



TEACHING ECOCRITICISM AND THE GLOBAL SOUTH.  
A VIEW OF LATIN AMERICAN ENVIRONMENTAL THINKING THROUGH THE  
ENVIRONMENTAL HUMANITIES

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# Teaching Ecocriticism and the Global South. A View of Latin American Environmental Thinking Through the Environmental Humanities

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## ABSTRACT

Modern environmental scholarship has been shaped largely by a rational approach to natural sciences, rooted in Cartesian principles. This universal and theory-centered criterion has often come into conflict with alternative world-views, generating tensions to the detriment of local communities. This article looks at ways in which the environmental humanities reconcile these tensions, while contributing to discussions about sustainability, enabling a transdisciplinary approach to environmental scholarship and stewardship. Ecocriticism, which had been traditionally understood as the dialectics of culture and nature, provides an analytical framework to look into the complex nature of environmental problems by drawing out the wisdom and insights of a wealth of creative works across diverse cultural landscapes. When this outlook is coupled with a Global South perspective, which sees environmental issues as fundamentally *eco-social*, it raises questions of justice and equity that make cultural and ethnic diversity inherent to discussions about environment and representation.

This analysis draws from over 10 years of research on pedagogical approaches to sustainability and recent experiences from students in environmental humanities courses focused on Latin America. Teaching environmental humanities becomes an opportunity to view the concept of sustainability as a cultural project that engages with many of the enduring “big questions” of what it means to be human on this planet. As a result, environmental ethics becomes an entry point to discussions about some of the big questions of the present and the outlook for the future, and sees social and intellectual tensions about the environment as symptomatic of a broader crisis of modernity, a crisis of modern thought.

KEY WORDS: environmental humanities; sustainability, ecocriticism, environmental ethics, Latin America, *Minimum Monument*

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1 Maria Alessandra Woolson Ph.D. grew up in Argentina, and received formal education in both the Natural Sciences and the Humanities. She also studied and worked in Europe and North America, where she completed her doctoral work, and presently teaches at the University of Vermont, in the USA. Through these experiences she has cultivated a dynamic and systemic view of interconnected natural and human processes. In her teaching, she brings together these worldviews of science and humanities, framed by sustainability as a paradigm for interdisciplinary studies, in the context of Latin America. Her most recent publications include “From Management to Governance” published in *The Politics of Fresh Water*, Routledge; “The Melting of Humankind”, published by *ReVista*; and “The Gift of a Different Gaze”, published by RCEI, Spain. Her current research focuses on performance of place and culture, employing biocultural diversity as an empirical approach to the study of identity and conservation..

## RESUMEN

El conocimiento ambiental moderno ha sido ampliamente abordado desde un enfoque racional propio de las ciencias naturales, arraigado a principios cartesianos. A su vez, este criterio universal y teórico, entra frecuentemente en conflicto con cosmologías alternativas, generando tensiones en detrimento de comunidades locales. Este artículo analiza las maneras en que las humanidades ambientales reconcilian tales tensiones, y contribuyen a las discusiones sobre sustentabilidad, permitiendo además un enfoque transdisciplinario sobre el conocimiento ambiental y la protección del medioambiente. La ecocrítica, tradicionalmente concebida como un análisis de la dialéctica cultura-naturaleza, proporciona un marco crítico analítico que ofrece una mirada a la complejidad de los problemas ambientales, dado que responde críticamente a una gran cantidad de obras creativas de diversos contextos culturales que se enfocan en el binomio hombre-naturaleza. Cuando este enfoque se combina con una perspectiva desde el Sur, que considera las cuestiones ambientales como fundamentalmente *eco-sociales*, se entra dentro del marco de la justicia ambiental que involucra la diversidad cultural y étnica como temas inherentes a todo análisis sobre medioambiente y representación.

Este análisis se sitúa en el marco de la educación universitaria, y en las experiencias recopiladas durante más de 10 años de investigación en pedagogía para la sustentabilidad y en cursos recientes sobre ecocrítica y humanidades ambientales en América latina. La enseñanza de las humanidades ambientales o eco-humanidades se convierte así en una oportunidad para abordar el concepto de sostenibilidad como proyecto cultural relacionado a las “grandes preguntas” que perduran sobre lo que significa ser un ser humano en este planeta. Como resultado, la ética ambiental se convierte en el punto de acceso a muchas de las grandes preguntas de hoy y se observa como las mencionadas tensiones sociales e intelectuales sobre el medioambiente resultan ser sintomáticas de una crisis más amplia: una crisis del pensamiento moderno.

