

MAKING THE CASE FOR THE HUMANITIES' TAKE ON THE CRUCIAL ISSUE OF ECOLOGICAL CRISIS

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(Received 03rd January 2024; accepted 25th February 2024)

Abstract. For a large number of people, the Humanities and the question of environment may sound like an oxymoron. Indeed, a lot of people tend to associate what is environmental with science only. This paper seeks to counterargue this dominant, superficial, and evidently erroneous view. Therefore, not only do we argue for the presence of a logical connection between humanities and the issue of environment, but we also argue for the importance and the value of human sciences in addressing a man-made planetary crisis. In parallel, we consider that scientificity of the approach to the question is not and cannot be the only criterion nor the only requirement for tackling environmental issues. In fact, we believe that it is quite possible to make a case for the role and the efficacy of humanities in this area. In other words, this paper is making the case for the humanities' take on a crucial issue. However, some people may wonder: How so?! How may the humanities be of utility? Do the humanities have what it takes to solve global environmental problems? Well, this paper answers all of these questions and more. Actually, the current article highlights the generous toolkit of valuable options offered by the classical humanities, the environmental humanities, together with the emergent tracks in humanities, and the way in which those tools may help in facing ecological threats.

Keywords: *planetary crisis, the role of humanities, environmental humanities, classical humanities, emergent tracks in humanities*

Introduction

Before starting to argue in favor of the humanities perspective, it is essential to point out some of the shortcomings of science concerning how it addresses environmental concerns. In relation to this, Palsson et al. (2013) think that the perspective of science is narrow. By narrow, Palsson et al. (2013) are referring to the lack of an adequate terminology in scientific language to appropriately explain several points as technical language can neither describe the social consequences of environmental change, nor the global power relationships behind environmental crisis. Similarly, Neimanis et al. (2015) also contend that science cannot go in depth into the power mechanisms that affect ecology. Neimanis et al. (2015) in fact consider categorizing environmental questions into specific scholarly disciplines in science to be risky because it fails to address questions of environmental justice, environmental racism, colonialism, poverty, etc. Holm et al. (2015) also state that science is not designed in a way that qualifies it to help human beings transform their ways of thinking. In other words, science cannot persuade people to change their actions, behaviors, attitudes, and values. Also, developing a list of rational environment-related choices may not necessarily lead people to act. In fact, sometimes even if the person knows the right thing to do, s/he may choose not to act on it or s/he will find it difficult to break the bad habit (e.g., using cars). Also, science does not take into consideration the complexity and the unpredictability of social behavior. In a nutshell, for Holm et al. (2015), science does not take into account the human factor, regardless of whether it is at the scale of the

individual or at the level of society. More than that, Palsson et al. (2013) believe in the misleading character of science. In this regard, the authors give the example of 'Climategate', a case that illustrates how the credibility of science has changed, and it is an example for the potential problems of mistrust between the scientists and the larger community. In line with this, Emmett and Nye (2017) make reference to the deceiving character of science. According to them, relying on solutions that are driven by scientists who serve institutional agendas would be a maladaptive solution. They also claim that the best eco-friendly technologies are often not adopted due to cultural and political reasons.

The references above cite some shortcomings of science with regard to the way it treats the question of environment. Far from accusing science of misleading people, what we would like to show here is the idea that science alone cannot bring a solution. As a result, we suggest that humanities-based approach can be a suitable alternative. As Touaf and Nasri (2017) suggest: "At a time of global environmental and economic challenges, there is an urgent need for the humanities to address to address the question of climate change". This essay tries to answer two major questions: (1) why is it necessary to adopt the perspective of humanities in dealing with environmental deterioration? And (2) what obstacles do humanities face when addressing environmental degradation?

