EXPLORING THE CURRENT POETICS OF THE GREAT LAKES THROUGH THE EMERGENT LENS OF CULTURAL ECOLOGY: THE AESTHETICS OF INSTABILITY/VOLATILITY AND SUSTAINABILITY (OR SURVIVAL) IN AN EVER-CHANGING BIOREGION

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EXPLORING THE CURRENT POETICS OF THE GREAT LAKES THROUGH THE EMERGENT LENS OF CULTURAL ECOLOGY: THE AESTHETICS OF INSTABILITY/VOLATILITY AND SUSTAINABILITY (OR SURVIVAL) IN AN EVER-CHANGING BIOREGION

An Essay Submitted to the Office of Graduate Studies College of Arts and Sciences of John Carroll University in Partial Fulfillment of the Requirements for the Degree of Master of Arts

By Terence R. McCafferty
One of the world’s great natural treasures, the Great Lakes—Erie, Huron, Ontario, Michigan, and Superior—form an interconnected system that is among the most beautiful, economically important, and ecologically complex regions on the planet. The Great Lakes, which hold over 20% of the world’s fresh water, contain some of the most precious resources for the future of humankind and life on earth. Rockman’s series celebrates the natural majesty and global importance of the Great Lakes while exploring how they are threatened by factors including climate change, globalization, invasive species, mass agriculture and urban sprawl. While there has been some success in reversing these trends, the exhibition of these dramatic works will serve to inspire wider understanding and draw greater attention to the urgency of these issues. (Grand Rapids Art Museum)

Our aim for Waters Deep was to bring together a diverse spectrum of contemporary poets with distinct voices writing about the Great Lakes — the history, culture, climate, ecology, geology, and the communities that inhabit the region. We hope that this book invites and encourages readers to appreciate and explore more deeply the many layers of the region's landscape, history, culture, communities, and natural environment. (Crystal S. Gibbins and Michelle Menting, editors of Waters Deep)

Water is life. As a born and raised Clevelander, the Great Lakes exist as a significant and defining part of the place which supports my basic needs in more ways than I am even cognizant of. I am connected deeply with the waters of the lake physically, mentally, emotionally, and spiritually. Yet they are under strain. Over the past few years significant cultural works focusing on the greatest stand of fresh water in the world have surfaced particularly as humans have become increasingly aware of human created threats posed to them like climate change, globalization, invasive species, mass agriculture, and urban sprawl. Two recent significant projects concerning the viability of the lakes come from writer Dan Egan and painter Alexis Rockman. Dan Egan's 2017 book The Life and Death of the Great Lakes, a finalist for the Pulitzer Prize for Journalism, New York Times best-seller, and winner of the L.A. Times Book Prize, utilizes an investigative, non-fiction approach to coming to know a sense of place and to understand the interconnected relationships of humans to place. From October 19th until
January 27th, 2018, Alexis Rockman's visual art installation *The Great Lakes Cycle* was exhibited by the Cleveland Museum of Contemporary Art. The exhibit had previously traveled from Grand Rapids, where it opened, to Chicago. After Cleveland, the exhibit moved to Milwaukee, and will also be displayed in Minneapolis, and Flint. These recent works exist as part of a larger cultural narrative that has been raising consciousness about the importance of the lakes and some of the problems confronting them. With each passing day, it becomes more clear that humanity must learn to live in increasing volatile conditions. Encountering these works inspired me to explore whether poetry of place concerning the Great Lakes existed and what it might express about the interconnected relationships of this particular bioregion. After some searching I found a current collection poetry that specifically does just this.

In 2018 the small publishing outfit, Split Rock Review, with the support of the Chequamegon Bay Arts Council and the Wisconsin Arts Board, released an anthology of poetry focusing on the Great Lakes bioregion titled *Waters Deep*. The collection, edited by Crystal S. Gibbins and Michelle Menting, presents the work of thirty-five poets who each contribute a different voice to the ongoing exploration of place. The poems in *Waters Deep*, aesthetically offers meditations on the ebb and flow of life and death, warmth and coldness, water and time. The collection as a whole exists as an expression of contemporary ecopoetics, a subset of poetry production and studies which continues to gain traction in both literary expression and critical interpretation. How might this collection of current poetry contribute to these varied expressions? To what degree does current poetics contribute to a cultural narrative that impacts the bioregion? How does
the cultural work of the human species become part of living ecological system that includes us, shapes us, and is shaped by us?

In this paper I will explore the current poetics anthologized in *Waters Deep*. In particular I will employ a theory of imaginative literature professed by Hubert Zapf in his recent work *Literature as Cultural Ecology: Sustainable Texts* as a lens for analysis. Cultural ecology speaks to the specific and ongoing needs for survival of the human species in light of present dynamically changing relationships to others and place. For Zapf, the imaginative place constructed by literature creates a fluid and dynamic space for both critical reflection and transformative regeneration, two elements that are essential for sustainable growth in human culture. Zapf’s lens of cultural ecology honors the historical and cultural developments of the human species, yet situates them between ecocentric and anthropocentric extremes.

Current poetics creates an aesthetic of shared discovery that contributes to ongoing conversations which in turn have the capacity to effect meaningful environmental/ecological change. As the highest form of imaginative language use, poetry exists as a special adaptation of the human species that has evolved over time. As an artistic medium, poetry creates space that invites further exploration. The poems of *Waters Deep* collectively express multiple insights into various species' struggle for survival—both in success and failure—amidst the change brought about in time and place by the ongoing evolution of the geologic and biotic forces, including historical and cultural forces.