PALABRAS CLAVE: humanidades ambientales, sustentabilidad; ecocrítica, ética ambiental, América Latina, *Minimum Monument*

## INTRODUCTION

In April 2018 Alicia Bárcena Ibarra, Executive Secretary of the United Nations Economic Commission for Latin America (ECLAC/CEPAL), opened a 4-day regional meeting at the Commissions’ headquarters in Santiago de Chile, capturing her audience’s attention by highlighting the essential role of culture in building a sustainable future. This was the second CEPAL meeting that sought to achieve an integrated approach for engaging the UN 2030 Sustainable Development Agenda, and delegates had gathered to discuss how a regional policy could emerge under the framework of the 2015 Sustainable Development Goals<sup>2</sup>. In the context of a forum that traditionally focuses on ways to foster economic cooperation, the executive secretary’s opening statement was particularly significant:

What we need is an urgent commitment to end the culture of privilege; that culture of privilege that naturalizes inequality. The 2030 agenda is not a numerical or technical agenda, but rather a political one. (Alicia Bárcena Ibarra)

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<sup>2</sup> The 2015 Sustainable Development Goals (SDGs) outline the objectives that underpin the United Nations 2030 Sustainable Development Agenda. They have been conceived as a set of common guidelines towards policy change and strengthening of regional agreements. They represent an inspiring and inclusive framework for international collective action over the next twelve years, and are widely seen as an important improvement over the Millennium Development Goals (MDGs) that preceded them and expired in 2015.

In this statement, the Harvard-educated biologist from Mexico spoke directly to issues of values and ethics, and channeled participants' attention to the kind of political discussions necessary for advancing a sustainability agenda. She concluded her remarks by citing Chilean writer Gabriela Mistral's *El grito*, a piece that celebrates the uniqueness of the continent, its cultures and opportunities, "¡América y sólo América! ¡Qué embriaguez semejante futuro, qué hermosura, qué reinado vasto para la libertad y las excelencias mayores!" (Mistral). In this way, Bárcenas chose to engage the power of the poetic for tackling the challenges of a complex and far-reaching UN Agenda.

This article looks at ways in which the environmental humanities can contribute to discussions about sustaining life and the quality of life on this planet, through interconnected environments and human communities. Our task here follows the example of Alicia Bárcena, by directly speaking to the role that human beliefs, values, and fears play in shaping human institutions and practical wisdom. This is the work of humanists. In that context, ecocriticism provides a necessary and critical framework that offers a window onto the complex nature of environmental problems by engaging and drawing out the wisdom and insights of a wealth of creative works across diverse cultural landscapes. This analysis draws from over 10 years of research on pedagogical approaches to sustainability and teaching courses in the environmental humanities, also known as eco-humanities, focused on Latin America (Woolson 2013).

Ecocriticism examines paradoxical aspects of human-environment interactions in literary and artistic representations. As a humanistic critical lens, it enables classroom discussions about the environment to be tackled from within their systemic complexity. When this ecocritical lens is further coupled with a Latin American viewpoint that contextualizing environmental issues as fundamentally eco-social, it raises questions of environmental justice and social equity that are often connected to local and indigenous communities, their rights to their land and traditions, and to self-representation. Cultural and ethnic diversity then become topics inherent to an analysis of problems related to the environment and its representation in the region, and serve as effective entry points to discussions on sustainability in the twenty-first century. Ultimately, this approach seeks to facilitate

reflective practices that can enable an ethics of sustainability, by exploring the nuances of how humans relate to their environments and to each other.

Why an ethics of sustainability? At the end of the twentieth century, the underlying assumptions about what sustainable development consists in, as conceived by the wealthiest nations, have been called upon for the continued advancement of free trade and privatization in the name of development, and a growth rooted within asymmetrical power relationships (Sachs 1999, 2010; Leff 2002, 2010). While sustainability emerged as an alternative to sustainable development, one which still addresses the intergenerational responsibilities concerned with equity and the integrity of the Earth's systems, it is also deeply concerned with its ethical obligation, of an ethics for the public good (Kelly 2009; Leff 2012; Woolson 2015). Sustainability ethics are therefore an ethics of the present, an ethics in favor of life, and an ethics that sits at the core of today's complex global challenges. As understood by a group of international environmental scholars, who gathered in Sao Paulo for the 13<sup>th</sup> Forum of Ministers of Environment from Latin America almost two decades ago, an ethics for sustainability is "an ethic of knowledge and dialogue among all fields of knowledge, an ethic for global citizenship, an ethic of global governance and participatory democracy, of peace and dialogue for resolving problems, of rights, justice and democracy for the commons and the common good" (Manifesto for Life).

These systemic and eco-social challenges encompass an urgent set of issues, such as climate change, that require institutions to deepen their commitments to catalyzing equally systemic responses to both local and regional problems. Institutions of higher education therefore play a key role in facilitating responses to these problems and advancing a plurality of knowledge and wisdom by ensuring that diverse perspectives are valued and included in all aspects of its work. For such an integrated vision to be realized within our current education systems, students must develop skills and competencies for working across boundaries and differences, ranging from diverse disciplines and methods, to identities and cultures, and other ways of knowing the world. While many of these skills are pursued by the sciences and social sciences, others will come from humanistic perspectives, from community and practitioner experiences including those emanating from non-Western

cosmologies—in sum, from perspectives that in environmental studies have often been overlooked in favor of a more technical focus that claims rationality as its guide. Sustainability therefore becomes a paradigm for interdisciplinary and transdisciplinary interactions; a cultural project that engages with many of the enduring “big questions” about what it means to be human on this planet. As a result, reflective thinking about an ethics of environment is also an ethics of care, an ethical caring for the Earth and for each other, in which social and intellectual tensions around society and environment can be seen as symptomatic of a broader crisis of our times, a crisis of modern knowledge.

