 at the University of Wollongong. In addition, several other universities offer single courses in EH at undergraduate or postgraduate levels, together with other courses with more specific disciplinary environmental foci (e.g., ecocriticism, history, philosophy, anthropology, and gender studies). In the past few years, *environmental humanities* has become one of the central labels for HASS-centered environment teaching programs in the country (alongside existing specializations in human geography and Indigenous studies).[4] While there are no named postgraduate EH programs, a growing number of students undertaking research degrees identify with that field.

There are teaching programs in many allied areas of scholarship in Aotearoa/New Zealand, Hawai'i, Fiji, the Mariana Islands, and other parts of Oceania. As far as we are aware, however, there are no named EH programs to date. Instead, teaching in this area has centered on approaches and topics drawn from literature and ecocriticism, environmental history, Pacific and Indigenous studies (including Hawaiian and Māori studies), and more. For example, Chamorro scholar and poet Craig Santos Perez at the University of Hawai'i at Mānoa, teaches EH through his course on Pacific literatures, which brings together a range of disciplinary approaches to explore key regional concerns

3. Rose and Robin, "Ecological Humanities in Action"; Griffiths, "Humanities and an Environmentally Sustainable Australia."

4. HASS refers to the humanities, arts, and social sciences.

centering on the intersections of indigeneity, tourism, militarism, globalization, colonization, and nuclear legacies. This course is one small part of an exceptionally vibrant storytelling and creative arts scene in wider Oceania that works across these themes. Another is historian Tom Brooking's interdisciplinary course on the entwined natural and cultural histories of New Zealand at the University of Otago. It brings together scholars across the humanities and sciences who teach with a range of methods.

1.2 Asia

There are no specifically named EH teaching programs in Asia. However, at universities across Asia there are courses that focus on ecological approaches to literature, philosophy, history, and aesthetics. When an umbrella term for these approaches is used, in many parts of Asia the term *ecological humanities* is preferred (in English or in translation) as scholars often associate dualistic and anthropocentric connotations with the term *environment*. These associations are often seen to be incompatible with traditional or Indigenous values. In several cases, these "ecological humanities" programs predate the international success of the term *environmental humanities* and seek inspiration in Asian philosophy and religion to overcome nature/culture dualisms and create a society in "harmonious coexistence with nature" (as it is frequently put in Japan). When the term *environmental humanities* is used, it often refers to specifically Western approaches, including attention to the Anthropocene, environmental justice, and particular critiques of nuclear energy.

Within the Chinese academy, the concept of *shengtai wenming* has guided the creation and institutionalization of many eco-philosophical courses and programs. For example, the Chinese aesthetician and former president of Shangdong University, Zeng Fanren, began to offer graduate-level eco-aesthetic courses in 2007. Even prior to this, however, the term *shengtai wenyixue* ("the study of ecological literature and arts"; 生态文艺学) had already emerged as a response to the rapidly deteriorating environment in the mid-1990s. Lu Shuyuan, one of the most important ecocritics in China, began offering courses on ecological literature and arts. The nondualistic term *ecology*, according to Zeng Fanren, is more suited to express the notion of *tian ren he yi* ("the unity of heaven and humanity"; 天人合一). For Lu, Chinese religions such as Buddhism and Daoism and local cultures tend to be ecologically oriented and hence serve as the antidote to China's reckless modernity. Currently, courses on ecocriticism, ecoaesthetics, ecological and environmental history, and environmental philosophy are offered at the graduate level at many major institutions in China, such as Beijing University, Beijing Normal University, Hunan University, Renmin University, Shandong Normal University, Shanghai Normal University, and Tsinghua University. In recent years, Hong Kong has also begun actively developing ecological humanities curriculum under various labels at the undergraduate level.

In Taiwan, Tamkang University began offering ecocriticism courses in the early 1990s, and this university can fairly be said to have been an important institutional

home for Taiwanese ecocriticism and to have nurtured what is now being called the environmental humanities. A range of other universities in Taiwan, including National Taiwan Normal University, National Chung Hsing University, and National Sun Yat-sen University, also offer graduate-level seminar courses on ecocriticism and Indigenous studies. These courses include not only Western ecocritical theories and literature, but also Taiwanese literature and cinema, particularly documentary films.[5] Academia Sinica, the national academy of Taiwan, has been a stronghold of environmental history in East Asia, but as a research institute they do not contribute directly to teaching. National Cheng Kung University offers a range of elective courses on human-animal relations, sci-fi, and eco-feminism in their history and Taiwanese literature departments, all of which place themselves in the global EH tradition.

In Singapore, the term environmental humanities is new to the teaching landscape, which is not surprising given the country's traditional focus on STEM fields in higher education. To date two named EH courses have been offered in Singapore: "Approaches to Environmental Humanities" (2018) was an English elective taught by a postdoctoral fellow at Nanyang Technological University, while "Foundations of Environmental Humanities" is a core module in Yale-NUS College's environmental studies major (cross-listed with literature), offered every two or three semesters. Both courses explore the role of the arts and humanities in understanding and responding to the socioecological challenges of the Anthropocene, exposing students to a range of disciplinary approaches.

In Japan, the environmental turn in the humanities took place relatively early. In the early 1990s study programs emerged in areas like human and environmental studies or human-nature coexistence studies (e.g., Kyoto University, Kanazawa University). A variety of courses in environmental philosophy, ethics, anthropology, sociology, communications, and literature can be found at BA, MA, and PhD levels in most universities across the country. These approaches are often grounded in the work of scholars of the New Kyoto school, such as philosopher Watsuji Tetsurō or biologist Imanishi Kinji whose enquiries into non-European environmental thought have also influenced Western EH. Buddhist and non-European environmental ethics, subsistence economy, commons, and traditional environmental knowledge are accordingly the topics most researched and taught in this tradition, but in general, these courses are more environmental science heavy than their Western counterparts. The tendency to reorganize university programs so that they combine humanities and social sciences with environmental issues has, however, increased since the early 2000s. The specific label *environmental humanities*, or *kankyō jinbungaku*, is seldom used in the Japanese context, partly because the term *humanities* is not generally used in university structures. When

5. In 2015, the Humanities for the Environment (H*f*E) network established two observatories in Taiwan, one at National Taiwan University and another at National Sun Yat-Sen University and National Chung Hsing University.

used, it tends to refer explicitly to the Anglo-American tradition, including the work of ASLE-Japan and the EH publication series by Benzei Shuppan.

In India, the interdisciplinary environmental or "ecological humanities"—the preferred term by some scholars, including Nirmal Selvamony, a senior eco-scholar and president of tiNai, a forum promoting ecocriticism—has yet to really emerge and as such there are no explicitly named courses in this area. There are, however, strong offerings in ecocriticism (mostly offered in English departments) at Madras Christian College (Chennai), Loyola College (Chennai), Bishop Heber College (Trichy), Delhi University (Delhi), Central University of Tamil Nadu, and West Bengal State University. In addition, India has a long tradition of research and teaching in environmental history, ecophilosophy, and political ecology (at the intersections of development studies, subaltern studies, and feminist studies). Indian universities such as Ashoka University, Jadavpur University (which ran a two-week EH intensive in November 2016), and the University of Delhi are among the leaders in the field of environmental history, both within Asia and beyond.

1.3 North America

In North America, it is difficult to identify common EH themes as the field is fast-growing and characterized by new programs and rapidly shifting centers of influence. Institutions tend to gather thought collectives that emphasize topics most relevant to a given region, such as climate change and glacial melt in Canada, oceans on the West Coast, deserts in the Southwest, legacies of postindustrial decline in the Midwest, urban environment in large cities, and relations with Indigenous/First Nation groups across Canada and the US. To the extent that a unifying theme can be identified, it may lie in environmental justice (EJ). Activists and scholars who focus on EJ have been able to demonstrate that you cannot successfully tackle topics like climate migration, industry siting, or inequitable access to clean water without being sensitive to the different experiences of people of different races, genders, and classes.[6] By bringing concepts of justice and intergenerational justice into the conversation, scholars in EH are challenging technocratic solutions that ignore questions of power and privilege in human societies and questions about the rights of nonhuman species to survivability.