My claim is that the current poetics anthologized in *Waters Deep* acts as a form of imaginative literature which functions as a medium of cultural ecology as articulated by
Hubert Zapf. In this sense, the work, exists as a cultural form which is both reflective and generative, acting as an ecological force that impacts the larger interrelated community of being, yet at the same time highlights individuality that is situated within a greater interconnected context. In this case, the work particularly contributes to the larger network of cultural work of sustainability that shapes the bioregion of the Great Lakes. To exemplify these concepts more specifically, I will explore how the aesthetics of imagery within some of the poems complicate the binary poles of warm and cold, solid and fluid, and order and chaos, to contribute to an overall feeling of instability and volatility that human and non-human inhabitants of the bioregion are facing due to an increasingly rapid rate of change within the bioregion. While I will focus on the poetry collection of *Waters Deep*, it is essential to see these works of poetry as part of a larger web of collective artistic and linguistic expression.

**Emergence of Ecopoetics in Current North American Poetry of Place**

Intellectual work surrounding the concept of ecopoetics has gained traction in the past few decades. J. Scott Bryson, the editor of *Ecopoetry: A Critical Introduction*, offers the following definition of ecopoetry that he believes coincides with other significant critics (Gifford, Scigaj, and Buell):

> Ecopoetry is a subset of nature poetry that, while adhering to certain conventions of romanticism, also advances beyond that tradition and takes on distinctly contemporary problems and issues, thus resulting in a version of nature poetry generally marked by three primary characteristics. The first is an emphasis on maintaining an ecocentric perspective that recognizes the interdependent nature of
the world; such a perspective leads to a devotion to specific places and to the land
itself, along with those creatures that share it. (5-6)

Bryson further explains this characteristic as poetry that sees all things as having an
interconnected relationship in the great web of being. The second characteristic Bryson
sees as stemming from the first: "an imperative toward humility in relationships with both
human and non-human nature." The third characteristic Bryson lists is "an intense
skepticism concerning hyperrationality, a skepticism that usually leads to an indictment
of an overtechnologized modern world and a warning concerning the very real potential
for ecological catastrophe" (7). Ann Fisher-Wirth and Laura-Gray Street's 2013
collection, *The Ecopoetry Anthology* comprehensively traces the development of
American ecopoetry from its historical strands beginning with Whitman to the present.
The shift towards a concept of ecopoetry marks a distinction from a traditionally
conceived nature poetry as Robert Haas notes in his introduction to the collection:

> By the mid-1950s and early 1960s a younger generation announced itself—poets
> who gave the innovative energies of nineteenth century romanticism and early
> twentieth century modernism a new push. Their work refracted the ways
> technology, ecology, and the condition of the natural world had come to seem
> intricately connected. (lv)

These new energies were furthered by poets throughout the next few decades.

As poetry has continued to evolve, identity poetics have shaped current poetics in
ways that relate to the poetry of place. In 2002, Bernard W. Quetchenbach noted,
"Contemporary and current poets show renewed interest in pastoralism and regionalism"
(250). More writers connecting environmental concern to place have started using the
term “bioregion” instead of “region” moving closer to the language of ecology.

Quetchenbach argues, "The implications of the development of current identity poetics for environmental poetry are significant and far-reaching. The 'eco-poet,' like the prose nature writer, is a kind of missionary, motivated by the fierce devotion to the subject matter that is endangered and absolutely critical to the poet's well being and, as even the largest circle of the general public in increasingly aware, to the world at large."

Quetchenbach furthers this point by saying, "Because it seeks to establish a community of readers whose common experience is assumed to be prior to and essential to the poetry, current identity poetics is well suited to reveal connections between individuals and communities" (248). The identity poetics of place have clearly diversified and expanded poetry's reach. As contemporary poetry has become more prolific due to more publishing outlets, there have also been significant shifts in audiences of poetry.

Quetchenbach argues as early as 2002 that "The audience for a current poem can be seen as a series of concentric circles rippling from the defined primary audience through increasingly broader audiences sharing essential characteristics with the primary audience and, ultimately, to the larger sphere of the reading public in general. In this outer circle the poems serve the purpose of consciousness raising" (248). How might a small collection like *Waters Deep* reach a larger sphere of the reading public?

In the editors’ prefaces to *The Ecopoetry Anthology*, Fisher-Worth and Street make two crucial points regarding the importance of current ecopoetics. First they express, echoing Buell, that they have become "even more convinced that the environmental crisis is made possible by a profound failure in imagination. What we humans disregard, what we fail to know and grasp, is easy to destroy: a mountaintop, a
coral reef, a forest, a human community. Yet poetry returns us in countless ways to our senses" (xxvii). As humans, if we fail in our imagination to clearly see the bioregion that sustains our species and many others, we run the risk of destroying it. By extension, if we fail to know and grasp the Great Lakes and surrounding area in our imaginations, it too becomes easy to destroy. The second point comes in Street's individual preface to the edition. Street advances the claim that "language is an integral part of our biological selves . . . We are language-making creatures in the same way that spiders are web-making creatures" (Street xxxvii). This idea is essential to understanding the lens of cultural ecology because it recognizes the differences in the ways that creatures have developed, yet also honors the special tools that humans have learned to utilize. The implicit understanding here is that humans are part of the ecosystem as opposed to being separate and imaginative language acts of poetics have evolved as part of the human species quest for survival.

Unlike The Ecopoetry Anthology edited by Fisher-Worth and Street in 2012, Waters Deep focuses on poems of encounter within a specific bioregion. Significantly, the bioregion crosses the national boundaries of the United States and Canada, which underscores the idea of ecology being transnational. In the Editors' Note, Gibbins and Menting clarify their purpose in constructing the anthology as follows: "Our aim for Waters Deep was to bring together a diverse spectrum of contemporary poets with distinct voices writing about the Great Lakes—the history, culture, climate, ecology, geology, and the communities that inhabit the region . . . Our primary criteria for selecting the poems in Waters Deep was the excellence of the poetry and how the writers addressed the Great Lakes region in their work" (ix). As conceived and executed, the text is worthy
of critical study. It is also important to note that the poems are arranged in the anthology alphabetically by author's last name.