#### SUSTAINABILITY AS A FRAMEWORK FOR PEDAGOGY. A VIEW FROM THE GLOBAL SOUTH

Sustainability education has evolved into several accepted practices over the past three decades. These practices include an approach that seeks to frame problems systemically, and draws knowledge from experiences, and values perspectives from diverse contexts and collaborations (Gadotti). Interdisciplinarity has also gained support by incorporating transdisciplinary perspectives into curricula, through contextual framing of theories and empirical evidence with the broader aim of addressing real-life issues (Reid et al.). Notwithstanding such developments, the question of what it means to engage students to reach these interdisciplinary goals remains a frequent challenge. As explained a few years ago by sustainability science scholar Gilberto Gallopín,

the world is already integrated, today more than ever. It is we who are persistent in fragmenting it because we have been taught to think in parts. Our formal education conspires against an integrated human perception, but without the latter, there will never be integral management. (Gallopín)

This “thinking in parts” represents a significant challenge, but also an exceptional opportunity for developing an educational framework of sustainability. Sustainability’s inclusive nature is at odds with the dominant epistemological disciplinary organization of knowledge in higher education, yet its transdisciplinary outlook recognizes the critical importance of interactions across broader domains of knowledge to address present-day problems. What does it mean to empower a

generation of students whose education and training often appears fragmented and diachronically connected to the world we live in? What does it mean to inspire the intellectual courage required to envision questions and answers to the problems of tomorrow with roots in the present? The issue, in many cases, is the strategy to which sustainability education often defaults, which has been dominated by content, or by content areas and methods; but sustainability is much more than a reorganizing of content and methods in an environmental curriculum and related fields. Sustainability is also a powerful pedagogical principle empowering students to become agents of their own learning.

For the humanities, pedagogical practices involve frequent reflective exercise that require safe spaces of conversation in which one's own vulnerability can be collectively and safely shared. The humanities provide vital insights into understanding human practice. They enable deep readings of texts and signs that, through interpretation, allow us to make sense of cultural practices. In particular, environmental humanities identify the epistemological nature of human-environment relationships in order to focus on the human aspects of these interactions, and deepen our understanding of the human dimension of a particular problem. For example, teaching the 2010 historic novel *Dream of the Celt*, by Mario Vargas Llosa, allows me to address matters of sexuality, gender and ethnicity, in parallel to the geopolitics of extraction, by creating a dialogue between the novel and assigned secondary readings that reveal the coded nature of nonfictional information within the text. In conjunction with the novel, I show students archival photographs in order to deepen their understanding of the socioecological transformation of the Putumayo region at the hands of rubber corporate interests of early twentieth century. These archival images facilitate an emotional connection to our common humanity with the Huitotos, Boras, Muinanes, and Andoques tribes. In turn, this connection gives rise to an empathetic understanding of the region's transformation and the decimation of a people over a very short period of time. Here, ecological change ensuing from rubber extraction is blurred by human cruelty of the atrocities committed to these indigenous populations, and the historic images and secondary readings provide a space for students to grasp some of the complexities of the topic which can later be addressed in depth

through a specific disciplinary frames. This approach to a subject enables a study that is both disciplinary and transdisciplinary.

The environmental humanities also provides a valuable network of information for exploring the boundaries and limitations of natural sciences as the sole valid prism for interpreting environmental problems. As the root causes of these problems are typically social and cultural in nature, addressing them requires equally social and cultural responses. Thus, the environmental humanities present an opportunity for revitalizing the debate within universities on what a twenty-first century education should be, particularly regarding sustainability, and address not only the technical challenges raised in this debate but its epistemological aspects as well. Pedagogically, a sustainability approach provides a platform for the bridging of disciplines and divergent cognitive and cosmological areas, in order to approach problems systemically. Pedagogy encompasses all habits of thought, reading, writing, and speaking that exist beneath the surface of skills and meaning advanced in teaching (Shor). It studies the know-how of education itself. It gives substance to principles and teaching actions (UNAM), shaping the means of engagement that allow faculty to build a learner-centered experience, meeting students where they already are, so they can build upon their previous knowledge. The humanities are often an expression of chaotic complexity. Under a pedagogy conceived for sustainability, such expressions can stimulate a process of empathy towards other forms of knowledge. As part of the learning process, humanities validate rational and sensory experiences and bring an emotional proximity to the topic under study. Translating that emotional quality into productive discussions of the systemic complexities of a given problem is, thus, a matter of pedagogy.

In particular, a pedagogy that treats the critical frame of ecocriticism as an open question for reading twenty-first-century artistic and literary works from Latin America, has helped many of my students discover alternative perspectives for exploring the transnational repercussions of geopolitics and related socio-ecological problems. Through creative works such as literary texts and other art forms, students manage to grasp the complex nature of problems, which can later be contextualized with secondary readings from various disciplines. Course outcomes often span



the various interests students bring to class and their critical understanding is expressed in a breath of different forms. For example, in discussing the concept of nature, one of my students chose to critically engage the subject by writing a poem. Voicing a generational search for optimism, she ironically argued that our modern environmental crisis will hopefully turn out to be “a phase” after all.