The role of classical and environmental humanities

In this section, we present eight highly cited papers that are in line with what we wish to argue for. Precisely, these papers argue for the significance of traditional and environmental humanities in tackling environmental crisis. Sörlin (2012) argues that scientists concerned with the issue of environment should take the humanities seriously. With relevance to this point, Sörlin (2012) provides various arguments for bio-scientists to consider. First, the belief that science is the only factor that can save us from the planetary dangers is no longer valid; on the contrary, this time, it seems that the hopes are tied to the humanities. For example, Sörlin (2012) states that after decades of slight interest in financing large-scale projects in the eco-humanities, sponsors of eco-projects have started to insist on the necessity of including the expertise of specialists in the humanities (e.g., philosophers, historians, experts on communication and on religion). Second, there is the emergence and popularity of the term "Anthropocene" in 2000. In fact, the newly coined notion of Anthropocene brought a new understanding that will stimulate a shift toward the humanities. Indeed, considering that the term Anthropocene implies that humanity is the major threat behind global change, future research on the environment will definitely target the study of human societies. Third is the presence of a change from within the humanities. For instance, the birth of the field environmental humanities signals the readiness of the humanities to let go of the focus on single disciplines (e.g., environmental history, environmental philosophy) for the sake of joining efforts. Besides, humanists reached a point where they started considering the environment (nearly) as important as humans. Fourth, Sörlin (2012) states that the entrance of humanists to the domain of environmental studies should be welcomed because the use of the humanities will not only provide pathways to reflection and critique, but it will also trigger increased competition and/or the chance for collaborations between ideas and perspectives.

Additionally, Lemenager and Foote (2012) also argue for the value of humanities, although in a different manner. Unlike Sörlin (2012) whose recommendation is

addressed mainly to scientists, the suggestion of Lemenager and Foote (2012) is addressed to humanists themselves. Lemenager and Foote (2012) argue that scholars in the humanities, who, for some time, have been thinking profoundly about their own relevance to the issue of sustainable development, perhaps without their literal use of the word sustainability, have to be brave enough to declare their right to enter the territory of sustainability. Lemenager and Foote (2012) provided multiple reasons for this. Firstly, according to the authors, the notion of sustainability is deficient because humanists have not been at the heart of discussions of what sustainability is or what it might be. So, in line with the opinion of the critics, the human sciences are not only relevant but they can also contribute to sustainability. Secondly, Lemenager and Foote (2012) believe in the compatibility of the projects of sustainability and the humanities because both share some of the common features. For instance, in the same way that the planet is fighting for its sustainability, the field of humanities is also trying to resist for the sake of its survival and continuity. In this regard, Lemenager and Foote (2012) state that in the world of academia, the sphere that suffers the most of severe budget cuts is the humanities (e.g., larger classes, more underfunded departments, more restricted hiring). Another factor that places the future of humanities in danger is the tendency to treat university students more as customers and less as intellectuals. Thirdly, the humanities are well-equipped to tackle the subject of environmental sustainability. To cite some of the tools that the humanities can offer so as to handle the topic of environmental sustainability, Lemenager and Foote (2012) mention environmental memory, critical realism, and imagination. In simple terms, Lemenager and Foote (2012) state that in the absence of the environmental memory that the literary and cultural archives provide, present and upcoming generations might never realize how places looked like or felt like before their destruction. Without environmental memory, people might never recognize the standards and parameters of what was once a healthy ecosystem. In sum, the archives of literary and cultural studies contain an environmental memory that proves global climate change. Besides, Lemenager and Foote (2012) add that humanists take part in critical realism by either critiquing or creating narratives counter to those spread by the media, considering that one of the goals of critical realism is to uncover the realities that usually are not visible. As for imagination, Lemenager and Foote (2012) claim that it encourages communities to visualize the world otherwise, and they give the example of the literary genres like novels or poems that help to expand the horizons of imagination. Lastly, it should be noted that Lemenager and Foote (2012) created a new term called “sustainable humanities” so as to imply the presence of compatibility between sustainability and the humanities.

In the same way that the talk of Lemenager and Foote (2012) is directed to humanists, Palsson et al. (2013) is also oriented toward practitioners in the field of humanities, in its own way. Palsson et al. (2013) urge and encourage humanists and social scientists to become more involved in one of the most pressing challenges of our time i.e., overcoming the planetary crisis. In this regard, Palsson et al. (2013) explain why those scholarly communities need to contribute, and how they can contribute. Concerning the reasons, Palsson et al. (2013) list that what is environmental is also social. Indeed, the environmental circumstances in which we live today are the result of human activity. Human impact is a strong driver of global environmental change; it even marks a new epoch called ‘the Anthropocene’. The Anthropocene is a new age that raises new research questions and requires new ways to approach them. For Palsson et al. (2013), humanities and social sciences are among the new ways to approach

environmental crisis because they have the potential to create a radical change in human behavior. Humanities and social sciences have the tools to modify the belief in 'human mastery over nature'. These fields can help to establish awareness, as well as values of responsibility, respect and humbleness toward other geological agents. Aside from why they have to contribute, Palsson et al. (2013) present two recommendations on how they can do so. Firstly, they propose that scholars in humanities and social sciences work together with movements from the global South in order to develop ways that ensure that global inequalities are not reproduced. Secondly, they recommend that humanities scholars and social scientists need to analyze emerging societies (i.e., emerging societies stand for future societies in the Anthropocene epoch) in order to determine how they will differ from both the past societies and the present capitalist societies, and in what ways they will vary in their culture, social institutions, morals, duties, and criteria of success. Indeed, Palsson et al. (2013) argue that societies have changed dramatically over time; so, it is likely that this will be applicable to future societies too.