Undergraduate and graduate students have shown great interest in humanities coursework with environmental themes and most large institutions have at least one faculty member who identifies their teaching and scholarship as part of EH, often with a focus on ecocriticism. The University of Wisconsin–Madison's Center for Culture, History, and Environment (CHE) has long been a notable exception for its focus on environmental history. Many of these courses are still offered in programs labeled "environmental studies." There is, however, growing recognition that certain research themes involving "questions of socioeconomic inequality, cultural difference, and divergent

6. Di Chiro, "Environmental Justice"; Agyeman, "Sustainability."

histories, values, and ethical frameworks" are better situated in programs that enrich the meaning of "environmental studies" with interdisciplinary EH modes of inquiry.[7]

The first American university to offer a named EH graduate degree was the University of Utah, where a two-year master's program prepares "students for careers as environmental leaders and thinkers."[8] In 2016, Oregon State University also began offering a master's in environmental arts and humanities with the goal of providing students with a degree focused on the cultural, moral, historical, spiritual, creative, and communication dimensions of environmental issues. At the PhD level, several universities, including UCLA, the University of Michigan, the University of Wisconsin, and Yale University, offer graduate certificates or specializations in EH while earning degrees in fields like English, history, or language and literature.

Other universities training students at the PhD level have formed interdisciplinary "environmental humanities initiatives," including Arizona State University (ASU); Princeton; Yale; University of California, Santa Barbara; and in Canada, the University of Saskatchewan; the University of Calgary; Mount Royal University; and the University of Victoria. These initiatives foster and consolidate diverse programming in literary studies, history, religion and ecology, environmental anthropology, sustainability, environmental justice, and energy transitions, among other foci, and graduate students are invited to study within traditional departments while taking courses across the graduate curriculum.

At the undergraduate level, ASU began offering an EH certificate in 2009 that allows students to fulfill major and minor requirements in recognized environmental fields, such as biology or sustainability, while also earning an additional credential in the attractive but still often less recognized field of EH. Stony Brook University offers an undergraduate major and minor in EH that integrates the humanities into the core curriculum offered in their Sustainability Program. Sterling College in Vermont also offers an undergraduate degree. Most of the graduate programs or initiatives offering training in EH also offer a range of undergraduate courses but not specifically in EH majors or minors. Similar initiatives for establishing an undergraduate major in EH are underway in Canada at Mount Royal University while the University of Victoria offers students the opportunity to major in English while specializing in an EH "research cluster."

1.4 Latin America

The concept of EH is not yet widely used in Latin America, although it has gained some traction in recent years. However, there is a consolidated tradition of research on environmental issues by researchers from the social sciences and the humanities. In general, this type of research uses the framework of socio-environmental studies. But other concepts, like biosocial or socio-natural, are also being used. This notion of the

7. Heise, "Planet, Species, Justice."

8. See environmental-humanities.utah.edu/.

socio-environmental is quite well rooted in the region—not only in academia but also in social movements—and it may be that this term already does the kind of work in this region that EH is doing elsewhere.

With regard to teaching, there is a range of interdisciplinary centers in Latin America that combine graduate education and social research focused on environmental issues or at least that have the environmental dimension as one of the axes of their work. In Brazil, for example, since 2000 there has been a National Association of Graduate Studies and Research in Environment and Society (ANPPAS is the Portuguese acronym). This association brings together about forty centers of this kind. Some are explicitly geared toward the environment and sustainability, others toward specific regions or rural development. What characterizes these centers is the presence of professors from different fields of knowledge, such as economists, historians, sociologists, philosophers, anthropologists, geographers, and ecologists. The biannual meetings of ANPPAS present this same diversity. It is likely that many of the chairs and publications offered by these centers, largely of an explicitly interdisciplinary nature, could be understood as belonging to the field of EH. In the case of undergraduate studies, the situation seems to be more fragmented. There are chairs with a socio-environmental perspective in departments of social sciences, ecology, and the like. But not, as far as we know, interdisciplinary programs such as those mentioned for graduate studies.

As far as we are aware, there are no teaching programs in Latin America explicitly using the terminology of EH. But in the research context, some seeds are beginning to appear, sometimes promoted by Latin American scholars living in the United States and Europe. To a large extent, these initiatives seem to be emerging from researchers working in the fields of cultural studies, anthropology, sociology, and ecocriticism. A Network of Environmental Humanities Research (Red de Investigación en Humanidades Ambientales—RIHA) was created recently, with a page on Facebook. The network is coordinated from the Catholic University of Chile, where systematic meetings have been organized by scholars "in favor of the environmental humanities." RIHA's objectives, nevertheless, do not mention teaching, but rather the dissemination of research and information on publications and events. Also, there are some interdisciplinary conferences on environment and humanities happening in Latin America. At the end of 2017, for example, a conference was organized in Maldonado, Uruguay, entitled Humanities and Ecology for the 21st Century. This conference, promoted by the South American Institute for Resilience and Sustainability Studies, was probably the most comprehensive one ever held in the region. It presented a high-quality program, focused on the field of cultural studies. Another high-level conference, entitled Knowledge/Culture/Ecologies, was also held in 2017 at Universidad Diego Portales in Santiago, Chile. This conference took place in close cooperation with the Institute for Culture and Society (ICS), Western Sydney University, Australia. It is worth noting in both conferences the presence of renowned researchers from several countries in Latin America and abroad.

1.5 UK and Ireland

EH teaching remains relatively underdeveloped in the UK and Ireland, although environmentally oriented degrees have been created within specific disciplines in several universities. The most notable of these was the (now defunct) University of Lancaster's pioneering MA in Values and the Environment, which was established in the Philosophy department in 1989 and relocated to the University of Central Lancashire in 2006.[9] Developing multi- and interdisciplinary qualifications has proven more challenging, however, as undergraduate degrees tend to be highly specialized, with students typically studying a single subject throughout their program in the UK. The notable exception is Scotland, where students study three or more subjects in their first year before focusing in on one or two majors. Unsurprisingly, then, the pioneering EH-type master's programs in the UK were Scottish: Edinburgh University's MSc in Environment, Culture, and Society, now closely linked with the Edinburgh Environmental Humanities Network, and Glasgow University's MLitt in Environment, Culture, and Communication, launched in 2007 and 2012, respectively.

It is not possible to identify any clear regional trends at this stage. As elsewhere in the world,[10] existing programs largely reflect the disciplinary expertise and socioecological concerns of the staff involved. For example, in 2015 King's College London launched a multidisciplinary MA: Climate Change: History, Culture, Society, instigated by the geographer Mike Hulme. EH at the University of Leeds, by contrast, leans more toward environmental literary studies, with particular strengths in postcolonial ecocriticism, animal studies, and disaster studies. In conjunction with KTH (Stockholm) and the Rachel Carson Center (Munich), Leeds is also currently leading an EU-funded innovative PhD program, called ENHANCE (Environmental Humanities for a Concerned Europe).

The first MA in Environmental Humanities (MAEH) in the UK and Ireland was created at Bath Spa University in 2016 under the auspices of the university-wide Research Centre for Environmental Humanities (RCEH). Bath Spa has a long-standing reputation for its pioneering courses in ecocriticism and nature writing. Together with recent appointments in environmental philosophy, environmental anthropology, and cultural geography, and existing expertise in heritage studies, eco-religious studies, and environmental science, this provided the foundation for the interdisciplinary MAEH and associated doctoral program, both of which include opportunities for creative practice-based research. EH graduate teaching and research is currently also under development at Bristol University in association with their newly created Centre for EH.

9. We are grateful to Isis Brook, who developed the online version, AwayMAVE; for background information on this track, see www.lancaster.ac.uk/users/philosophy/awaymave/tutors.htm. Among the other staff, key staff were philosophers Alan Holland, John O'Neill, John Benson, and Emily Brady, who subsequently became course director of Edinburgh's MSc in Environment, Culture, and Society.

10. Emmett and Nye, *Environmental Humanities*.

1.6 Northern Europe

EH largely began to circulate in Scandinavia and the Baltic countries from about 2010, with a few minor precursors. Since then, sizeable EH activities have developed in Scandinavia at the Environmental Humanities Laboratory at KTH Royal Institute of Technology in Stockholm (since 2011), and at Linköping University (since 2015), as well as more recent initiatives emerging in Denmark, Norway, Finland, and elsewhere around the region. In Denmark, the Aarhus University Centre for Environmental Humanities (CEH) was established in February 2017.[11] In Norway, the University of Stavanger established the Greenhouse EH program area in 2017, and the University of Oslo established the Oslo School of Environmental Humanities in 2018.