Turns Out it was a Phase After All<sup>3</sup>

I like to think of this as what might just be the tail end  
Of our long and rebellious adolescence.  
As a teenager storms out the front door  
And works tirelessly to distance herself from the ones who raised her,  
So have we pushed ourselves away from  
(If you'll pardon the cliché)  
Mother Nature.  
Somewhere in the Enlightenment,  
We scribbled veiled epithets in our diary  
We turned fifteen and cast her aside.  
We smoked until the air turned black  
We stayed up later and later  
Until the lights in our windows puzzled the birds  
And blocked our view of the stars.

But now, we spend enormous sums of time  
Sums of money, sums of thought and planning  
Attempting to mimic our inimitable parent:  
The parks we sculpt into the hearts of our cities  
The fields of glinting solar panels with which we catch the sun  
The medicines we base upon the chemical structures  
Found in plants our Mother gave us.  
Our scientists write in humankind's collective journal  
About how healthy it is  
To walk and breathe and be surrounded by flora.  
Our literary scholars remind us that, at our core,  
We still accord nature an unshakeable respect.  
Why else  
Would our poets compare so much of what we love  
To the land and sea and sky that raised our species?  
Now I like to believe that all of this  
Is humanity's way of turning twenty-something  
Stopping in the middle of our busy lives  
And remarking to ourselves:  
Hmm...  
Perhaps mom was right.

*Rose Warren 9/4/17*

*UVM class of 2020, Engineering*

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<sup>3</sup> This poem was presented by a student as her blog entry, with the purpose of engaging her classmates in a critical digital discussion about the concept of Nature that would then lead to opening the class discussion. Her choice was poetic. Her degree course of study is in engineering.

It was mentioned earlier that a Latin American perspective enhances opportunities for discussing justice and equity, alongside other environmental topics. Why is a Latin American perspective particularly fruitful in my teaching environmental humanities in a North American academic context? A perspective from Latin America is an opportunity to integrate realms of knowledge through eco-social analysis. This is a viewpoint that acknowledges the ultimate paradoxical experience of a region that is rich in diverse forms of practical and adaptive knowledge, and traditional cultures still attuned to the deeply-rooted wisdom of its many identities, but that at the same time cannot escape its high indexes of poverty and inequality, or its colonial legacy (Woolson 2018). As an analytical approach from the Global South, it provides a platform for discussing the colonial legacy of centuries-old history, and its related contemporary coloniality. Invoking coloniality, a concept which refers to the practices and legacies of European colonialism that in contemporary societies have been integrated in social orders and forms of knowledge (Mignolo), shifts the conversation towards ethics and values. For example, the post-Kyoto Protocol atmosphere that was supposed to bring about a reduction in greenhouse gas emissions, brought on an increase in hydrocarbon extractive practices in South America, with a heightened effect on climate change and irreversible damage to communities and biodiversity. Here, coloniality manifests in the absence of an ethics for the public good that, in the Sub-Andean and immediate Amazonian areas, neglected to protect indigenous people and ecosystems alike.

Notwithstanding this paradox, a very powerful environmental thinking emerges from this Latin American experience that treats nature, culture, and society in holistic ways; a thinking that listens to many of the voices that have been traditionally absent from environmental conversations. Latin American environmental thinking not only resists the industrial paradigm of our times, as does its counterpart in the Global North, it expresses the collective identity of the many rural communities in the region and understands their interconnectedness to their land. This is the kind of thinking represented by artistic and cultural expressions from the region. For example, *The Mad Woman of Gandoca*, a semi-autobiographical fictional novel by AnaCristina Rossi about her efforts to safeguard the Wildlife Refuge in Costa Rica's Manzanillo-Gandoca, is as much a witness to corrupt and ineffective government bureaucracy as it is a critical interrogation of the Western paradigm

of development, and a poetic rendering of one of the most biologically diverse places on Earth, rich also in the diverse knowledge of its residents. The environmental thinking depicted in the novel is attuned to various ways of seeing the natural world, both Western and non-Western, as a multilayered place-based form of knowledge that grapples with many of the same topics enunciated through the Sustainable Development Goals, referenced by Bárcena in 2018. For students, this kind of humanist perspective that examines paradoxical aspects of human-environment interactions in a Latin American cultural context, offers a unique lens through which to reevaluate environmental problems and become aware of their ethical dimension. As one of my students recently explained, Rossi's novel was a completely new way of looking at environment; it led her to consider the central role of politics and culture for advancing any aspect of the sustainability agenda that she had discussed in other courses.