As for DeLoughrey et al. (2015), they edited an influential book titled *Global ecologies and the environmental humanities: Postcolonial approaches* in which they argue for the significance of postcolonial environmental humanities. First, applying postcolonial approaches to environmental humanities helps in the clarification of the power relations that underlie the environmental issues. On the one hand, there are historical power relations. These include histories of colonialism, imperialism, dominance, marginalization, and resource exploitation. On the other hand, there are contemporary power relations like capitalism, globalization, and forced climate migration. In general, both types of power relations are essential to understand environmental decision-making and environmental practices at local and global levels. Second, postcolonial methods offer the possibility to imagine ecological recuperation through the use of anti-colonial politics. Third, implementing postcolonial theory into environmental humanities will create richness and diversity of perspectives. Indeed, postcolonial theory draws from cultural resources, feminism, environmental justice, political economy, etc. In their defense of the humanities, Holm et al. (2015) launched a project titled *Humanities for the Environment (HfE)* based on the argument that human preferences, practices, actions, values, ethics, belief systems, assumptions, opinions, human agency, the relationship with the natural environment, perceptions and motivations are key factors in global environmental change. Accordingly, a closer look into the situation reveals that the issue will necessitate promoting pro-environmental behaviors. That is to say, what is required is a transformation in behavior. In connection to this point, Holm et al. (2015) indicate that humanities offer largely rich untapped resources of information about the driving forces behind climate change. And, having a deeper understanding of those factors will lead to transformational behavior. Moreover, insights provided by the humanities operate at the individual, institutional, and social levels.

According to Neimanis et al. (2015), there are three problems that frame our relation to the environment, and that only environmental humanities can address. These are the problem of intangibility and alienation; the problem of a dominant technocratic approach in a post-political situation; and the problem of negative framing. For the first one, Neimanis et al. point out that the intangibility of environmental phenomena by human beings is due to differences in scales. In other words, because humans organize their practices around a time scale that corresponds to their lifespan and a scale that corresponds to their human dimensions, they can find it difficult to identify with and

relate to environmental issues that are at other scales (e.g., the prolonged period of climate change, the long interval of time between the causes and the manifestation of observable effects, the very small size of microplastics in water bodies, and the invisibility of toxic pollutants). In addition, the issue of intangibility-i.e., the inability to literally grasp or feel the phenomena— can take another form. It can be a matter of degree. That is to say, for some people, environmental concerns are less tangible; for others, environmental challenges are more tangible. In this regard, Neimanis et al. (2015) say that the former category includes in particular Western countries like Sweden and elsewhere where the upper-class and middle-class are relatively out of danger thanks to the popularity of technological solutions, eco-branding, green consumerism, and adequate waste management. In a nutshell, regardless of whether it is the result of differences in time scale, dimensional scale, geographical scale or social scale, intangibility gives rise to alienation, i.e., a state of detaching and isolating oneself from showing concern about environmental issues. Alienation is keeping oneself distant from the need to feel invested in environmental issues; it is a feeling of indifference translated by an absence of citizen engagement and political engagement, and a classification of environmental concerns as somebody else's problem. Nevertheless, through imagination, environmental humanities prove capable to connect humans with intangible phenomena and thus reduce the degree of alienation. For the second problem, Neimanis et al. (2015) argue that policies of countries tend to exclude anything genuinely political from their environmental discourses. For example, truly political matters of competing agendas and goals, of distributing resources, risks and damages, and of values are made invisible; these issues are framed to appear as merely a technocratic problem that needs to be effectively managed by technical experts and administrators. In sum, Neimanis et al. (2015) describe the post-political milieu as characterized by environmental management instead of politics. Nonetheless, environmental humanities come in order to bring back the questions that were disregarded by the post-political sphere, i.e., questions of power, ethics, as Rose et al. (2012) maintain "The humanities have traditionally worked with questions of meaning, value, ethics, justice, and the politics of knowledge production". For the third problem, Neimanis et al. think that negative tones of urgency are unproductive. For them, consistent apocalyptic framing can block opportunities for innovative thinking, creative problem solving, and citizen participation. So, environmental humanities can develop alternative, constructive and/or hopeful narratives to create equilibrium.