The intellectual work Hubert Zapf has done in the Environmental Humanities clearly extends and advances the work of earlier scholars and creates an essential lens to view the poetry collected in *Waters Deep*. In his 2016 work, *Literature as Cultural Ecology: Sustainable Texts*, Zapf presents what he calls a "theory of imaginative literature based upon the paradigm of cultural ecology" (3). Zapf, a professor and chair of American Literature at the University of Augsburg, Germany, also directs the Cultural Ecology Research Group, a cohort of scholars who publish in the areas of Literature and Cultural Ecology with a special focus on Ecology and Literary Ethics, Ecology and Narratology, and Transnational Ecocriticism. Cultural ecology, according to Zapf, "is a new direction in recent ecocriticism which has found considerable attention in Europe and the German-speaking world but which is also beginning to be discussed in English-language publications in the field" (3). Cultural ecology, as opposed to seeing the processes of nature and culture as separate, sees human culture as having agency within the ecological sphere. Zapf states, "A guiding assumption of this approach is that imaginative literature deals with the basic relation between a culture and nature in particularly multifaceted, self-reflexive, and transformative ways and that it produces an 'ecological' dimension of discourse precisely on account of its semantic openness, imaginative intensity, and aesthetic complexity" (4). Seen through an ecological lens, all is connected and his approach validates that idea through the central tenet of relationality. It also values a process based approach. This is not without potential problems though. Zapf explains:
One fascinating but also disturbing implication of the recent explosion of productivity in ecocritical thought and of its expansion into more and more disciplines across the environmental humanities and beyond is the enormous challenge that it poses for individual scholars to integrate the vast, transdisciplinary but also highly specialized and differentiated knowledge that is relevant to the field. Ideally, a contemporary ecocritic would have to be conversant with the most recent state of knowledge in such diverse areas as scientific ecology, evolutionary biology, historical anthropology, social systems theory, environmental history, geography, geology, as well as phenomenology, history of philosophy, art history, media theory, gender studies, postcolonialism, globalization studies, and, of course, cultural and literary studies. (5)

Due to the nature of this implication, Zapf believes that "ecocritical scholarship must always be seen as part of an ongoing dialogue and cooperative form of work-in-progress between scholars rather than only an accumulation of singular isolated contributions of individual minds" (5). I, like Zapf, see this as a particular strength of ecocritical scholarship. A theoretical framework that honors process, a multiplicity of voices, and the space that those voices create mirrors life processes that are at work in the world.

Current poetry creates a zone where bits of differentiated knowledge from many of these various arenas of specialized and personal discourse interact in dynamic ways.

Zapf's concept of transdisciplinary contexts provides a helpful construct to further explore the poetry *Waters Deep*. Zapf states:

As has been seen, cultural ecology, both as dimension of critical theory and feature of literary process, cannot be contained within existing categories of
language and discourse. Instead, it always moves between and beyond them as a transformative textual-discursive principle which fluidifies fixed concepts and transgresses closed binaries of thought and imagination. As a dynamic-relational rather than systemic-logocentric principle of critical thought and imaginative production, cultural ecology has to do with clusters of relationships and differences, in which former exclusionary binaries are replaced by interactive domains of connectivity-in-diversity, whose poles are constantly influencing and mutually transforming each other. (123)

The poems collected in *Waters Deep* individually provide space for these types of interactive domains, yet also create a wider layer of interactive domains between the whole.

Collecting current poetry of place into an anthology of a bioregion provides a rich opportunity to understand the concept of ecocultural poetics due to the diversity of voices within the collection. The anthology itself becomes a dynamic place where the voices of the different poems may interact and even present creative tensions that both capture experience in time and also generate new thinking. Not only does the bioregion of the Great Lakes itself showcase these traits, but by its very nature, an anthology of poems does as well.

**Exploration of the Generative Aesthetics in the Current Poetry of Waters Deep**

As I read and re-read the collection, I began to notice that a number of poems revealed a sense of a general underlying feeling of instability. In order to exemplify how the poetry *Waters Deep* might be viewed through the lens of cultural ecology as
suggested by Zapf, I will analyze a selection of the poems that touch upon the general theme instability which in many cases intensifies into a state of "volatility."

More specifically, I will attempt to show how the aesthetics of poetry, particularly the use of imagery, complicate traditional binaries of warmth/cold, order/chaos, and solid and fluid. These aesthetics generate an increased/felt volatility that is both unsettling but also potentially transformative as human beings learn to live in increasingly volatile conditions while figuring out how to live more sustainably.

A number of poems in the collection depict the lakes' shifting energies and the human relationship to these shifts. In deep time, there often appears to be a steadiness, a slow shifting change. Yet depending on one's scalar perspective, volatility exists. Scalar challenges, also complicate the relational polarities of solid/fluid and order/chaos. Deep time, geology, and global climate systems each present facets of reality that can be extremely difficult for human beings to understand in relation to their daily perceptions of reality in the local dynamics of a place. Although everything in our observable reality changes, the timeframe of that change presents to human consciousness a perception of solidness. To what degree is anything solid? For how long? To what degree can we rely on entities we have come to rely upon? How does the nature of perceived solidness enable us as human beings to structure our lives and societies?

In order to provide a sense of how the theme of volatility becomes evident throughout the collection, I will arrange my analysis of the anthology topically. First I will explore how some of the poems "remember" moments of historical volatility. I will then show how each of the binary elements warm/cold, solid/fluid, and order/chaos emerge within the poetry and create generative dynamics. This leads to a discussion of a
poem that imagines a future without humans. Finally, I will explore how an underlying theme of resilience serves as counter-discourse to the theme of volatility. Where fitting, I will highlight where some of these elements overlap in order to show how the poems of the collection create a great potential for generative interaction.