#### WORKING THROUGH A DISCOURSE OF CLIMATE CHANGE

Climate Change is one of the most discussed and multifaceted environmental challenge of the twenty-first century. Climate change is a global problem that affects the world unequally. In places, for example, a heavy burden on coastal communities, and on impoverished regions that are unable to adapt to a changing environment. Climate change evolves in uncertain ways, generating unexpected positive feedback loops and uncovering formerly dormant dynamic processes. In its magnitude, climate change is sobering. Its alarming nature is often paralyzing. In an effort to bring a student-centered pedagogy to the forefront of the climate discussion and to engage the topic systemically through the arts, in October of 2018, I invited internationally-renowned Brazilian sculptor Nele Azevedo to bring her *Minimum Monument* to the State of Vermont. Her visit was intended to represent a celebration of the enduring environmental stewardship of what is commonly referred to as the Green Mountain State, and the opening of a university-based symposium titled, *Feverish World*. Her artistic installation-cum-urban action transformed student expectations into a collective experience of unpredictable depth.

This was Azevedo's US debut. Similar scenes had previously coalesced in other cities around the world. It was a special day when the one-thousand faceless ice figures of men and women

covered the steps of Burlington City Hall, facing the public park. Over many hours, *Minimum Monument* became an collective artistic performance; and on that afternoon of October 20, 2018, it disrupted the somber mood that had been generated by the much anticipated *Special Report on Global Warming of 1.5°C*. I am referring here to the special report released by the Intergovernmental Panel on Climate Change (or IPCC) only a week earlier. The report had been commissioned to climate scientists from around the world with the aim of establishing a basis for understanding the difference in the impacts and costs of 1.5°C and 2°C warming, following the 2015 United Nations Conference on Climate Change (COP21), the Paris Climate meeting. Nele's ice sculptures of men and women served as a gentle-yet-poignant metaphor for what the data and predictions from the report indicated: global climate change is not only real and anthropogenic in origin, but it is steadily evolving at an alarming pace as we approach what is increasingly referred to as a tipping point of irreversible change for many of the globe's ecosystems.



Azevedo's ice figures on the Burlington City Hall footsteps, October 20<sup>th</sup>, 2018

A decisive “words are not enough” marked, on that occasion, Nele Azevedo's commitment to

enriching the climate change discourse (Azevedo 2018). Today, the Brazilian artist intentionally uses her ice sculptures to interact with the concept of climate change, but her art did not begin by thinking of the world's climate. Nele Azevedo began sculpting a series of elongated iron sculptures of human figures to explore the effect of juxtaposing a small-scale figure, the ordinary figure of the individual, with the vast open spaces of cities such as Sao Paulo (Azevedo 2012). She was interested in the relationship between monuments and the public and private spaces, and was researching ways in which to intervene in the urban landscape. Her sculptures had to remind the public of how the historic celebration of a monument is removed from ordinary people, and from those on the losing side of history. Azevedo's concept evolved conceptually into an anti-monument; a monument that would represent all of that which a traditional monument does not. The solid metal figures soon gave way to ephemeral ones, and ice became a poetic support material for the sculptures, as the opposite of durable ones. They were small scale rather than large; in place of the face of powerful men, these were faceless and anonymous figures of men and women; rather than a pedestal, the sculptures sat on the ground, the same surface as the passersby (Azevedo 2018). Then the artist found the collective dimension that community brings to a solitary figure, and this gave her work its wings.

Upon arriving in Vermont, Azevedo began working in a studio I set up at the University of Vermont with volunteers and community members eager to share a creative moment with an artist visiting from abroad. For an entire week, a steady flow of students moved in and out of the studio, talking, smiling, discussing global themes, documenting, molding, and sculpting the 1,000 sculptures destined to Burlington and the 400 that would later travel to Middlebury College, also in Vermont. They metaphorically paired the fragility of the medium to the fragility of current environmental change. They reflected on both theme and creative process, and the shared experience. As one student recalled,

I quickly took my knife to finish removing the ice around its faceless head. When I put the figure on the mound of others in the freezer, I stopped for a moment, and I realized that all of it was going to disappear in forty-eight hours. In a world with a climate that is constantly changing, it is crucial that we understand the severity of the situation. (Sandiford)

Once complete, Azevedo's ephemeral collective creation travelled to Burlington City Park. Highschool students from a local ski academy led the journey. Community members, young and old, children and college students, local residents and visitors, as well as passersby, placed each sculpture ceremoniously on the steps of the City Hall's building, contributing to the aesthetic creation. Then, they watched it slowly melt away before their eyes. As sculptures filled the steps, the metaphor came to life. People smiled, talked, embraced, took photos, and reflected introspectively. The energy was vibrant. Everyone became part of a community, united by the joy of coming together to grapple with the overwhelming realities of Climate Change. Students had been asked to engage in a reflective exercise (Piaget), and then, as part of the same assignment, document the experience in teams. However, in the absence of an effective local press, they found themselves tasked with a documentation exercise that reached audiences near and far. As their work was published on a university website, their documentation became an exercise in constructing memory not only for themselves and their peers, but for all who would access the digital information at a later time. They were no longer simply thinking critically about the events in which they had participated, they had become critically responsible for the lasting message of what it means to document a powerful public performance. There is something emotionally provocative about art, a language everyone could respond to, which simultaneously leaves interpretation of its meaning up to the viewer.