Additionally, in the introduction to a major book titled *Environmental humanities: Voices from the Anthropocene*, Oppermann and Lovino (2016) contend that "the fundamental argument, then, fueling the research in the Environmental Humanities is that the urgent environmental problems that stretch from the geological to the biological are also essentially social and cultural issues"; while we disagree with Oppermann and Lovino (2016) on the grounds that there are several arguments in support of environmental research in the humanities. Their claim that the potential of the humanities is limited to only one point seems reductionist. Other than that, Oppermann and Lovino (2016) arguments are sound, and they make a solid case for the connection between humanities and the question of environment. In fact, Oppermann and Lovino (2016) state that wounds of the natural world are social wounds too. Most notably, these wounds include anthropocentric dualistic worldviews like North/South, East/West, human/non-human, nature/culture, man/woman, and ecology/economy, which are at the root of planetary crisis. Besides these binary opposites, Oppermann and Lovino (2016)

provide other cases that can lead us Oppermann and Lovino (2016) to rethink the social in ecological terms and vice versa. For example, they mention food scarcity, water and air pollution, climate-health challenges, and energy demands. Last but not least, for Oppermann and Lovino (2016), climate change is interwoven with socio-economic and political agendas.

Moreover, another leading work that stands up for the value of humanities is *The environmental humanities: A critical introduction* by Emmett and Nye (2017). Emmett and Nye (2017) contend that the humanities are necessary to the treatment of planetary crisis, for numerous reasons. First, humanists prove themselves good at public speaking skills. In fact, humanists are capable of triggering various emotions in audiences. This point should be of benefit to environmental issues. For instance, Emmett and Nye (2017) mention that humanists have the ability to awaken empathy for endangered species and habitats. Besides, humanists can arouse a sense of awe at the resistance and complexity of ecological systems. Also, humanists are skilled enough to evoke a feeling of an urgent need to take knowledge-driven action on environmental issues. Second, the social sciences have also been affected by ideologies of political and economic nature. So, unlike the natural and social sciences which often serve governmental interests, the humanities differentiates itself by revealing the implicit narratives, the ethical problems, and the consequences of the environmental decisions taken by the government. For example, the humanities can identify the real motives that may lead a government to want to change modes of energy consumption. In another case, humanities may raise ethical questions concerning governments that intend to spray sulfur into the atmosphere so as to combat a climate emergency. Third, the humanities got recently equipped with a field named environmental humanities. The emergence of the environmental humanities is crucial in many ways. In the first place, the new field translates an open-minded approach toward disciplines. Environmental humanities tear down the walls established across departments of humanities. In relation to this, Emmett and Nye (2017) argue that the adoption of the old-style humanities, where each discipline focuses on narrowly defined concerns, seems to be irresponsible and would not help in the confrontation of planetary crisis. Instead, the historian should engage with philosophy, the philosopher has to deal with anthropology, and so on and so forth. In the second place, the environmental humanities use methodologies that are relevant to real life (e.g., semi-structured interviews, visual ethnography, and storytelling). In the third place, environmental humanities have been sculpted by postcolonial studies. And, postcolonial contexts provide important insights into complex environmental issues. A case that shows the value of postcolonial understandings is the idea that first-world countries export their waste to third-world countries. Another typical case is of the white, male, European colonizers who believed that human beings are exceptional. As a result, they thought themselves as standing outside of nature and that they could control it. This assumption was based on the belief that nature is passive and feminized. So, for them, in the same way they are superior to women, they are superior to nature.

The role of emerging tracks in humanities

After providing an overview that demonstrated the potential of 'traditional' humanities and 'environmental humanities', we move to cite the references that mention striking recent emerging directions together with their importance and what they can add to the discussion around planetary crisis. As a starting point, humanities have generated a new lively discussion concerned with water; this turn has been given

various names. For example Mentz (2009) uses the term ‘maritime humanities’ and states that maritime humanities draw upon several elements like globalization, postcolonialism, environmentalism, ecocriticism, the history of science and technology, and Atlantic history. Yet, the thrust of his paper is that “the contribution of Anglophone literary scholars has thus far lagged somewhere behind other fields in the maritime humanities”. So, as a reaction, Mentz coins the term blue cultural studies. Otherwise, names synonymous to maritime humanities include the blue humanities (Alaimo, 2019) and hydrohumanities (De Wolff et al., 2022).