My analysis as a whole will work to show that the anthology of Deep Waters works as a what Zapf calls a sustainable text. For Zapf, the notion of sustainable texts: involves the basic assumption that imaginative literature as a special, artistic form of cultural textuality is characterized by several traits of sustainable cultural practice: a long-term perspective of culture-nature co-evolution vs. short-term concerns; a double orientation on continuity and change, on past and future, cultural memory and cultural creativity; a sensitivity to the multi-layered forms of relationality between self and other, mind and life, humans and the nonhuman world, encompassing perceptual, sensory, emotional, cognitive, communicational, and creative dimensions; an attention both to life-sustaining diversities and to patterns of connectivity across the boundaries of categories, discourses, and life-forms; and an implicit but crucial relevance of this ecocultural potential of imaginative texts for the survival of the cultural ecosystem in its long-term co-evolution with natural ecosystems. (26)

Past Instability: How Cultural Memory Informs the Present

A few poems in the anthology give a sense of unpredictability that has been known by human inhabitants of the bioregion for thousands of years. This unpredictability has culturally been passed down through story. Though the Great Lakes have a history of unpredictability, the instability of a changing climate intensifies a
Cynthia Anderson's poem "Mishipeshu's Warning" calls to mind past cultural understanding of Lake Superior's known unpredictability. The speaker states:

I'm a relic of probability,
the tides of becoming
alive in me at once,
I'm lynx, dragon,
fierce reptile—mammal
and amphibian,
dangerous demon—
thrashing my great tail
made of copper,
changing the weather
when I swim underwater. (1-11)

In the imaginative act of the poem, the "I" represents Mishipeshu, the name that the Anishinaabe people gave to a mythological water being said to cause storms. As a powerful underworld being, Mishipeshu, was known to be the guardian of the precious copper that existed in the Lake Superior bioregion. The poem's dire conclusion reveals the fact that the lake's power to destroy remains unpredictable and no doubt will claim more lives:

I swear,
by the horns of my head
and the lake of my birth
when I lure you to deep water,
you'll end there. (25-29).

The poem calls upon past cultural understanding in which narrative was utilized to engender a healthy respect for place. The warning from the past connected to the present exhibits cultural continuity that orients individuals of the human species to the water. The image of a creature causing destruction aesthetically continues to be an appropriate emblem of unpredictable volatility.

This poem, when related to another in the collection, Jacob Lindberg's poem "The Fresher the Better," shows that warnings continue to exist and they are not always heeded. The poem in stark images presents the tragic death of a fisherman claimed by icy waters as his truck fell through the ice while he was ice fishing. The poem opens with a line of non-fiction revealing tips for playing on frozen lakes: "As time passes, the bond between ice crystals decays even in very cold temperatures." In today's language, the warning comes in the form of a pamphlet. Yet the words of the pamphlet are not as dynamic as the image of the cold, lifeless body presented in the last lines of the poem:

The fisherman stripped
of his jacket.

The silver split-shots in his pocket
emptied onto the steel table. (20-24)

The image contains both visual and auditory elements which both underscore the feeling of coldness that has left the body. The cold lifeless body is mirrored in the cold, hard
fishing weights. The sound of the weights hitting the steel table aesthetically adds an emphasis of finality.

Both of the poems, each in their own way, achieve cultural ecological significance by imploring that members of the human species should continue to heed warnings of impending destruction. The strength in each lies in the vividness of the images, be it the imagined underwater creature stirring unexpected destruction or the aftermath of a drowning.

Another example of a poem that points to past understandings of the lakes' volatile nature is "Presque Isle," also by Anderson. The poem's opening line calls forth the past: "Iroquois knew the lake as Erige, / wild cat, unpredictable" (5). She takes the poem in a different direction as the speaker remembers visiting Presque Isle with her cousins in the 1960s. The speaker remembers: "...we swam the easy surf / at Beach 6, in between closures for pollution, / and canoed the quiet lagoons" (6-8). She describes paddling down channels, going "as far as we could, then back out / to try another." Seeing a few ducks and turtles, and paddling near the forest that "grew right up to the banks, / branches shading our heads," the speaker recalls "it was the closest we ever came to wildness / in our civilized lives" (15-17). In the middle of this line the poem makes a dramatic shift evoking the first lines of the poem and complicating the youthful freedom that was felt: "it was the closest we ever came to wildness / in our civilized lives, Erige fighting / harder than we knew just to survive" (15-18). The poem takes a personal experience of a specific place and in the matter of a few lines locates at near past experience with the imagined deep past experience. The connections of the lake with the wild cat of the past and the image of lake attempting to survive "civilization" give the
lake a tacit sense of aliveness. This poem offers a different type of warning as the roles have been reversed: civilization has become unpredictable, as our cultural shifts have upended the rhythms of the natural world.

These three poems exemplify how imaginative language brings the past dynamically into conversation with the present. As part of the recursive nature of storytelling, contemporary poetry re-imagines the past in new and meaningful ways. In the next section of this paper I will explore how poetry of the anthology specifically encounters life in the present, particularly through the binaries of warmth/cold, solid/liquid, and order/chaos.

Warmth and Cold: Regulating Human Survival

Many poems within Waters Deep relate to the binary of warmth/coldness and the volatility that an individual can feel within this particular bioregion with its particular shifts in temperature. At the most basic biological level, humans, as a warm-blooded species, seek warmth because warmth is survival. For me, the simplest, yet most poignant line in the anthology comes from Catherine Anderson's poem, "What They Will Say After Us": "Their time on earth an unending chain of heat" (3). Our ability to keep it from conception to death, is one of the most basic necessities of being. Constant body heat over a lifetime, with little fluctuation creates a chain of stability from which all other life functions emerge. To stay warm we have learned to do many things. We need food, shelter, clothing to keep our heat. We need each other. Language, among other tools and methods that we have developed culturally over thousands of years, provides a means to procure these physical items. Yet humans need more—as social/communal beings, our language has also evolved to satisfy our psycho-social-emotional needs. In this section of
my paper I will explore how extremes of warmth and cold emerge within a few of the poems of the collection. Notably, "The Fresher the Better," the poem previously discussed also offers insight into the imagery of coldness that has sapped life from the body.