Documentation took the shape of photojournalism, interviews, spatial analysis, poetry, film and storytelling ("A One-of-a Kind Work of Art"), all connected by a consistent critical thread. *Minimum Monument* evoked glacial melt and reminded viewers of the frailty of life on the planet. It confronted modern indifference in the presence of the ordinary. Azevedo reminded us of the forgotten bodies that surround us in a shared planet common to us all, while being aware that the most valuable and lasting memory for those present that day was the celebration of community, a community well aware of an environment threatened by global warming. Art stimulated a creative process, by which student could acknowledge scientific evidence of climate change and also respond in a variety of ways, including art itself. In the poetic words of one student's reflective and reactive piece, the event was transformational, and she referred to Azevedo's work as "Art for Change."

Arte Para Cambiar

el hielo se parece a los hombres  
y esto lo sé  
hombres tristes y tristes  
hombres que lloran lágrimas congeladas con vergüenza

si estos hombres pudieran hablar gritarían  
te gritaban, me gritaban  
sus gritos son ruidosos  
pero sólo a los oyentes más atentos

Los oí  
Los oigo todavía  
¿los oíste?  
¿Puedes oírlos todavía?

los gritos son escalofriantes  
comunican la destrucción masiva de nuestro medio ambiente  
comunican los hábitats que han sido destruidos  
comunican sobre especies en peligro de extinción

Los oí  
Los oigo todavía  
¿los oíste?  
¿Puedes oírlos todavía?

estos hombres no perdonan  
estos hombres gritarán hasta que todos puedan oír  
estos hombres gritarán hasta que escojamos escuchar

Los oí  
Los oigo todavía  
¿los oíste?  
¿Puedes oírlos todavía?

estos hombres gritaban por el cambio  
estos hombres gritaban por la tierra  
la tierra ha estado gritando también  
pero nadie quiere escuchar

Art For change<sup>4</sup>

the ice appears like men  
and this I know  
sad, sad men  
men who cry icy tears of shame

if these men could talk they would shout  
they shouted to me  
their screams are noisy  
but only to the most attentive listeners

I heard them  
I still hear them  
did you hear them?  
can you still hear them?

the screams are chilling  
they scream for the massive destruction of our environment  
they scream for the habitats that have been destroyed  
they scream for the species in danger of extinction

I heard them  
I still hear them  
did you hear them?  
can you still hear them?

these men will not forgive  
these men will scream until all can hear  
these men will scream until we choose to listen

I heard them  
I hear them still  
did you hear them?  
can you hear them still?

these men shout for change  
these men shout for the earth  
the earth has been shouting too  
but nobody wants to listen

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<sup>4</sup> This poem was originally written in Spanish, as a documentation exercise for the *Minimum Monument* event, in a course titled *Language and Sustainability* that was taught entirely in Spanish. The English version was required of students once the event's documentation was published bilingually on the University's website, and it is the student's own translation or re-write of the original piece.

Los oí  
Los oigo todavía  
¿los oíste?  
¿Puedes oírlos todavía?

I heard them  
I still hear them  
did you hear them?  
can you still hear them?

con la ayuda de muchos, el cambio es simple  
eso es lo que los hombres me gritaban  
este evento creó comunidad  
este evento reunió a hombres y mujeres  
viejos y jóvenes  
comunidad es lo que necesitamos

with the help of many, the change is simple  
that's what the men shouted  
this event created community  
this event brought us together, men and women  
old and young  
community, it is what we need

Los oí  
Los oigo todavía  
¿los oíste?  
¿Puedes oírlos todavía?

I heard them  
I still hear them  
did you hear them?  
can you still hear them?

escucha el arte  
escucha a los hombres  
tienen mucho que decir  
cuando escuchamos, aprendemos  
cuando aprendemos, actuamos  
por favor, escucha.

listen to art  
listen to these men  
they have a lot to say  
when we listen, we learn  
when we learn, we act  
please, listen.

*Ilana Goldstein 11/5/18*  
*UVM class of 2021, Arts & Science*

*Translated by Ilana Goldstein 5/11/18*

Within as little as 30 minutes the tiny ice figures of men and women were but a trace of their prior existence. The park was silent; but the meaning of the shared experience remained.





Azevedo's ice figures on the Middlebury College Library footsteps, Oct. 20<sup>th</sup>, 2018

#### RATIONALITY? A FINAL WORD ABOUT SCIENCE AND THE POWER OF AESTHETICS

The multifaceted, well researched responses from the students who documented the public art intervention of *Minimum Monument* were also informed by the outcomes outlined in the IPCC report that had been released earlier that week, and discussed in class. The works produced by students set up a dialogue between the scientific findings and the artistic event (Azevedo 2018). As such, they manifest the power of art and aesthetics to reconcile an often fragmented experience of

higher education institutions and the apparently divergent paths that have evolved between modern Western science and other realms of knowledge. For years, this apparent divide, once dubbed by British novelist and scientist C. P. Snow as “two cultures” (Snow), defined a perceived unintelligible gap between the sciences and the humanities. From then on, variations of this argument evolved, but some degree of separation of the sciences from the arts and humanities continues to play a role in how certain types of knowledge are valued and prioritized, both institutionally and in the social imaginary.