Of the three Baltic States, EH is most institutionalized in Estonia where the influences of literature, semiotics, and history are strong, while the term *EH* is perhaps perceived as too narrow in Latvia where related approaches have been developed at the intersection of arts and architecture, and Lithuania where politics and STS have been central. Thus, the compound "environmental humanities and social sciences" has been used in order to accommodate different tendencies in all three countries. In Estonia, the first EH undergraduate courses emerged in the Department of Semiotics and Theory of Culture at the University of Tartu that introduced eco- and biosemiotics as one of its specializations in the mid-1990s. The Estonian Centre of Environmental History (KAJAK) was established at the University of Tallinn in 2011.

Named EH teaching is most prominent in PhD training where graduate courses and seminars have been hosted at KTH, Linköping University, and Stockholm University (which started its doctoral program in environmental humanities in 2018) in Sweden, and at the University of Helsinki in Finland. The Oslo School of Environmental Humanities at the University of Oslo launched in 2018 will include development of MA and PhD programs in EH for students in Norway. KAJAK holds graduate schools in EH and/or environmental history every second year, often in cooperation with the University of Tartu, the Rachel Carson Center for Environment and Society (RCC) in Munich, and the European Society for Environmental History.

In general terms, integrative and collaborative approaches to teaching at an undergraduate level in the humanities have only recently begun to gain momentum, although an EH minor was started at the University of Oulu in Finland in 2002. Standalone courses labeled as EH are offered at the bachelor's level at Aarhus University (Denmark), University of Oslo (Norway), and University of Oulu (Finland) and at the master's level at Tallinn University (Estonia). Since 2015, Interdisciplinary Environmental Humanities was introduced as one of the four core elective courses for all MA students at the University of Tartu Master School in History, Literature, and Culture Studies, broadening the potential student body to include the Faculty of Letters. At KAJAK, EH has

11. CEH builds on the Aarhus University Research on the Anthropocene (AURA) project.

become an independent minor in the history curriculum at BA level, and EH topics are also covered in the Department of Anthropology, the Centre for the Studies of Landscape and Culture, Urban Planning, and English Literature.

Significant EH teaching is also carried out in "environmental history" courses at KTH, Umeå University (Sweden), University of Stavanger (Norway), and some other universities; in "ecocriticism" in several places such as Mälardalen University, Mid-Sweden University, and University of Gothenburg in Sweden; and in "anthropology" at Aarhus University. Since 2018, the University of Stavanger, Norway, has coordinated a new funded network called Bringing Research in Green Humanities into Teaching to promote EH teaching across the Nordic region.

1.7 Continental Europe

In contrast to the United Kingdom and Northern European countries, where curricula are following an Anglo-American model and English is to a growing extent the academic lingua franca, universities in "Continental" (Western, Eastern, and Southern) Europe are less internationally or "Western" oriented, and more entrenched in national traditions. Currently, there are no BA or MA programs in EH offered under that specific name. However, in Spain, the DESEEEA (Diploma de Especialización en Sostenibilidad, Ética Ecológica y Educación Ambiental) was established in 2015 at the Universidad Politécnica de Valencia.[12] At the University of Extremadura a course in Humanidades Ambientales—the same term for EH that is being used in Latin America—has been taught since 2016 as part of the master's degree in English. The creation of a diploma in EH—through the School of Humanities and the Institute for Applied Linguistics (LINGLAP)—is scheduled for 2019.

Doctoral degrees in EH are awarded at three universities in continental Europe: at Masaryk University in Brno in the Czech Republic where the Czech term for EH (*humanitní environmentalistika*) has been in use since the winter term of 1997–98; at LMU Munich (through the RCC's doctoral program in Environment and Society); and at Augsburg University in Germany. Characteristically, both German programs are attached to chairs in american studies (see 2.1.1). The University of Warsaw, Poland, offers a PhD in "Transdisciplinary Environmental Studies" (really an EH PhD except in name) through the Liberal Arts and History Department; and a cross-faculty position in EH has been set up in Fribourg, Switzerland. Furthermore, the Swiss Network in Environmental Humanities (which is run by a US environmental historian and a Swiss ecologist) notes that courses in the field of EH (if not under that name) have been offered at Franklin University and at both ETH Zürich and the University of Zürich.[13]

Many universities in continental Europe offer BA and MA teaching options that focus on the environment while privileging the humanities over the social or natural

12. See ecoeducacion.webs.upv.es.

13. Forêt, Hall, and Kueffer, "Developing the Environmental Humanities."

sciences. Heidelberg University offers courses on environmental topics through the Heidelberg Center for the Environment, which brings together scholars from nine disciplines. Programs like the one at Masaryk University in Environmental Studies and the RCC's Certificate in Environmental Studies also fit this description. A broad range of other courses in environmental history, cultural environmental studies, biohistory, and similar disciplines are offered in several other Western, Central, and Southern European countries, especially in Belgium, Hungary, Italy, and the Netherlands. While the term *EH* is not generally used in the titles of these courses, notable exceptions are emerging, for example within Vrije University's new Environmental Humanities Center.

1.8 Africa

A number of EH research networks have emerged in Africa centered on concerns that are dominant in particular regions, countries, or in one of the relatively independent African academic-language networks (French, English, Arabic, and Portuguese), but there is as yet little EH curriculum taught.[14] Environmental Humanities South (EHS), based at the University of Cape Town, offers the only named EH teaching on the continent, with a graduate program in which core curricula, co-taught across disciplines, are compulsory at both master's and PhD levels. Since its launch in 2015, the EHS program has accepted approximately forty-five graduates from roughly a dozen African countries and from a wide range of disciplinary and professional backgrounds. This diversity has contributed to the vibrancy of the teaching program.

EHS built its curriculum on an intensive workshop process in which interested academics from literature, film and media, sociology, anthropology, historical studies, and fine art shared respective research and teaching approaches, and worked toward the curricula of two core courses, the participants of which now include colleagues from geographical sciences and African studies. Concurrent student activism for university transformation and the decolonization of curricula, spearheaded by #RhodesMustFall in 2015, profoundly shaped the emerging EHS curricula, which now reflect the writings of Aimé Césaire, Frantz Fanon, Édouard Glissant, Sylvia Wynter, Thomas Sankara, Wangari Maathai, Nnimmo Bassey, and others whose critiques of racism, coloniality, and modernity are of direct relevance to the transformations of university scholarship that are demanded by an Anthropocene/Capitalocene geological era.

Interest in EH approaches from graduates and colleagues with work and life experience in Zimbabwe, Kenya, Mauritius, Tanzania, Mozambique, Lesotho, South Africa,

14. These research networks include the following: the African Network for Environmental Humanities based in Nigeria serves to connect scholars in a region where ecological discussions on petropolitics are strong, in the shadow of the execution of Ken Saro-Wiwa. The Oceanic Humanities at the University of the Witwatersrand in Johannesburg, South Africa, has built on a foundation of Indian Ocean scholarship, broadening its focus on postcolonial literature and shared history to a broad interest in hydropolitics including sea level rise, acid mine drainage, urban water crises, monsoon changes, and the Antarctic. At the University of Pretoria, the African Observatory for Environmental Humanities focuses on ecological knowledges both traditional and innovative.

Congo, Nigeria, Namibia, Cameroon, Malawi, Sudan, and Zanzibar evidences the growing recognition across the continent of the value of an integrative teaching environment. In Africa, work in EH is emphasizing an approach where problems are defined neither by the need for disciplinary furtherance, nor for neoliberal orientations to national economic growth, but by the need to address complex real-world problems and situations.

Nonetheless, there remain significant challenges. The "post-humanities," as a scholarly approach, has not found a great deal of traction in a context where, as one graduate put it, "I've spent my whole life showing I am a human being not an animal; I cannot accept a post-humanism that wants me to become-animal." Given the very troubling forms of northern environmentalism in conservation that exclude people, "green" has little traction as a concept, and, to paint with broad brushstrokes, is generally situated in opposition to "development." Thus, as northern climate responses seek to leverage development funds to obtain climate-responsive buy-in from African governments, African climate change discourses in many—not all—research, teaching, and policy contexts have not sought to articulate a critique of "neoliberal green." This is a major concern, as it means that many climate interventions serve to become "Development Mark II," and the familiar critiques apply. The implication is that in the long term, interventions to stem climate change agreed to at an intergovernmental level are at risk within nations.