Many other poems touch upon the extremes of temperature throughout the anthology. A poem like Brenda Yates's "Michigan" suggests the challenges of getting through long, cold winter months represent one extreme, while Kelsey Hoff's "Ice Cream Truck Doppler Effect" describes the intensity of the hot, humid summers of the Great Lakes bioregion. Images of cold include lines like "The ground froze in October, won't thaw / until May. Meanwhile, another blizzard: / lake-effect snow blows against windows / settles against the back door. Blocking both" (1-4). Images of heat include, "The windshield bends / light into hot water" (1) and "When it gets hot enough in the Midwest, every surface is a mirror" (7-9). Anyone who has lived in this bioregion has known these extremes. These poems underscore the sense of factors that challenge the stable warmth which our bodies must regulate. The inability to do so ushers in tragic consequences for individual lives. How might increasing volatility of the weather impact the known extremes we already face?

Emily Stoddard's "Winter Imram" also concerns surviving the winter. An immram is a type of Irish tale that recounts a hero's sea journey to the otherworld. The poem's first line, "Lake Michigan is brittle / and keeps the waves as ice, / humbles them into cloistered fragments" (1-3) sets the landscape of the frozen shoreline which the speaker as the subtle hero will traverse. The speaker in lines 21-23 states, "This is the posture of winter: / survival, shoulders hunched around a secret" (secret here referring to
a previous image of a bluejay safeguarding food by pretending to sound like a hawk, which showcases the tricks devised for survival). The heroic journey is ordinary struggle for survival against the harshness of the winter. The speaker has chosen to go out to the shoreline away from the warmth of home in search of a lost dog. Following the tracks, the cold has become too much. In the last line of the poem, she returns, choosing not to call out for the dog:

   Better to bow the head
   toward the tracks, press hands
   into jacket pockets,
   move inland
   as though the world is only now arriving. (32-37)

Will the dog survive? Will the dog be found? Has the dog also instinctively pushed inward to survive? "The world is only now arriving" intensifies the idea of survival in that the world continues to arrive to the one that survives. The speaker has been to the otherworld and now returns, potentially hardened in her own desire to push on. This imaginative space of the poem offers the reader a place to heroically encounter the extremes of environmental space.

   As a counterpoint to this heroic journey into the cold,"Raymond Goes to MSU"
by Brian Czyzyk, narrates the tragic story of a college student who struggles to make it, who, unbeknownst to others, fell through the ice as a boy, due to neglect. The speaker reveals:

   . . . Raymond doesn't tell
   
   people where he is from. That he would measure steps
to the center of the lake during hours locked out of the house.

He doesn't tell people that once the frozen surface broke
and swallowed him, or how long it took people to look for him.
That he wishes for the warm grip, the fuss and blankets thrown
over him. (10-15)

In just a few short lines both the need for biological warmth and emotional warmth pulse beneath the surface of struggling Raymond's life. The understory of Raymond's life shows the deep impact of the cold upon his existence both emotionally and physically. The biological and the human-cultural experiences cannot be separated from Raymond's process of becoming.

How might humans continue to face the extremes of warmth and cold in this bioregion as temperatures continues to fluctuate?

**Solid and Fluid: Complicating Perceptions of Reality**

In this section I will analyze how two poems, John Sibley William's poem "Lake Country" and Jen Karetnick's poem, "Considering Chagrin" utilize images of solid and fluid to generate multiple layers of meaning that connect humans intimately with place.

In John Sibley William's poem "Lake Country" takes place at this setting of the seashore. According to Zapf:

The special significance of the seashore for cultural ecology of literature is linked with its conspicuous in-between status: it is located at the interface between water and land as heterogeneous manifestations of the global ecosystem. It occupies a special zone bordering on the water and still belonging to but also somehow separated from the land. . . The beach has a certain stability, yet is
constantly changing; it is a site of regularly recurring rhythms and irregular
morphodynamic shifts and transformations. (189)

In William's the poem, the central image of toes digging into the sandy shore becomes a
gateway to deeper contemplations about dredging and the human impact upon the land
and water, yet this does not become clear until the image is revealed at the end of the
poem.

The poem's first line "Another lake dredged" calls to mind the numbers of
dredgings conducted by the human species in lakes to make them navigable. The shore,
which seems to be solid, remains fluid. The lakebed, the holding place of the fluid water
which seems to be solid, changes shape through human action. In the phrase "Sediment
and clouds widening" (1) the solid particulates that have been stirred up have become
fluid. The image of the sediment expanding within the fluid water parallels the widening
cloud of consciousness in the speaker's mind.

Digging one's toes into a sandy shore conjures the sense of a day at the beach with
more immediate connotations of renewal, relaxation. Yet in the imaginative space and
progression of lines, the toes destruct. The act of dredging also literally stirs up the
environmental contaminants of the past and makes them present, as emblematically noted
in the phrase "the pollutants from the paper mill pulled & filtered" (6). The
movement of the poem through a series of images and questions creates space for
contemplation. Visually, the poem contains gaps of varying lengths within half of the
lines. These gaps correspond to the gaps left by the act of dredging. The poem moves
from a distant, objective lens citing "another lake dredged" to the very personal, specific
recognition of sand between the speaker's toes. The final line of the poem complicates
the relationship of the speaker to the land and raises questions of belonging: "Would I be less reminded / this sudden sand clumped between my toes once belonged to the lake?" (7-8). The question of belonging is potent. Who or what belongs to whom or what? This simple question opens a dialectic in which the lake acts as agent, shifting the perspective away from the anthropocentric. To what degree does his digging of the sand make it his own?