Apart from the water turn in humanities, Hussain and Riede (2020) introduce the term paleoenvironmental humanities (pEH), its objectives, and its significance. According to Hussain and Riede (2020), the objective of paleoenvironmental humanities is to tackle human-climate relationships from a “deep time” perspective. Deep time is a concept that was originally coined by 18th C geologist James Hutton in order to argue that Earth was a lot older than 6000 years (what most people thought back at the time). Nowadays, deep time refers to geological epochs with lengths of time that go beyond imagination, and beyond human scale. In other words, with the concept of deep time, numbers lose their value. In other words, the paleoenvironmental humanities seek to explore past human-climate intersections based on deep time archeological records. In particular, Hussain and Riede investigate the potential of pEH by making use of insights from Pleistocene (a.k.a., Ice Age) archeology. Yet, most importantly, “while rooted in archeology, the pEH perspective aspires to be more than environmental archeology”; the pEH aims to align archeology with the concerns of environmental humanities. As for its benefits, paleoenvironmental humanities have many. First, the pEH will help in the recuperation of the long-lost human-climate narratives. Consequently, our ancestral past of human-climate interactions will be reimaged in new ways. However, what is of utmost importance is that this re-imagination and this reconstruction of fragments from deep time will be based on strong theoretical evidence.

Second, Hussain and Riede (2020) argue how effectiveness and sustainability of ecological futures depend heavily on our knowledge and our understanding of past human-climate relations. In this regard, Hussain and Riede extend their argument by claiming that the paleoenvironmental humanities have the tools to demonstrate that while the distant past inspires us and tells us that there can be hope concerning the future of our planet Earth, the deep time also teaches us that we should be cautious about the way we treat our environment because the archeological evidence for vulnerability and failure is found. For example, Pleistocene archeology represents a dark mirror of deep historical human-climate experiences. Indeed, the dark side of the Pleistocene era is illustrated by the Last Glacial Maximum (LGM) period which was characterized by severe climate cooling. Besides, Pleistocene is the age when the Neanderthals lived. Neanderthals (a.k.a., *Homo neanderthalensis*) are an extinct species of human beings. Neanderthals lived during the Ice Age. Neanderthals whose typical remarkable physical characteristics of big forehead and brow ridges are thought to have come as a result of trying to cope with the radical climate shift. Therefore, ecological artefacts (ecofacts or biofacts) from Pleistocene epoch will help to moderate and/or reduce the overly optimistic future imaginaries. In a word, despite the fact that the insights and the knowledge of the paleoenvironmental humanities are about the past, the genre has future implications too; the long-term scale of the deep past gives us potential clues about the deep future. Third, the paleoenvironmental humanities knowledge

comes to correct contemporary ideas and behavior. On the one hand, the pEH rectify the misconception that the Anthropocene is an unprecedented age, and the misbelief that humanity is witnessing an unparalleled climate shift in the age of the Anthropocene. Clearly, the environmental challenges of the Pleistocene era surpass the modern-day global change. Yet, those misjudgments are based on ahistorical or shallow-time perspectives. So, the deep time perspective of the paleoenvironmental humanities comes to fix this. On the other hand, the function of warning of the paleoenvironmental humanities aims at the modification of people's behaviors. For example, the hard weather of the Pleistocene reminds us of the need to stick to our engagements toward the climate.

Also, the long-vanished Neanderthals push us to re-think our contemporary relations to the environment before the current species of human beings becomes extinct too. In a nutshell, implications of paleoenvironmental humanities are not limited to the past; the insights are applicable to the past, the future, and the present. In other words, the paleoenvironmental humanities open up a new comparative ground for the examination of human-climate relationships across different temporalities through tools of interpretation and reflexivity. Fourth, Hussain and Riede (2020) state that the multidisciplinary feature of the paleoenvironmental humanities is another added value. The pEH connect paleoarcheology, and environmental humanities. Besides, archeology in itself has a unique position in academia because it works at the interface of humanities and science. Indeed, even if archeology is classified as a discipline in humanities, it draws on scientific methods (for example, in the extraction of data). However, most importantly, at least in our opinion, is that "in relabeling a politically and narratively conscious environmental archeology as paleoenvironmental humanities", archeology is viewed more as a discipline that belongs to the humanities. Moreover, by coining a new term called eco-critical archeology [a term that we personally liked], Hussain and Riede make archeology look as if it is more aligned with the specific characteristics of humanities. Also, we liked how Hussain and Riede (2020) framed archeology as the one in need of humanities. For example, Hussain and Riede (2020) write that the paleoenvironmental humanities is a field that presents a new opportunity for archeologists by supplying them with new arguments through which they can contribute to the climate cause. In this regard, Hussain and Riede (2020) explain that much of the human-environment relations are only accessible archeologically; yet, before the dawn of the paleoenvironmental humanities, archeology used to be peripheral not only in the environmental turn of the humanities but also in major works of environmental studies in general.