The emerging "African EH conversation" is hampered by the very few connections between Francophone, Lusophone, and Anglophone academic communities across Africa, and the fact that university libraries, chronically underfunded, tend to prioritize core disciplines. Innovative and integrative scholarship must therefore be open access; hence, the EHS strategy of building a research base and then publishing edited collections that will be available online for free download.

Since bursaries are hard to find and the majority of graduates seeking an EH program to date have careers and families to support, EHS academics are working on creating a suite of part-time courses, in which we will be working with colleagues in different fields (for example, water infrastructure engineering) whose struggles have got them to the point where they recognize the limitations of their prevailing disciplinary paradigms. With support from the Mellon Foundation, EHS is looking to build stronger regional partnerships to support a wider curriculum for distance learning.

Key to emerging African environmentalism is critique of the notions of "nature" inherited from coloniality-modernity, and which currently continue to materialize in corporate land-grabbing, hostile forms of conservation that exclude people, and a range of destructive approaches to natural-resource extraction whether of water, oil, gas, wood, crops, or fish. Introducing a scholarly discourse that "undisciplines" human worlds and natural sciences and then works toward a reconstructive approach is being argued for by a range of scholars in Africa, because it offers a space where decolonial thought meets the Anthropocene's necessity for scholarship that no longer divides the sciences, social sciences, and humanities. Bridging these approaches in curricula on a continent

where neoliberal dogma and funding platforms dominate teaching and research on environmental matters compels a rich engagement with knowledge studies, postcolonial literatures, visual arts, science studies, political ecology, law, and onto-epistemic approaches.

Part 2: Key Challenges and Opportunities in Environmental Humanities Teaching

2.0 Introduction

In this part of the article we explore some of the key challenges and opportunities for EH teaching. Here we draw on the experiences of our authorship team in designing, establishing, and teaching EH courses, majors, and programs around the world at both undergraduate and graduate levels.

2.1 What Is in a Name?

2.1.1 FELLOW TRAVELERS As is clear from Part 1 of this article, the global growth in EH is patchy and uneven. In some parts of the world, broadly similar interdisciplinary approaches to the environment, including ones that are increasingly incorporating the perspectives of the humanities, are being taught under other names, such as socio-environmental studies in Latin America, ecological humanities in parts of Asia, and human ecology (*ekologjia humane*) in Albania. Some of these approaches were established contemporaneously with the emergence of EH in the Anglophone world, using terms that made most sense in the local cultural context. Indeed, it seems that the label *environmental humanities* has gained the most traction, especially in research but also in teaching, in Anglophone university environments (including places like Scandinavia and South Africa where university education is often conducted in English). Outside the Anglophone world, for example in continental Europe, many of the existing programs in EH were established by English-speaking scholars or in American studies departments. However, even within Anglophone universities, teaching in this broad area still often comes under a variety of other names (in large part shaped by local institutional histories), but is increasingly incorporating a greater emphasis on scholarship and approaches from EH. For example, at Arizona State University, where the first free-standing School of Sustainability was established, the term *sustainability* has wider institutional traction; while at New York University Abu Dhabi, the term *eARThumanities* is preferred.

As a result of these local differences, in some parts of the world—indeed at some universities—alternative labels and approaches have meant that the term *environmental humanities* has not been as useful or necessary, and subsequently has not been taken up. It has also been noted that in some instances EH does not translate well into other languages. The German *Umweltgeisteswissenschaften*, for instance, sounds awkward and narrow to some and has not yet gained any currency; the same goes for direct translations of the term *environmental* into Slavic languages (where *ecological* also tends to be the preferred term); and in Scandinavian languages the English term is often simply used.

Alongside issues in relation to the translation of the term *environmental*, the term *humanities* (and its translations) also has different meanings and currencies in various languages. In many other parts of the world, however, translations for the term *EH* are beginning to emerge. In Spanish, for example, the field is now often being referred to as "Humanidades Ambientales," in both Spain and Latin America. In Japan, there is a direct translation that is used informally (環境人文学, Kankyō jinbungaku), but it tends to be used in relation to specifically Anglo-American, ecocritical, strands of EH scholarship. In Russian and most other Slavic languages the term *humanities* has been translated as "sciences about humans" (гуманитарные науки). Some scholars in Russia, however, are beginning to establish and use the neologism *humanities* (e.g., in *digital humanities*, цифровая гуманитаристика), and it seems likely that the term *EH* might become more common in the future.[15]

2.1.2 UMBRELLA OR INTERDISCIPLINARY PROJECTS One of the central tensions that characterizes the emergent field of EH, with regard to both research and teaching, is the extent to which it should be understood to be a fundamentally integrative and interdisciplinary project that challenges and indeed transforms traditional disciplinary approaches in the humanities. At one end of this spectrum there is a view that EH should function as something like an umbrella, gathering up existing approaches within subdisciplines like environmental history, environmental anthropology, and ecocriticism—perhaps to enhance their visibility in various institutional and funding forums—but leaving these approaches essentially unchanged. At the other end is the notion that EH is interdisciplinary not just in the sense that it brings scholars of different disciplines into dialogue, but that it transforms their disciplinary approaches in some fundamental ways, at the very least through an engagement with one another's literatures and questions, but perhaps also through the development of new methods for researching, writing, and, of course, teaching.

Within the teaching space this tension takes particular forms. Those of us who have established undergraduate teaching programs in EH have had to consider the need to provide students with a cohesive set of approaches and ideas. In this context it is not sufficient to simply expose students to a variety of different approaches and hope that they will come out of this process with some sort of coherent education. Interdisciplinarity cannot simply be about sitting ideas and approaches alongside one another; it must also take up the work of synthesis, of cross-fertilization and interrogation. How this takes place is shaped by different institutional contexts. For example, at Macquarie the EH major incorporated existing disciplinary courses but also established a core set of synthesizing courses. At UNSW, all courses were designed as interdisciplinary offerings, centered around core training in ethnographic methods.

15. However, as the term *environmental* (эйнваронментальный) is difficult to pronounce, the Russian term for EH may be *ecological humanities* (экологическая гуманитаристика).

In other contexts there is less emphasis on the need for such a synthetic approach to interdisciplinary training, as the field takes the form of an "add-on" to traditional disciplinary training in the humanities (either concurrently at an undergraduate level or as a postgraduate qualification). For example, the RCC offers an Environmental Studies Certificate Program (with a strong emphasis on EH) that accepts students from every discipline; they receive their MA in another subject and get an additional Certificate in Environmental Studies. Similarly, ASU offers a short certificate qualification in EH that undergraduate students can take alongside their primary training.

The core contrast here seems to lie in whether or not EH is the core disciplinary training provided to students. However, as greater numbers of students graduate with qualifications of one sort or another in EH, including those who are taking a thoroughly interdisciplinary approach to their postgraduate research under this rubric, it is becoming less and less tenable to understand EH primarily as an umbrella collecting up traditional disciplinary approaches. In this way, EH teaching is transforming the field.

2.1.3 A RECOGNIZABLE NAME? EH is not yet a well-recognized field outside of the academy. This poses both challenges and opportunities in recruiting students into teaching programs. On the positive side, EH often appeals to students as an exciting, dynamic, and emerging new field with a compelling story about the need to attend to environmental challenges as inherently social. On the other side, however, students must first learn about the existence of the field. Unlike programs in history, literature, or geography—which are taught at a high-school level in many parts of the world—EH is not an area that students are familiar with and therefore actively seek out. This lack of student recognition has been addressed in a variety of ways, from information sessions at high schools and in first-year university courses, to actively cultivating a lively social program of EH events.

This also means that students are often unsure about the vocational opportunities associated with EH. This is part of a broader trend in the humanities, which has been described by some as a "crisis" for the future of these disciplines, resulting from a perceived lack of vocational relevance.[16] Students who would like to work in the environmental field may be more attracted to strictly vocational environmental degrees (like environmental management or engineering), or just to qualifications that are likely to be more familiar to potential employers (such as geography and environmental studies). As the field is relatively new, and even more so as an area of education, much still remains to be seen about the vocational opportunities for EH students. In general terms, it seems that many of our students end up working for environmental NGOs, government departments, community organizations, and in cultural institutions like museums. Many others go on to work in entirely different areas. Indeed, these diverse employment possibilities are one of the key strengths emphasized by EH teaching programs around the

16. Schmidt, "Humanities Are in Crisis."

world, that is, the fact that they combine the broad and desirable skills of a humanities education in areas like research, critical thinking, and communication with a vocationally specific set of environmental knowledges and skills. Nonetheless it remains the case that there is considerable work to be done by the EH community in increasing recognition of the field and the valuable contributions that it might make. This work is already taking place in a diverse range of ways (see 2.4), and among those that stand to benefit from it are future generations of students.