The act of dredging makes volatile past pollutants that had been buried beneath the lake. To make the lake a place where "our boats can almost / navigate the surface unharmed" (2-3) the human species has unleashed added volatility into the bioregion. While the boat may remain unharmed, as signaled by the word "almost," the act of dredging has brought up the potentially harmful chemicals of the paper industry. The dredging has allowed boats to go unharmed, but the latent harm in pollutants buried and now unleashed present a different type of harm to a wider array of individuals. The repeated use of the word "our" referring to the human species and the digging of the sand by the speaker's own toes further suggests the complicity that the speaker feels to the issues raised—a recognition that his participation in the combined actions of our species and the benefits gained (paper and other products procured from industry and open shipping lanes). With the act of dredging the past continually resurfaces with each present act of re-digging the channels that boat transportation has come to rely upon.

The act of the poem is to complicate. For Zapf, "Literary texts are open semiotic systems, which depend on the active participation of their readers in the creation of their meanings" (14). The poem, with each re-reading, mimics the act of dredging, bringing deeper meanings to the surface and bringing up uncomfortable thoughts that most would
rather not think about, taking the idea of toes in the sand being comforting, to toes in the sand being disruptive. Thus, poetry has made a seemingly fixed idea a bit more fluid. The image is so powerful that as a reader, I may not be able to run my toes through the sand in the same way I once had. The important cultural work of the poem is to question for the human species and "our poor wielding" (5) of water, one of the most sacred and essential elements of our habitable planet.

Jen Karetnick's poem, "Considering Chagrin" (20) meditates on the extinction of a solid individual life in the fluid space of geologic time. The poem explores the interconnection between her father, his family, aging and death, and fly-fishing in a very specific context. The title, "Considering Chagrin" exerts double-meaning referring to the contemplation of a sadness and also directly naming a particular feature of the bioregion: the Chagrin River, a tributary of Lake Erie. The first sentence of the poem aesthetically links the aging of the father with the landscape:

My father can no longer fly fish,
can't torque the cast and its potent energy load against his spine, narrowed like a reed-choked river, banks growing into the water. . . (1-5)

This juxtaposition of two bodies, the father's body, and the river body, suggest commonality particularly in the movement of energy through them. The spine, as part of the skeletal system provides form to the body, itself a rigidity of bone, yet flexible and strong as part of the larger interconnected systems of the body's musculature. The word
"torque" captures both the kinetic energy of the rod and the spine. The next line of the poem furthers the visual of a body within a body:

Nor can he wade into

a current, pit his balance against it—

not to win but to stalemate—as he flicks

the filament forward while astride

the layers of Cleveland Shale. (5-9)

These lines capture the energy of life that circulates through one individual, pitted against the energies outside of the body. In earlier days, the man may have felt powerful enough to overcome the forces of the river's current, yet now he is unable to "balance against it."

The most striking part of this image is of the filament of the fishing line juxtaposed against the Cleveland Shale. Geologically, Cleveland Shale is approximately 360 million years old and was formed during the Dasburg event, a time of great extinction, particularly of prehistoric sea creatures. Shale physically represents time being compressed and literally the remains of life being compressed. The image of the father no longer able to fish as he once had solidifies the idea that his individual being will too, in deep time become part of the surrounding ecosystem. Yet in the context of the poem and in the time of the poem his individuality and connection to his family are clear. The volatility of life, particularly of an individual's life, against the scope of time provokes the deepest existential questions of our being. The moment that ends energy moving through the body can happen at any time:

The men in our family die young,

in their fifties, unpredictable
attacks grabbing them like lures
in the lip. . . (23-26)
The final line of the poem expresses the effort made to maximize the potential time that one has:

. . . In the end, my sister finds
a captain willing to go out at sunset
for two hours, who assures her
it won't be too rocky, not hot, and enough
time for my father to catch his limit. (30-34)
The word "limit," on one level refers to the legally allowable amount of fish one is allowed to catch. The other connotation is more poignant: the limit, or limitation of any individual's time on Earth, human or other.

Each of these two poems situates individuals within a particular context that contains that which is solid and that which is fluid. The life of the individual is marked as important against the flow of geological time. The pitting of the solid up against the fluid, or vice-versa, calls forth existential questions about being and not being, and how one matters in a particular place in terms of one's relationships.

**Order and Chaos: A Desire for Order as Systems Collide**

In this section I will explore how images of order and chaos further reveal themes of instability and volatility using Philip Sterling's poem "Alligator Hill Hiking and Skiing Trail" and Rachel Morgan's "Diaversary." Sterling's poem depicts the aftermath of storm upon the shore and links it to surviving cultural storms, while Morgan's poem shows the effects of cultural eating habits upon the individual.
Phillip Sterling's poem, "Alligator Hill Hiking and Skiing Trail," not only exposes the volatility of nature, but also links these forces to the volatility of human cultural forces. The italicized line beneath the title provides context for the lines to come:

"Sleeping Bear Dunes National Lakeshore after the bow echo storm of 2015."

According to the National Weather Service,

A "squall line" refers to a linearly-oriented zone of convection (i.e., thunderstorms). Squall lines are common across the United States east of the Rockies, especially during the spring when the atmosphere is most "dynamic." A "bow echo" or "bowing line segment" is an arched/bowed out line of thunderstorms, sometimes embedded within a squall line. All these terms fall under the more generic term Quasi-Linear Convective System (QLCS). Bow echoes, most common in the spring and summer, usually are associated with an axis of enhanced winds that create straight-line wind damage at the surface. In fact, bow echo-induced winds/downbursts account for a large majority of the structural damage resulting from convective non-tornadic winds.

The use of specific scientific diction for weather related storms creates transdisciplinary space within the poem.