A third emerging trajectory concerns the medical-environmental humanities, a term formulated by Slovic et al. (2022). The medical-environmental humanities come as a result of combining the medical humanities with the environmental humanities. Slovic et al. (2022) explain the rationale and the significance of the notion. First, Slovic et al. (2022) clarify that much of the work on *The Bloomsbury handbook to the medical-environmental humanities* has taken place during the lockdown. To shed light on this point, in the pandemic, journalists have noted that the COV-19 may be healing the Earth. That is to say, the COV-19 period represented an opportunity of "anthropause" (a term coined by Rutz et al. (2020) in the mid of COV-19) for the planet Earth to heal and rest to some extent, at least for a little while. Indeed, Earth that used to be healthy, pure, and unspoiled has witnessed environmental deterioration due to human activity. Luckily, the arrival of the virus provided the planet with a margin to breathe by

reducing our carbon footprint. So, medical-environmental humanities are significant because they deal with the impact of human beings on the health of the environment. Second, Slovic et al. (2022) admit that the lives of blue-collar workers especially migrants and/or the poor are the most exposed to health effects. Moreover, those who live near industrial locations, or in the direction in which the wind is blowing or in which the river is flowing are most vulnerable to disability or illness. Besides the physical aspect of contamination, climate change has mental health implications too such as anxiety. So, medical-environmental humanities are significant because they tackle the impact of environmental degradation on the health of the humans. Third, Slovic et al. (2022) came to realize that there is no human health and environmental health; there is only health. In other words, human health and environmental health do not exist as separate entities; they are intersecting. Fourth, from our perspective, we liked the way in which the medical side is tackled. We liked how Slovic et al. (2022) framed what is medical without referring to science. Medical-environmental humanities by Slovic et al. (2022) break the normalized association between the medical field and science. And here, between parentheses, we would like to provide a typical case that confirms that not everything medical is related to science. The example is: sometimes, when we go to some doctors, we feel that they do not have good communication skills by their excessive use of complicated scientific terms and by their lack of humanistic ways of talking.

Moreover, numerous other recent developments in the environmental humanities are reported by Hubbell and Ryan (2022). For instance, Hubbell and Ryan (2022) cite the wetland humanities, Asian environmental humanities, emergency humanities, energy humanities, human-animal studies, human-plant studies and the Arctic and Antarctic humanities. For the sake of clarity, the wetland humanities are concerned with the study of wetlands like lakes, ponds, swamps and marshes, and how these spaces are culturally significant (e.g., the way wetlands are perceived to be sources of disease). Also, the Asian environmental humanities, with their focus on regional characteristics of environmental issues, are distinct from the West (i.e., North America, the UK, and Australia) where environmental humanities first emerged. Additionally, emergency humanities deal with urgent catastrophic climate events including wildfires, droughts, floods, and the extinction of species. Moreover, energy humanities examine energy (in both its forms renewable and non-renewable) and its links with institutions, power, everyday use, etc. Furthermore, human-animal studies (HAS) (a.k.a., anthrozoology) address issues such as the ethics of meat consumption, and the recent interest in the study of the mammal the Malayan pangolin due to its potential role in spreading COVID-19. In addition to HAS, there is the field of human-plant studies (HPS) that investigates people-plant relationships such as the way people perceive plants in terms of their utility (e.g., for food, medical use, decoration) and how people tend to ignore plants as intelligent conscious beings that experience pain and refuse to be manipulated through genetic engineering. Lastly, Arctic and Antarctic humanities (Sörlin, 2015), Roberts et al. (2016) rise to counter the view that the Arctic and Antarctica are merely places for scientific endeavors (e.g., a place to collect ice data, climate data, and to get scientific measures), and seek to explore the narratives of indigenous people inhabiting the Arctic and Antarctic poles. Examples of these indigenous people include Eskimos, Chukchi, Nenets, Evenks, etc.