The fragmentation of much of our modern thinking, including environmental thinking, has been primarily shaped by a “rational” approach to inquiry, as is the case of the natural sciences. In the public domain, it has frequently been assumed that rationality – or hypothetic-deductive thinking as the central tenet of the scientific method for constructing theory– leads to certainty (Toulmin 2003, 2001). I am referencing the form of *rationality* that is rooted in Cartesian principles, whose influence has dominated the division of disciplines prevalent in the twentieth century. Some have argued that this predominant view was compounded when the perceived rigor embedded in scientific methods of study became narrowly defined and established as the arbiter of value. In this context, a valid interrogation can be made about the privilege assigned to the rational approach to inquiry, inherent to Western science, and about the implications of this privilege for education.

Philosopher Stephen Toulmin, has argued that “we need to balance the hope for certainty and clarity in theory with the impossibility of avoiding uncertainty and ambiguity in practice” (*Return to Reason* 175). The privilege of one way of structuring knowledge, and the subsequent temptation to assume that such framework ensures predictability, has obscured much of the frequent uncertainty of many systemic problems. For example, new scientific evidence, and compelling tipping-point predictions resulting from that evidence, have not spurred a political response to curb greenhouse gas emissions, when our global climate crisis is an imminent systemic reality, and not a potential one. Uncertainty, or working with the unexpected, defies predictability. Uncertainty is inherent to science, yet the tendency in the West has been to make the world a predictable place, in accordance with a desire to anticipate outcomes from situations as they unfold (McDaniel and Driebe). This has led

to a kind of censorship of the unexpected, as if all uncertainty were a sign of something that needs to be corrected (Wouters). Bruno Latour refers to this phenomenon with a metaphor that sees the world not as “a solid continent of facts sprinkled by a few lakes of uncertainties, but a vast ocean of uncertainties speckled by a few islands of calibrated and stabilized forms” (245). In the context of contemporary complexities, how we think about science has become a pressing issue. For example, scientific research scrutinizes theory by means of experimentation, and that leads, at best, to a non-refuted hypothesis, but never to one that is absolutely proven (Popper cited in Thornton). As a universally regarded theory-centered criterion it has led to extraordinary discoveries. Conversely, relying upon its findings to reduce the scope of the unexpected has often led towards dysfunctional responses to systemic problems. Moreover, this reliance on rational approaches to solving complex problems has often come into conflict with alternative world-views of the complex systems where those problems exist, causing tensions with local communities as they tend to disregard not only the community’s needs, but also non-Western forms of knowledge. An example of the latter is the demonstrated unpredictability of the fast-pace melting pace of key water sourcing glaciers in the Bolivian Andes, which have been vital for local communities. The world’s ice has been melting, that we know, but in many parts of the world, predictions have been off by years regarding the pace of that melt, as in the case of Bolivia (Woolson 2019).

Today, the sciences and scientific research are frequently perceived to provide a utilitarian function, as if science’s practical application were its most essential attributes<sup>5</sup>. In their book *Uncertainty and Surprise in Understanding Complex Systems*, McDaniel and Driebe explain that “wisdom is an essential tool to have in the face of uncertainty and wisdom is an attitude rather than a skill or a body of knowledge” (9). How did science and technology become the guarantors of predictability in the collective imaginary of the twentieth century? How did this predominant form of thought, rooted in a conception of rationality, become the defining standard for rigor in education? Science is both inherent to human development and to the practical translation of human curiosity. In a sense, like art, science can provoke emotional experiences that go beyond simply rational satisfaction. To

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<sup>5</sup> This could be argued in multiple ways. One example is the advancement of STEM disciplines in North American academia, which are portrayed as the engine for national growth and competitive international advancement.

quote Carl Sagan from a 1996 interview, “science is a way of thinking” about the world and the human condition (Sagan). Another way of thinking and studying the human condition is through ethics and values. Contemporary challenges in the world, including its regime shifts and abrupt systemic reorganizations across social and ecological systems, are pressing conventional science to build a wisdom about, and a knowledge of, complex phenomena that are multi-causal and context-dependent. How a question is reframed to influence collective will cannot be a discipline-specific endeavor. How we are to be emotionally moved in order to respond to these complex problems is often through a work of the arts.