Set within the dunes on the coast of northeastern Michigan, the physical geography adds dimensionality to the poem due to its place on the solid/fluid continuum. (This clearly connects the poem to the previous section of this paper). Dunes, as physical features, constantly change. Yet to visit the place on any given day, they seem generally stable. The first three words of the poem "To clear a path" signify the attempt to recreate order where chaos has ensued. A skiing and hiking trail is a place of perceived order in
that there is an expectation of its being there. The path has been travelled many times in many seasons by many people, which creates a perception of its inevitability. The path can be found on a map, an instrument of the human species to utilize place.

Marriage is a cultural practice that has evolved in the human species in which the bond of two are supposed to create relational stability within often unstable societal conditions. The trauma from a broken marriage must be negotiated like the fallout from a vicious storm:

. . . an uprooted
clutch of second-growth hardwood
requires the groomed tools of loggers and lumbermen
and the persistence of a boy
who has learned from the damage
of a broken marriage
how to tell one anger from another
and to believe in the wind's remorse. (7-15)

The poem's final words, "believes in the wind's remorse," personifies the wind, yet provides a sense that a wind that can be destructive is not always so. How might we as human species relate to the increased volatility both human cultural conditions and weather patterns?

The act of the poetic imagination creates space through connections made by language acts. The juxtaposition in thinking and word of a boy struggling with cultural forces amidst the chaotic aftermath of a bow echo storm provide opportunity for the reader to consider coping with forces beyond one's control.
Not only do our cultural practices shape surrounding species, they also impact our own. Rachel Morgan's "Diaversary" explores the challenges of living with diabetes, a problem linked to the dietary habits and food production models created by the human species. A "diaversary" is the anniversary of the day that one gets diagnosed with diabetes. Morgan utilizes the image of a tree exploding to convey the volatility of the disease upon the body and upon our species. Morgan writes, "If we mark time by arriving at the same point again, / let us do so hence, not to hear the gunshot of a tree exploding, / whose sap had no more room inside" (4-6) A phenomenon of exploding trees occurs when temperatures drop so low that the sugar-laden sap, which usually has a lower freezing point than water, expands and ruptures the exterior layers of the tree. The sugary sap, clearly connects to the disease of diabetes and the body that is unable to process the sugar that has been consumed. As a species, humans have evolved to satisfy the basic biological need of food by producing food on large scales. Processed and refined foods that have become omnipresent in our constructed society have become difficult to avoid. Human health is individual, but to a large degree it is also cultural. Diabetes, once diagnosed, must be lived with and managed. As a species, our procurement of food connects to both our built habitat and cultural practices. Morgan's phrase "scrim of holidays" (2) connects the difficulty of entering into the cycle of cultural practices surrounding holidays and the deeply embedded relationship between rich foods and cultural celebrations. The words "arriving at the same point again" call to mind human beings’ ability to become conscious of the cycles of life as part of time.

Morgan's poem shifts into something larger near the end: "What heartache to learn somethings / evolve into such cold hardness they destroy themselves" (6-7). This
line serves to expand the poem beyond the individual to a poignant reflection upon how our cultural practices have evolved to a point where they are causing harm to our own species. This leads directly into a discussion of a poem that imagines that future.

**Envisioning a Human-less Future: Culture-Critical Metadiscourse**

Catherine Anderson's poem "What They Say of Us Later" directly addresses the place of the human species in the time of the Anthropocene and through the act of imaginative literature enters into an empathetic viewpoint of the species that will remain when humans are no longer. This poem invites contemplation into the scalar challenges of human being. The opening line, one of the most significant in the collection, states: "Their time on earth an unending chain of heat." Heat both reflects a sense of constancy, yet also in the context of imaginative space, impermanence. In day to day reality, the solid state of our bodies in place requires actions to maintain warmth. Humans have evolved to satisfy this need for bodily heat in many different ways. The challenge to contemporary humans is that many of the ways we have created to enhance our existence now threatens the very continuance of the chain of warmth that has enable us to be:

With the Great Lakes on their knees.

And warming water flowing to the lakes.

With evaporation all months of the year

With the Word incarnate wasted. (8-11)

The phrase "With evaporation all months of the year" refers to the understanding that with rising temperatures, the ice pack that has in our era formed on the surface of the lakes during the frigid winter months, will not form, leaving the lakewater open during every season. The evaporation of water into the atmosphere will continue to change
weather cycles due to changes in the moisture content. The evaporation of water into the air also creates more variability in the lakes’ water levels. That which seems to be a solid/constant in daily experience, in reality exists with many factors that can greatly change this. The line "With the Word Incarnate wasted" both shows the value and limitation of cultural expression. Through a cultural ecological lens, religiosity carries forth cultural significance and thus shapes the human species embodied connection to ecosystem. The viewpoint that such energy could be "wasted" expresses a recognition of cultural value, yet one that did not have the energy to create lasting change against other ecological forces/energies. This raises a question regarding whether or not poetics, even of this collection, holds enough power to create lasting change.

"What They Will Say of Us Later" directly addresses the negative human impacts upon the other creatures, the land, and the water. "With acid-scented water the rust in which [fish] swim"; "rivers unpolluted then polluted"; and "With polybrominated diphenyl ethers, mercury, and iron" (13, 15-16). These items showcase both human created and naturally occurring elements that humans have used for their own purposes.

In form, Anderson's poem is a series of fragments. The title suggests that something will be said of us later by some plural entity, yet the fragment structurally expresses that their will be no completed thought by the "other" that is not human. The pronoun "they" is never clarified, yet exists as a recognition of beings that exist outside of the human species. Anderson seems to be recognizing that language creation, even her own act of imaginative language use, exists as a particularly human form of expression. Furthermore, while other beings do not express themselves in the same way humans do,
this does not mean that they do not communicate by their own distinctive and relavent
means.