Challenges to environmental humanities

Even if the humanities, both traditional and emerging directions, are relevant and significant to the treatment of environmental degradation, there are many challenges. There are external challenges; i.e., challenges that are not related to the internal structure of humanities itself and that are beyond the control of humanities. First, some researchers do not believe in the self-efficacy and self-efficiency of humanities. They believe that the success of humanities in treating environmental problems will heavily depend on and be determined by collaboration with the sciences. For example, Castree (2014) believes that humanists should make their work relative to the STEM fields in a time where humanities are experiencing budgetary cuts. Specifically, Castree argues that environmental humanists should engage with geoscientists. Castree also briefly refers to the need to engage with social scientists. Aside from Castree, a claim by Heise (2017) asserts that “Most environmental humanists continue to rate the collaboration with scientists as indispensable”. Last but not least, Alaimo (2019) thinks that “while science studies has been vital for the environmental (green) humanities, it is even more essential for the development of the blue humanities, since most aquatic zones, species, and topics exist beyond human domains, requiring the mediation of science and technology”. For researchers like Alaimo (2019), Heise (2017) and Castree (2014), this is their personal opinion. It is an exterior factor over which humanities can do nothing.

Second, researchers in the humanities who would like to carry out collaboration with scientists, to support a humanities view of how to curb environmental degradation and to be more convincing, face challenges. Holm et al. (2013) argue that good examples of teamwork between science and the humanities are very rare. According to Holm et al. (2013), the barrier is that the present platform is not fit for carrying out proper collaboration. Holm et al. (2013) state that cooperation in the present situation is based on inequalities between the involved fields, i.e., in which sciences are dominant, ruling, and hold more privilege, whereas the humanities are taken advantage of or are neglected and not integrated right from day one (e.g., by not giving them the right to participate in the formulation of research questions). In the same way Holm et al. (2013) contend that there are many obstacles that make the current situation inadequate for implementing proper collaboration between the humanities and sciences, Hussain and Riede (2020) also acknowledge the presence of challenges in terms of collaboration. Hussain and Riede (2020) report that “The key challenge, especially pertinent for archaeologies of deep past and human origins, is to acknowledge that the humanities have much to offer in framing and resolving long-standing ecologies questions and that these questions cannot be adequately addressed simply by rectifying chronologies”. So, the first challenge for humanities scholars is to get validation from scientists; this reflects superiority of one field over the other and inequalities among the involved fields. Moreover, Hussain and Riede (2020) report that “For this project [referring to the paleoenvironmental humanities] to succeed, we must arguably grant rigorous but interdisciplinary epistemological exploration more space in the research landscape, as the coordination of scientific and humanistic observations and perspectives is not simply a pragmatic problem but requires exercised (and taught) awareness, intellectual diligences, and mutual respect”. That being said, the second challenge is the need of consistent exercise of collaboration. And, the third challenge is to reach a level of ‘MUTUAL RESPECT’. Indeed, the humanities suffer from underrating. To explain this point, Lemenager and Foote (2012) state that humanities are suffering from (“a slow violence”, to borrow Rob Nixon’s term”). Furthermore, Palsson et al. (2013) mention that funding agencies in science still belittle the potential value of humanities and social

sciences in solving environmental degradation. Said underestimation is confirmed through the writing style of Castree (2014) by claiming that “They [geoscientists] also offer environmental humanists a rare opportunity to operate on a global stage”. Indeed, in this regard, Holm et al. (2015) point out that scientists tend to lower the status of the humanities; they tend to consider the humanities to be secondary, advisory, and non-essential. In sum, the present platform is not fit to carry out healthy non-toxic collaboration. This is another exterior challenge to humanities scholars who respect the value of sciences, but whose respect is unfortunately not reciprocate.

And, there are internal challenges. The literature cites a list of characteristics and features that come from within the humanities and humanities scholars, and that constitute obstacles that handicap and slow down their progress. And, for us, whereas we agree with some of the inherent limitations, we do not approve of other ones. On the one hand, we agree with Palsson et al. (2013) who believe that it is a big challenge for humanities to make people understand that the environment is a social category too although we believe that it is feasible. Additionally, DeLoughrey et al. (2015) write about a limitation that used to impede the work of humanities, but which the humanities are fixing fortunately. In this regard, DeLoughrey et al. write “Certainly the humanities and social sciences have been charged with anthropocentrism; recent work in animal studies, posthumanism, multispecies ethnographies ... have done much to correct that history”. Another critique that can be addressed to the humanities is well articulated and well responded to by Emmett and Nye (2017); they say that “because of its wide range, the field of environmental humanities is difficult to pin down, and it has different profiles depending on the scholarly strengths at the institutions where it has emerged ... With such differences between research groups, the field might appear incoherent, but it is more accurate to say that it is evolving rapidly”.