2.2 Is There an Environmental Humanities Canon?

As is apparent from Part 1 of this article, EH does not have a clear, singular identity as a space of teaching. Rather, as is the case with research in this area, EH is taking form through an ongoing, pluralist, experimental ethos. Indeed, among many of the scholars teaching in the area there seems to be a firm view that the field ought *not* to preemptively, or perhaps ever, become a formalized discipline—that this diversity ought to be held onto and cultivated. At the same time, however, it is recognized that as a highly integrative and interdisciplinary field, EH requires some kind of common ground: at least some partially shared and overlapping sets of terminology, understanding, and commitment must exist, even if they continue to change and develop (as indeed they do in all disciplines). Identifying these shared spaces can be an important component of designing EH teaching. In this section we offer short explanations of five key ideas that, in various forms, we encountered across much of the current EH teaching landscape. This is not an effort to *define* the field but rather to tentatively identify some commonalities across diverse teaching programs. While they are a long way from a formalized "canon" of scholars or texts, they do offer a sense of the way in which some shared spaces are taking form.

2.2.1 THERE IS NO SINGULAR "HUMAN" Since the early 2000s, in many parts of the world, the fields that have come together under the rubric of the EH have been animated by the idea of an "Anthropocene," a geologic term suggesting that *anthropos*, or the human, is an ambivalent figure, possessed of an agency scaled up to embrace and endanger the entire planet.[17] While still controversial, the concept has drawn growing numbers of humanities scholars from across the disciplines into symposia and conferences to discuss and debate this "epochal idea" and the role of the human.[18] In many of these discussions, notions of *anthropos* are employed uncritically, in the aggregate, as if all humans are essentially the same or as if a collective "We" is responsible and might or should respond. Used in this way, the term fails to account for unequal human

17. In other parts of the world, however, the Anthropocene concept has not been taken up as readily by scholars and is instead associated with a specifically Western set of approaches and concerns.

18. Nixon, "Anthropocene."

accountabilities and vulnerabilities.[19] With this context in mind, teaching in EH tends to draw on anticolonial, antiracist, feminist scholarship to provide a better picture of the diversity of who people are and how they live, paying attention to cultural and historical difference. This attention to diversity animates our understandings of what it means to approach environmental issues in ways that are fundamentally grounded in questions of justice. The environment has frequently been taken up in humanities scholarship in a way that does not adequately acknowledge this kind of difference. Indeed this is a major issue for the broader "environment movement" in much of the West.[20] While a great deal remains to be done, many EH scholars are engaging with traditionally marginalized perspectives, approaches, and communities, and the field as a whole has gained significantly from both activist and academic work in political ecology, environmental justice, environmental racism, feminist and queer theory, anthropology, postcolonial studies, development studies, and diverse Indigenous studies.[21]

2.2.2 THERE IS NO "ENVIRONMENT" (AS DISTINCT FROM "SOCIETY") Contemporary environmental challenges are inescapably social and cultural, grounded in particular modes of understanding, valuing, organizing, and inhabiting our world.[22] As such, teaching in EH tends to begin from a principled refusal of the "compartmentalization of 'the environment' from other spheres of concern."[23] From this perspective, nature and culture, facts and values, scientific and human dimensions, cannot be neatly separated out from each other. This fundamental insight is presented in a range of ways within EH teaching, from critiques of wilderness, and the modern constitution, to efforts to attend to and enact naturecultures, cosmopolitical proposals, or hybrid, more-than-human, and multispecies worlds.[24] Despite their many differences, all of these approaches have in common the fact that they: (a) challenge "human exceptionality" in a way that requires us to take seriously diverse, and unequal, forms of human life in our efforts to understand and address environmental (and other) challenges,[25] and (b) insist that rethinking

19. Adamson, "Roots and Trajectories"; Di Chiro, "Environmental Justice and the Anthropocene Meme"; Palsson et al., "Reconceptualizing the 'Anthropos' in the Anthropocene,"

20. Taylor, *Rise of the American Conservation Movement*.

21. See, for example, DeLoughrey, Didur, and Carrigan, *Global Ecologies and the Environmental Humanities*; Sandilands, "Some 'F' Words for the Environmental Humanities"; Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities."

22. Bergthaller et al., "Mapping Common Ground," 262.

23. Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 67.

24. On wilderness, see Cronon, "The Trouble With Wilderness"; on the Modern Constitution, see Latour, *We Have Never Been Modern*; on naturecultures, see Haraway, *Modest_Witness@Second_Millenium.FemaleMan©_Meets_Oncomouse™*; on cosmopolitical proposals, see Stengers, "Cosmopolitical Proposal" and de la Cadena, "Indigenous Cosmopolitics in the Andes"; on hybrid, more-than-human, and multispecies worlds, see Whatmore, *Hybrid Geographies*; Tsing, *Mushroom at the End of the World*; van Dooren, Kirksey, and Münster, "Multispecies Studies."

25. Plumwood, "Human Exceptionalism"; Crist, "On the Poverty of Our Nomenclature."

dualisms is not simply about overcoming or abandoning them, but must involve relentlessly attending to the very consequential effects that these modes of categorizing continue to have. Taken together, these points remind us that, as Anna Tsing has noted, "human nature is an interspecies relationship."[26] This understanding compliments the above noted emphasis on the multiplicity *within* the figure of the human (see 2.3.1). To this end, feminist scholars such as Val Plumwood have emphasized the way in which dualistic divisions between culture and nature, human and animal, male and female, Caucasian and "other," have been mapped onto each other in *mutually reinforcing* ways.[27]

2.2.3 GROUNDED THINKING Teaching in EH has also emphasized approaches that are grounded in specific case studies, sites, or even texts. In so doing, courses require students to explore their ideas and approaches in real-world contexts that complicate simple metanarratives. Issues like climate change, biodiversity loss, and waste are seen through the forms they take in particular communities and places. For example, in the Rethinking Wildlife course at UNSW, students are required to bring general conceptual insights into dialogue with their own ethnographic research to explore a particular instance of shifting human/animal relationships. In a related vein, Life Overlooked, an eco-digital pedagogic collaboration among Humanities for the Environment researchers based at ASU, the University of Oregon, and York University, helps students to learn to see their local environments as "citizen humanists," prompted by close readings of novels and a range of other creative and experiential resources.[28] In other contexts, archival research, oral histories, and other methods might similarly ground EH teaching. In each case, these pedagogic approaches reinforce the above two points, providing worldly examples of the ways in which positionality and naturalcultural entanglements shape the contours of lives and places. They also challenge students to think in concrete terms about the complexity of the issues they are learning about: the compromises and competing responsibilities, the inequalities and the very material stakes, of particular understandings and approaches.

2.2.4 POLITICS OF KNOWLEDGE A key dimension of thinking through the particular is the need to acknowledge very different ways of knowing: which kinds of knowledge and expertise, and whose concepts and categories, are given preference in environmental discussions and decision making?[29] The very concept "environment" itself has a long history, inseparable from particular modes of knowing and valuing, and with a marked

26. Tsing, "Unruly Edges," 141.

27. Plumwood, *Feminism and the Mastery of Nature*.

28. Project funding by the Andrew W. Mellon Foundation. See hfe-observatories.org/projects/life-overlooked/.

29. Sörlin, "Reconfiguring Environmental Expertise"; Howitt and Suchet-Pearson, "Rethinking the Building Blocks"; Jørgensen, Jørgensen, and Pritchard, *New Natures*; Østmo and Law, "Mis/translation, Colonialism, and Environmental Conflict."