In the case of Azevedo’s human-shaped ice sculptures, the intervention of public space responded to an emotional urgency to discuss and address climate change. It forced the public to challenge the subjective norms with which we often move through urban spaces, and confronted each one of us with the frequent indifference displayed in public behavior that is deeply engrained within society. For the viewer, the faceless bodies and ephemeral ice figures soon became a confrontation of the fragility of our existence. They were an interrogation of modern ethics. They made people question their individual practices and behaviors in light of evidence requiring collective action. As another one of my students found out that day, stories are often capable of conveying the deep meaning of experience. Her critical response to the event took the form of a short story from the point of view of an ice man,

*La perspectiva de un hombre de hielo*

He estado en este congelador toda mi vida. Siempre me pregunté sobre este día, el día que entraría al mundo real. El día que entraría al medio ambiente natural y finalmente lo vi. Una mano desconocida me sacó de mi casa congelada y me puso afuera, en el mundo. El aire natural era tan cálido que quemó mi piel. Otra mano me puso en una escalera grande con cientos de mis amigos. Miré delante de mí y vi los árboles. Muchos, muchos árboles. Yo vi un cielo azul y sentí el aire fresco en mis brazos. Y vi el sol. Un sol muy grande y amarillo. El sol era tan brillante que me hizo llorar. Cuanto más tiempo pasé allí, sentado en las escaleras, más lloré. Y mientras lloraba vi a los seres humanos. Muchos, muchos seres humanos que me estaban mirando a mí. Todo mi cuerpo comenzó a derretirse. Primero mi cabeza, luego mi cuello, mis hombros y mi espalda. Y finalmente mis piernas y mis pies. Hasta que ya no era nada. Traté de pedirle a los humanos que me ayudaran, pero no hicieron nada. Solamente miraron. Yo traté de pedirles que me pusieran de nuevo en el congelador, pero no escucharon. ¿Quién sabe si ellos alguna vez escucharán? ¿Quién sabe si ellos alguna vez harán algo? Tal vez un día lo harán.

*Isabelle Ross 10/20/18  
UVM class of 2021, Arts & Science*

From the Perspective of an Ice Man<sup>6</sup>

I have been in this freezer for all of my life. I have always asked myself about this day, the day that I would enter the real world. The day that I would enter the natural environment and I finally saw it. A strange hand removed me from my frozen house and put me outside, into the real world. The natural air was so warm it burned my skin. The hand put me on a large staircase with hundreds of my friends. I looked in front of me and saw trees. So many trees. I saw a blue sky and I felt the fresh air on my arms. And I saw the sun. A sun so large and yellow. The sun was so bright that it made me cry. And the more time I sat there, on those stairs, the more I cried. And as I wept I saw human beings. Lots and lots of human beings that were looking at me. Then, all of my body started to melt. First my head, then my chest, my arms, and my back. And finally, my legs and feet. Until I was nothing. I tried to ask the humans to help me, but they did nothing. They just watched. I tried to tell them to put me back in my freezer, but they didn't listen. Who knows if they will ever listen? Who knows if they will ever do something? Maybe one day they will.

*Translated by Isabelle Ross 10/20/18*

As signaled in the introduction, systemic and eco-social challenges encompass an urgent set of issues that require institutions of higher education to play a key role in advancing a plurality of knowledge and diverse perspectives in order to facilitate responses to environmental problems. In turn, students need skills and competencies for working across boundaries and differences ranging from diverse disciplines and methods, to identities and cultures, and other ways of knowing the world. While many of the skills needed to address the systemic nature of problems are pursued by the sciences and social sciences, others will come from humanistic perspectives, from community and practitioner experiences, including those emanating from non-Western cosmologies. A Latin American perspective adds this dimension to the discussion, as the analysis can quickly move to matters of culture when seeking to envision solutions to environmental problems. For example, looking at global and regional movement of capital, people, and ideas in Latin America, and their impacts on culture and identity can also bring to bear how transnational processes rely on Spanish as a lingua franca and English as the commercial language across multilingual territories. How people and communities respond to this phenomenon also varies from place to place. It is within this type of cultural context that a reflection about ethical norms and behaviors can be undertaken, and the exercise of listening to other ways of knowing can be productively understood.

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<sup>6</sup> This short story was also written originally in Spanish, as the author was a student in the course titled *Language and Sustainability*, which is taught entirely in Spanish. The short story was latter translated or re-written in English by the student to be published bilingually.

The collective artistic engagement with *Minimum Monument* that was employed to connect with the IPCC's report findings and discuss our global climate crisis, is one example of strategies that enable conversations about environmental ethics in the classroom. I use these strategies as an entry point to some of the big questions of today, whether that be water, biodiversity, global warming, or the human condition more broadly. The arts and humanities convey unique opportunities for social, environmental and historical interpretations. They allow students to understand the environment's problems not only as an ecological emergency, but rather as symptomatic of a broader crisis of modern intellectual thought and modern societies. In other words, as a crisis of modern ethics.

Sustainability, as an interdisciplinary and transdisciplinary paradigm, is therefore the only effective way of addressing intergenerational responsibilities concerned with equity and integrity of the Earth's systems. Sustainability embraces complexity. Sustainability is by nature systemic. As a cultural project, it engages with many of the enduring "big questions" about what it means to be human on this planet. It requires an understanding of the co-evolution of culture and nature, and views humans as the diverse cultural beings that we are (Hajer 1999; Kelly 2009; Leff 2012). Within this framework, difference is celebrated in order for otherness to be overcome, and in doing so, sustainability aligns with ethical obligations towards the public good (Woolson 2015). As a result, reflective thinking about an ethics of environment is also an ethics of caring for the Earth and for each other, in which social and intellectual tensions about society and environment can be seen as symptomatic of a broader crisis of our times, a crisis of modern knowledge.

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