On the other hand, we disagree with factors that put the blame on humanities/humanists. For instance, we do not appreciate the way Sörlin (2012) comments that “..., and for half a century, there were few humanities scholars at the top levels of environmental science planning and as policy advisers. They themselves commonly accepted the outsider role”. In fact, it seems to us that the comment of Sörlin (2012) is a value judgement. So, we do not know whether the outsider role is accepted indeed or if it was imposed. Also, we disagree with Palsson et al. (2013) who put much pressure on the shoulders of humanities. The way Palsson et al. (2013) see it is that much depends on the ability of humanists and social scientists to prove their creative thinking in the environmental domain; much depends on them to come up with not only the intellectual and the social rationales for the investment that is required by the funding agencies in science, but also agendas for long-term research plans and programs to give themselves evidence. Likewise, we disagree with Castree (2014) who blames it on the humanities by stating that the traditional role of ‘deconstructor-critic’ is what keeps environmental humanists at a distance from geoscientists. Actually, critique is important and constructive; critique is also a strong feature that characterizes the humanities. Apart from that, we disapprove of the tone of Holm et al. (2015) concerning a point. For them, the record of humanities concerning turning insights into practical impact is not impressive: most of the time, humanists do not translate their work into political advice, they do not work jointly with businesses, and they do not move beyond the context of academia; so, their work does not receive proper recognition for being of practical use. Reflecting on what Holm et al. (2015) wrote, it seems to us that the authors are probably ignorant of the presence of the notion of public humanities whose

mission is to take humanities beyond the world of academia, and to bring scholars of humanities into contact with state agencies, NGOs, and the like. And anyway, we think the effort should come from both parties. That is to say, supposing that the record of public humanities is not impressive, the blame should also be addressed to the other side. In fact, it is also the responsibility of the state, businesses, and civil society to reach out for the knowledge and insights of the humanities, especially taking into account the unlimited number of advantages that humanities can offer.

Yet, most importantly, in spite of the presence of factors impeding the progress of humanities in the field of environmental studies [and regardless of whether we agree or disagree with those factors], there is hope. For instance, according to Bergthaller et al. (2014), “natural scientists have begun to acknowledge that an understanding of the environmental crisis must include insights from the humanities and social sciences.” [Although we are not waiting for the acknowledgment of scientists, but it is a good sign. And anyway, if they admit this reality, it is for their own good]. Besides, Emmett and Nye (2017) predict that “Ten years from now, the environmental humanities will likely be present in most universities. This prediction is based on the fact that the institutions with such programs are among the world’s elite. ... Financial support that once was episodic and haphazard has become more systematic”.

Conclusion

To conclude, the article tackled two main points. Firstly, we tried to answer the first research question of why it is necessary to adopt the perspective of humanities in dealing with environmental deterioration. In order to reach this goal, we devoted two sections, i.e., (1) the role of classical and environmental humanities, (2) the role of emerging tracks in humanities. Each of the works cited contributed tremendously to advance our argument. Indeed, unlike science that has many shortcomings, humanities are well-equipped to transform the behavior of humans who are the main drivers behind global change in the Anthropocene, taking into account that what is environmental is also social and vice versa. Among the tools of human sciences, there is classical humanities, environmental humanities, the new emergent tracks in humanities, critique, imagination, the postcolonial method, public speaking skills, and so on and so forth.

Secondly, we tried to answer the second research question concerning the obstacles that humanities face when addressing environmental degradation through section (3). In this regard, we identified two types of challenges: extrinsic and intrinsic. But, we finished by arguing that even if there are factors that slow down the progress of humanities in the field of environmental studies [and regardless of whether we agree or disagree with the factors cited in the literature], there is hope.

Acknowledgement

This article is sponsored by the organization of CNRST in Morocco (Centre National de Recherche Scientifique et Technique) (a.k.a., National Center of Scientific and Technical Research). My thanks go to my supervisor Dr. Touaf as well as to Dr. Boutkhal for their endless support, their valuable directions and clarifications on how to publish a paper in a journal. My thanks also go to the esteemed panel of anonymous reviewers for taking the time and the effort to consider this paper in the Quantum Journal of Social Sciences and Humanities.

Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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