shift in meaning and in the frequency of usage from around the middle of the twentieth century.[30] Indeed, it has numerous histories in different languages and parts of the world, each with their own particular but shifting meanings and connotations. Teaching in EH tends to emphasize a multitude of simultaneously empirical and political questions, challenging students to interrogate hidden and hegemonic knowledge structures that have allowed some ways of knowing to appear natural, neutral, and objective, while positioning all others as culturally specific.[31] Such an approach does not lead to an easy relativism about questions of knowledge and truth. Rather, in dialogue with work in feminist STS, Indigenous and postcolonial studies, multispecies studies, and related fields, it instead prompts students and teachers to "situate" their knowledges: attending to why and how we are each positioned as we are, making room as best we can for the multiplicity, the plurality, of human and nonhuman understandings, values, ideas, and approaches that together constitute and produce our worlds.[32] Such an approach to pedagogy insists that learning is always about learning *with* a wider community of life; that it is not simply about greater and greater accuracy of what we know but also about being accountable for the consequences of our particular ways of knowing and the qualities of the relationships and alliances we form.[33]

2.2.5 STORYTELLING Teaching in EH emphasizes the powerful communicative and transformative nature of storytelling. We utilize stories in the classroom as a technology for education, while at the same time teaching students to attend to the stories that shape worlds and to play an active role in the weaving of alternatives. This value of narrative is increasingly being accepted, beyond the humanities, as a vital component in efforts to achieve an equitable and sustainable future. The UN's 2030 Agenda for Sustainable Development, a framework to end poverty and mitigate the increasing risks and impacts of global environmental change, establishes 17 Sustainability Development Goals (SGDs). Success is to be measured through the use of 169 indicators designed to collect data *but also by employing storytelling* to motivate more follow-up action than any simple accounting for numbers would. This situation offers but one example of the growing recognition that narrative "is the most powerful educational tool we possess; . . . [and] a way of allowing for multiplicity and complexity at the same time as guaranteeing memorability."[34] This increasing recognition has been driving calls for greater integration of the humanities into international discussions of STEM (alongside more conventional approaches in science communication, marketing, and public education). Scholars in the humanities have long advocated for understandings of the politics

30. Warde, Sörlin, and Robin, *Environment*.
31. Blaser, "Is Another Cosmopolitics Possible?"; Latour, *We Have Never Been Modern*.
32. Haraway, "Situated Knowledges."
33. Whyte, "Is It Colonial Déjà Vu?"
34. Griffiths, "Humanities and an Environmentally Sustainable Australia."

of storytelling. Beyond simply "applying" narrative methods they have sought to emphasize the ways in which stories inevitably frame our environmental understandings and actions,[35] as well as the ways in which they might give voice to marginalized communities and understandings, for example those people afflicted by environmental degradation (see, for example, the ToxicBios Project[36]).

2.3 Mixing It Up

One of the key challenges of teaching in EH is interdisciplinarity. This challenge is often presented as one of building a two-way dialogue and collaboration between the humanities and the STEM disciplines. This is indeed a critical issue, but it sits alongside broader collaborative challenges. Teaching within EH is increasingly emphasizing multivocal conversation between humanities, social sciences, and natural sciences disciplines, as well as beyond the academy with a wide range of communities, institutions, and publics (discussed further in 2.2 and 2.4). In this section, however, we focus specifically on the humanities/STEM dialogue, which has posed particular challenges and opportunities for interdisciplinary EH teaching. In doing so we briefly discuss three key themes that speak to the possibilities and tensions involved. (Collaborations within the humanities and social sciences are discussed in more detail in 2.2 and with publics in 2.4.).

2.3.1 ASYMMETRICAL RELATIONSHIPS The emphasis on "environment" in EH offers opportunities to reinvigorate humanities subjects and attract new cohorts of students. However, this emphasis also brings humanities into close proximity with established and sometimes well-funded STEM programs focusing on environment and sustainability. Sometimes this means that necessary integrative and interdisciplinary work on environmental issues takes place outside of humanities and arts contexts where humanities knowledge and practices may be appropriated or not well understood. Similarly, where EH is strongly anchored within humanities and liberal arts structures, there may be a high degree of cross-disciplinary collaboration between humanities and social sciences disciplines (for example, history, literature, cultural studies, philosophy, anthropology), but the understandings and approaches of the natural sciences may be only superficially engaged. Frequently, calls for greater integration and collaboration within universities to address critical global environmental challenges are stymied by "traditional" institutional structures and asymmetries that undermine genuine inter- and transdisciplinary work. Increased support, funding, and formal recognition of this kind of collaborative teaching is necessary. In its absence, development is hindered and existing collaborations tend to be taken on in addition to regular responsibilities, relying on volunteered time.

35. Cronon, "A Place for Stories"; Lidström et al., "Invasive Narratives and the Inverse of Slow Violence"; Heise, "Planet, Species, Justice."

36. www.toxicbios.eu.

There is, however, a growing number of examples of successful EH/STEM teaching collaborations in this space. It is noticeable that they tend to rely on personal relationships and significant goodwill on all sides. At the RCC students engage with different disciplines during a site visit—for example, to a permaculture farm, national park, river, or high alpine landscape affected by climate change—guided by teachers from geology, botany, geography, anthropology, media studies, philosophy, and history.

2.3.2 MODES OF KNOWING Vital pedagogical aspects of EH include questioning authority and critique of various forms of expertise, particularly with regard to the power relations and knowledges that inform environmental governance and policy. There is frequently a tension between general approaches to knowledge making in the humanities and STEM disciplines. In broad terms, contrasts between quantitative and qualitative methods and associated differences in evidence, argumentation, and presentation frequently present challenges for interdisciplinary teaching, but also opportunities. More fundamentally, unexamined notions of "objectivity" and the apolitical or neutral positioning of truthful knowledge tend to ground education in the STEM disciplines, especially at an undergraduate level. Many of the science students we have encountered in our classrooms understand themselves to inhabit the "culture of no culture."[37] Humanities approaches tend to challenge these assumptions, emphasizing the way in which all knowledges are rooted in cultural and historical positioning, and often grounded in the erasure of alternative understandings, in particular those of non-Western and Indigenous peoples. In this way, teaching in EH often seeks to "decolonize knowledge," by reconfiguring power relations and notions of expertise and authority (see also 2.2.4).[38] Kyle Powys Whyte asserts that for Indigenous peoples around the world, climate injustice "is less about the spectre of a new future and more like the experience of déjà vu."[39] Anthropogenic environmental change occurring now continues patterns that have been part of settler colonialism for hundreds of years, and for this reason Indigenous peoples should be accorded authority on these issues. It is with precisely these ideas in mind that some EH teaching has sought to "reboot" disciplinary methods and approaches. In one such approach at UNSW, students are asked to critically interrogate the ways in which diverse academic knowledges clash and/or cooperate with Indigenous knowledge systems and to propose the kinds of changes that might be necessary for the ongoing life of the (inter)discipline (see 3.3).

2.4 Welcome to the Teaching Lab

Those teaching EH have frequently employed creative and experimental methods, and teachers aim to encourage these attributes in students. In fact, teaching approaches

37. Traweek, *Beamtimes and Lifetimes*.
38. Apffel-Marglin and Marglin, *Decolonizing Knowledge*.
39. Whyte, "Is it Colonial Déjà Vu?," 88.

must necessarily be experimental, as the field is arising out of and generating new ways of doing research. Sarah Whatmore has made a similar case for taking risks in novel forms of more-than-human research.[40] This section explores the more experimental side of EH teaching. One of the stand-out dimensions of emerging EH teaching programs is their emphasis on the development of novel approaches to humanities education. In some cases these approaches are borrowed from other disciplines—like field courses and mapping—in other cases, they take more established humanities practices in new directions, in particular, into more collaborative, participatory, and public-facing modes (examples of several such approaches are offered in Part 3).

Within the specific context of EH this experimentation is a response to at least four key imperatives. First, the interdisciplinary nature of the field and of the challenges it addresses necessitate the creation of new approaches that draw different methods and literatures into dialogue around shared matters of concern.[41] For example, in some programs this involves students collectively choosing one research topic to focus on over a longer period of time—such as urban environments, water, or agriculture—and constructing a multidisciplinary project in which they learn from each other as they apply different disciplinary approaches to the selected topic or predicament. Second, as discussed further below, experimental teaching approaches respond to a well-established emphasis in EH on understanding environmental challenges as social challenges and the imperative to engage with them in ways that are participatory, democratic, creative, and just. This means stretching humanities teaching beyond the classroom, developing the skills and training students to communicate and collaborate with a variety of publics. In existing EH teaching these efforts have taken a variety of forms including field classes and open-ended assessments such as exhibitions, collaborative writing and blogging experiments, and the production of short films, ecological sound trails, guided tours, and more. Third, this experimentation responds to a perceived need to challenge and reorient often unexamined anthropocentric and ethnocentric assumptions, to provide students with the critical and imaginative skills to better attend to a complex, diverse world. For example, at Macquarie University this has included students keeping creative diaries of interactions and imaginings with particular nonhumans, fostering "the arts of noticing."[42] Finally, this experimentation responds to the recent trend in university teaching that emphasizes student-centered learning. Although this trend is widespread, EH seems to be particularly well positioned to take up these approaches and in many parts of the world appears to be playing a leading role within the humanities in doing so. This section focuses on two key ways in which publics are being engaged in experimental EH teaching. The first centers on efforts to take enrolled students

40. Whatmore, "Materialist Returns."

41. Puig de la Bellacasa, *Matters of Care*.

42. Tsing, "Arts of Inclusion"; Bastian, "Towards a More-Than-Human Participatory Research"; van Dooren, Kirksey, and Münster, "Multispecies Studies."

"beyond the classroom," both physically and/or through public-facing projects that require them to speak to and think with broader audiences (2.4.1).The second centers on forms of education that are aimed at broader publics, beyond "our own" students, exploring "the world as classroom" (2.4.2).

2.4.1 BEYOND THE CLASSROOM A distinctive feature of EH is its action orientation. In some cases, teaching EH implies a challenge to the usual disciplinary silos by embracing a focus on grounded approaches to pressing challenges (see 2.2.3). In this regard, EH can be understood as having a robust public agenda whereby a variety of disciplinary approaches can be marshalled to address a specific issue. This is not to say that EH is a purely solution-oriented field with an entirely instrumental aim. Rather, it is to stress the public character of the field and its engagement with the wider more-than-human world.[43]

Most EH programs include some level of public-oriented learning and teaching, which is a source of continual creative pedagogical experimentation. From place-based workshops and on-water intensives, to urban sound trails and rebooting pedagogies (see Part 3). For instance, at ASU, historians and philosophers have led summer courses abroad in which students work with local communities to solve sustainability challenges. At Macquarie University, students can take courses that have formal agreements with community organizations, and the assessment tasks are determined in discussion with the partner, which have ranged from an Indigenous land-rights organization in Borneo to national parks managers in Sydney. The assessments differ significantly and are reflective of students' often diverse skill sets. At the RCC, a group of multidisciplinary students curated the *Ecopolis: Munich* exhibition, where they collected and created stories about the Bavarian capital's environmental past, present, and future. The exhibition and accompanying public events took place in one of the most frequently visited buildings of Munich's Ludwig-Maximilians-Universität. Part of the exhibition was later transformed into a virtual exhibition within the RCC's digital Environment and Society portal.[44] This collaborative learning experiment reached a lot of people, however, finding the resources proved to be expensive and time-consuming, and producing the actual exhibit required involving professionals with curatorial and exhibition skills.

Such a public-facing orientation is reflective of the field's imperative to redistribute expertise, both within and beyond the academy (see 2.2.4).[45] Many of these kinds of activities require students to work with each other and often with those outside universities, helping them to build collaborative skills. These public-facing approaches also open up possible career pathways for students, which could include roles that are oriented toward public and/or community engagement. As another avenue to introduce

43. Castree et al., "Changing the Intellectual Climate."

44. See www.environmentandsociety.org/exhibitions/ecopolis-muenchen2017; also see Gora and Holzer, *Ecopolis München*.

45. Whatmore, "Materialist Returns."

students to possible career pathways in EH, various programs including the RCC and Bath Spa invite speakers from environmental NGOs and social enterprises, as well as environmental practitioners (for example, engineers and landscape architects), to present to and in some cases collaborate with students.

2.4.2 THE WORLD AS CLASSROOM EH teaching programs at some universities have invested considerable effort in working to engage with students beyond their own classrooms. This work has taken a variety of forms, in most cases centering on creating classes, events, and other learning resources and opportunities so that wider communities might engage with and make use of EH approaches and ideas. In some ways this work draws on the well-established approaches of public humanities engagements, from public history and philosophy to community art projects, but often taking them into a distinctively interdisciplinary mode. To this end, a series of recent events have focused on the need to develop EH approaches in this area, for example the KTH intensive school in Public Environmental Humanities and the UNSW/ASU/King's College London symposium on the Participatory Environmental Humanities, both held in 2017.[46]

These events have highlighted the fact that it is sometimes difficult to clearly distinguish between public education and the communication of research to the public. There are, however, some clear examples of recent EH projects that have been explicitly framed as public education. For instance, in 2016, UNSW launched a massive open online course (MOOC) called Environmental Humanities: Remaking Nature on the FutureLearn platform.[47] The course enrolled roughly six thousand active learners from around the world. Many already had an interest in EH—as students or academics in the area—but for many others, from the environment sector, creative arts, and other fields, it was an opportunity to learn more about interdisciplinary humanities approaches to the environment. In 2011, a team of researchers, coordinated through the Nordic Network for Interdisciplinary Environmental Studies (NIES), launched the Bifrost initiative, an international open-access channel promoting education for sustainability and climate change awareness. Bifrost creates resources for education while connecting academics to other educators, civil society, business, and government.[48]

At KTH, the Environmental Humanities Laboratory (EHL) has organized experimental events that have brought together graduate students from a variety of institutions with members of various interested organizations. These have included several festivals, workshops, and experimental conferences—since a lab is after all an experimental space. Similarly, in 2017 Bath Spa hosted an international environmental arts and humanities graduate summer school on New Narratives for Environmental Change in collaboration with the Association of Commonwealth Universities. Other important public-facing EH events around the world have included exhibitions, such as the RCC's

46. For a record of the Participatory Environmental Humanities event, see sites.google.com/view/peh.

47. See: www.futurelearn.com/courses/remaking-nature.

48. See bifrostonline.org.

collaboration with the Deutsches Museum titled "Welcome to the Anthropocene: The Earth in Our Hands"; as well as "Tales from Planet Earth" and a range of other film festivals/series and visual EH projects[49]; and the Sydney Environmental Humanities Lecture Series, a major public-facing collaboration between five universities and the Australian Museum.[50]

Part 3: Experimental Pedagogies: A Sampling of EH Teaching Approaches

3.0 Introduction

While writing and discussing the various sections of this article we frequently found ourselves wanting to know more about an interesting pedagogical approach or experiment being utilized by one of our coauthors. This final part of this article provides a set of short summaries of interesting and innovative EH teaching practices. Our hope is that the ideas below might be picked up—applied, adapted, redone—or might simply serve as inspiration for the ongoing development of creative and engaged modes of education in EH.

3.1 Place-Based Workshops (Rachel Carson Center for Environment and Society, Ludwig-Maximilians-Universität Munich)

Several times a year, and as part of its curricula, the Rachel Carson Center takes between ten and thirty MA and doctoral students on multiday field trips or to specific sites, such as a high alpine landscape affected by climate change, a permaculture farm, or an industrialized river like the Danube.[51] Guided by a team of researchers from a variety of disciplines including anthropologists, geographers, environmental historians, geologists, botanists, and philosophers, students learn how various disciplines practice their particular "arts of noticing"[52] and what might be gained by utilizing different methods and epistemologies. Often these teams are joined by environmental practitioners, such as environmental engineers, hydrologists, or landscape architects. Exploring "place"—the relationship between people, plants, animals, rocks, and microbes that animate a landscape—makes it obvious that environmental questions necessarily reach across disciplinary divides.[53] In these place-based workshops, students are also asked to

49. The Tales from Planet Earth film festival was created by the Center for Culture, History, and Environment at the University of Wisconsin–Madison. In 2014 the KTH EH Lab brought the festival to Stockholm.

50. See australianmuseum.net.au/landing/human-nature.

51. See, for example, www.en.envstudies.carsoncenter.uni-muenchen.de/events/events1/2018/berchtesgaden/index.html; www.en.envstudies.carsoncenter.uni-muenchen.de/events/events1/2018/alternative-agricultures/index.html; www.en.envstudies.carsoncenter.uni-muenchen.de/events/events1/2017/danube-workshop/index.html.

52. Tsing, "Arts of Inclusion, or, How to Love a Mushroom."

53. The idea of conducting transdisciplinary place-based workshops was inspired by the yearly events at the Center for Culture, History, and the Environment (CHE), and several workshops have been conducted in cooperation with the Rachel Carson Center. In 2016 a team of twelve students and professors at the RCC explored the banks of the Mississippi River. In 2017 staff and students from CHE went down the Danube with an RCC team, and in 2018 RCC graduate students explored rural Wisconsin together with the theme "Animating the Landscape." See nelson.wisc.edu/che/events/place-based-workshops/index.php.

actively engage with a diverse range of people who live in the local region; for instance farmers, hunters, activists, state officials, park rangers, and others. Employing ethnographic methods, using photography, or collecting oral histories, students learn about people's values, practices, and politics, and how they contribute to the shaping of the naturalcultural landscape around them.

3.2 Life Overlooked (University of Oregon, York University, and Arizona State University)

Life Overlooked is an open-access eco-digital pedagogic collaboration designed by Humanities for the Environment researchers Joni Adamson, Stephanie LeMenager, and Catriona Sandilands.[54] The goal of the project is empowering students to work within the "citizen humanities" to disseminate local ecological knowledge about "noncharismatic" species to a wider public. Students were asked to create a digital portfolio for one "species overlooked" that would be built on an interactive WordPress platform specifically created for the Humanities for the Environment (H*f*E) international project, although students were also allowed to post their projects on other platforms such as Facebook and Weebly. They were assigned to read and write fiction, poetry, and nonfiction; take pictures; make drawings or other artwork; create short performances or films; then pull these elements together to create a narrative focused on their selected species. Twenty-one students posted projects on the H*f*E website. From pigeons to crickets to "dust bunnies," the projects illustrate how narrative and image can be employed to broaden the application of principles of affective attachment, social justice, and environmental sustainability. Life Overlooked also models how teachers of EH might collaborate in order to "scale up" their work internationally while also cultivating a sense of connection among diverse students working on common issues.[55]

3.3 Rebooting Ways of Knowing (University of New South Wales)

In a later-year course in the EH major at UNSW, called Indigenous People and the Environment, students are asked to critically evaluate the knowledges and methods they have explored in their degrees to date. Students engaged in different majors—social sciences, physical sciences, economics, law, fine arts—consider the ways in which these knowledges have been and might be deployed on Aboriginal Australian Country to extract value, tackle problems, achieve justice, or protect beauty. In each case, students began to see how these knowledges clashed with or cooperated with Indigenous knowledge systems. These problems were further dramatized by climate change projections. Working with the principles of caring for country that Australian Indigenous people have maintained for millennia, we worked collaboratively to "reboot" our various disciplines so that they could more effectively care for specific territories.

54. See hfe-observatories.org/.

55. Each of the three syllabi used to teach the course, and all of the student projects, can be found at the project website, hfe-observatories.org/projects/life-overlooked. For a fuller discussion, see Adamson, LeMenager, and Sandilands, "Citizen Humanities."

To ground this effort we imagined, through negotiation, what these disciplines would look like in the year 2045 (when the students would be mid-career). We did state-of-the-art assessments of what we wanted to retain from our disciplines as they stood today—conceptual frameworks and methods—then we drew up the rebooted changes we felt would be necessary for 2045. In a final moment we invited "diplomats from the future" (three colleagues from UNSW and other universities) to come back in a time machine, and, having read our manifestos for change in these fields of knowledge, they informed us about how well our negotiated changes in these fields were coping with the situation in 2045.

3.4 Urban Sound Trail (Rachel Carson Center for Environment and Society, Ludwig-Maximilians-Universität Munich)

As part of the transdisciplinary student exhibition "Ecopolis München: Environmental Histories of a City"[56] held in summer 2017 at LMU Munich, two students of the RCC's Environmental Studies Program, Katharina Müller and Vera Kovács, created an audio walk "Stimmenspur," or "sound trail," through Munich's famous English Garden, one of the city's largest parks. The idea was to explore this urban ecology through sound while asking how to create more environmental awareness acoustically. Guiding listeners through five kilometers of the park, the sound trail tells unusual multispecies stories, giving voice to the park's human and nonhuman inhabitants. For example, while walking along the trails of the park, the audio guide (downloadable on any electronic device),[57] introduces the listener to the female beaver "Uschi," who has recently arrived here and is not wanted by everyone; the park's landscape architect explains the park's "field democracy"; and the listener learns about the environmental histories of trees like the sycamore, ash, and elm, while speculating about their future well-being in times of climate change. As pedagogical experiments, sound trails integrate different disciplinary perspectives and thereby encourage students to explore naturalcultural spaces multisensorially—visually, tactually, acoustically, and kinesthetically—while moving through a variety of urban, industrial, or rural landscapes. If larger groups of students are involved, producing sound trails can also be turned into a larger collaborative project, where participants build on their disciplinary expertise to discover unheard or forgotten environmental stories and to ask new questions.

3.5 On-Water Research Intensive (University of Pennsylvania)

Since April 2016 the Penn Program in Environmental Humanities (PPEH) has been organizing an interwoven suite of public EH research initiatives in and around our campus in Philadelphia, located in the watershed of the Schuylkill River, designated as a National and State Heritage Area in 2000. Under the heading of the Schuylkill Corps, these various initiatives—documented in our living river archive—shine light on the lower, tidal

56. See www.environmentandsociety.org/exhibitions/ecopolis-muenchen2017.

57. See stimmenspur.wordpress.com/.

stretch of the river, home at once to the continent's oldest botanical garden and to the world's longest continuously operating refinery complex. The On-Water Research Intensive, run in June 2018, picked up this focus, exploring the way in which the tidal Schuylkill and the confluence with the Delaware River have, for centuries, provided a laboratory for Anthropocene experiments ranging from land reclamation to energy transitions. With the basin's marshy past and increasingly soggy future in mind, our intensive aimed to explain and unpack these long, sometimes haphazard, and frequently toxic geo- and hydro-engineering attempts. To do so, we convened instructors and students across environmental ways of knowing, and included presentations spanning environmental art to environmental engineering. For two hot (but thankfully rain-free) weeks we met on different floating classrooms and on riverbanks, and we walked and mapped historic creeks and swamps. We aimed to catalyze interdisciplinary projects that could later be adapted and potentially scaled up for bigger public audiences. To do so, PPEH enlisted help from partners, especially Drexel University and its Academy of Natural Sciences, as well as Bartram's Garden, the Independence Seaport Museum, and the John Heinz National Wildlife Refuge at Tinicum whose involvement connected intensive participants with specific public audiences.

3.6 Reflective Journal: Relationships and Connections across Species (Macquarie University)

Reflective journaling has been utilized as a pedagogic method in the Ecological Humanities: Australians and Their Environments course at Macquarie University. This exercise aims to offer a practical introduction to a foundational but complex theme in EH: *rethinking relationships and connections across species*. This task requires students to select a nonhuman animal encountered in our local region as a companion for the semester. The task is loosely based on multispecies ethnographic techniques of listening, observing, and reflecting in order to become more attuned to other modes and manners of being. Students document their daily encounters with their nonhuman companions and draw on readings, lectures, and other course materials to rethink their assumptions about how we connect with the more-than-human world. The reflective journal forms the foundation of the major essay and students also present their journal work to the class at the end of semester in a three-minute presentation format. Students really enjoy the task of thinking and reflecting with nonhumans and frequently report that this exercise has changed how they think about the environment. For many, it is a deeply personal task: some students have taken the opportunity to overcome phobias to insects and spiders; others have developed a more compassionate stance toward the plight of unwanted or unloved species or rethought the ethics of conservation practices toward pest or feral animals.

Conclusion

It is clear that EH teaching programs and courses are steadily growing. This growth is varied and uneven: thicker in some parts of the world than others, each with its own

distinctive disciplinary inflections, catering to students at different degree stages. Across this diversity, some clear themes and common approaches seem to be emerging (2.2). In our discussions, the authorship team have, in general, expressed support and enthusiasm for the identification and development of a core set of approaches to EH teaching. At the same time, there has been a widespread insistence that EH teaching must remain an open, experimental, emergent space of possibilities—not to be locked down by an overly prescriptive canon or set of methodologies. Holding these two commitments in productive tension will be a key part of the future development and dynamism of this space of learning. To this end, we feel that more must be done to encourage dialogue across diverse EH teaching programs, highlighting challenges, opportunities, novel pedagogies, and more. We hope that this article might make a meaningful contribution to this process.

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