Throughout the poem, each line begins with either "With" or "And" to add ideas
rhythmically to what could be an ongoing chain of ideas imagining a time soon after now,
yet reconsidered from many years beyond that. The imagery of the final line "And
beauty anvilled of all its folds" (22) echoes and extends an earlier the imagery of the
earlier line "With Queen Anne's Lace pressed in a book." The implication of the final
image is that humanity in the Anthropocene era has become a dominant force that
eliminates some of the multi-faceted biodiversity. The verb "anvilled," in passive voice
construction has eliminated the active voice subject. Beauty anvilled of all of its folds,
rather than the implied humanity has anvilled all beauty from the Earth's folds. In this era
of the sixth extinction, this image holds a particular weight regarding the effects of our
actions upon the beautiful diversity of the world offering the greatest of warnings.

Resilience: How to Live With Increased Volatility

With a poem like "What They Will Say of Us Later" in mind, questions arise to
how the human species might learn to survive long-term in a state of co-existence with
natural ecosystems. Poems regarding past events like earlier discussed "Burned" and
"Firewhirl" also can open possibility for increased resilience for the human species. If
we today are able to understand past experiences through contemporary imaginative
language acts, we are able to see the possibility of moving beyond such tragedies. This
opens the possibility for regeneration, for example in the rebuilding or reconstructing of
communities in new ways. In historical moments of tragedy, the loss of the individual
and particular can be seen, yet when seen from a larger scale, the species or community of life has been able to move beyond those moments of destruction.

James Armstrong's poem "Union" contains imagery that offers a counterpoint to the volatility of the lakeshore. The poem, in two sentences, describes a grouping of trees whose roots have been exposed beneath the surface of the shoreline:

Who thought that
every old birch, rough
and lichen-fissured
and every pale sapling
painting its pale insignia
against the dawn, all
in the ochre underground
clasped each other,
locked muscular legs together, were braced together
against iron waves. (24-34)

Aesthetically, the image of the intertwined roots calls forth a feeling of strength. The title "Union" itself dynamic and filled with possible meanings, each speaking to a collective of individuals holding together, stronger together than alone.

The final poem I will discuss, Milton J. Bates's poem "Dendrolycopodium," features a Great Lakes plant that has survived since the Carboniferous period. Bate's presents this small survivor as an emblem of resilience. Bates opens the poem with a play on the biological term "understory":

There's an understory to the understory
in our woods, a stand of trees so small
you may not notice them, or if you do
mistake them for seedlings of the hemlocks
and spruces reaching for daylight high above" (1-5).

The narrative or story of this long-surviving species generates awareness of the potentiality for long-term existence and also presents ways that the human species might learn from another species. This line also points to the human capacity for limited seeing/understanding—potentially a caution. Bates further describe the

*Dendrolycopodium* as follows:

They flourish in the shade and wreckage
more ambitious trees, the overreachers
that invest in sky-scraping structures
to capture sunlight, risking storm and drought,
insects and rot, the beaks, the teeth, and saws
of creatures after heat and housing. (18-23)

The human species, presented in line with insects, decomposers, birds, and other toothed-creatures, are represented by their tool—the saw. As creature, the human species shares with many other species the basic need of warmth and shelter. Some species will become extinct while others will continue.

In this poetic space, Bates has created what Zapf calls an "imaginative space for otherness" (92). We as human species can recognize that which is other, and in the differentiation presented, are offered a space for deeper reflection. According to Zapf:
Literary texts are sites of radical strangeness, alienation, and alterity, both in terms of aesthetic procedures of defamiliarization and of existential experiences of alienation and radical difference; and they are also simultaneously sites of reconnection, reintegration, and, at least potentially, of regeneration of psychic, social, and aesthetic levels. (12)

In this case, the differentiation opens a capacity for self-reflection and potentially a call to live with greater humility and simplicity:

Press your ear against the ground and listen
to the maxims pulsing through their rhizomes:
Keep a low profile. Live within your means.
Let others spread the news of your success. (25-28)

Will humanity be able to heed this mighty example in its quest for long-term survival?

The imaginative space of this poem offers an alternative mode of existence that offers a model for survival.

**Conclusions**

It becomes clear in much of the poetry of the anthology that our innate instinct for survival remains strong amidst such volatility. Language, particularly the imaginative language of poetry will continue to play a role in our ability as a species to attempt to find greater balance and sustainability in our relationships with one another, other creatures, and the landscape. Zapf makes a case for sustainability studies including a serious study of culture, particularly literary culture. This type of cultural work is a movement from technology and scientific dominated approach, to a more balanced approach.
Meandering my way through *Waters Deep* has imaginatively taken me on a journey into a bioregion, meeting its varied inhabitants, considering its past, encountering its landscapes, and facing the existential questions of survival, both my own and our species. The specifics of places and names allow for the connection to distinct places. The collection as a whole embodies a sense that we, as species, extend our own survival through our ability to stay warm in light of an ever-changing earth. Poems about life and loss of life coupled next to narratives of resilience mark current anxieties about how increased volatility and change will continue to challenge our own survival, both individually and communally as a species.

The anthology as a whole gives voice in an important way to the connections of people and place. As opposed to a single poem, printed in isolation, the poems connected together in this anthology offer a glimpse into a bioregion and its inhabitants existing in deep time. Readers of this anthology come to know individual people, distinct species, geology, mythology, cultural anthropology, history (personal, cultural, environmental),

While I have merely dipped my critical toes into the surface of this collection of poetry to give a sense of how a critical lens of cultural ecology might be applied, the anthology as a whole has much more to offer an active reader who opens further dynamic potentiality of the work. As I write, Lake Erie crests at record heights due to the also record-breaking rains. Some climate scientists believe this could be a new normal due to the fact that the Midwest is poised to receive more of the rainwater being created as more ocean water enters the hydrological cycle. Two recent headlines that surfaced in the *Cleveland Plain Dealer* speak to the current state of the bioregion. The first, "Climate Change Report: Great Lakes Region Warming Faster than Nation" and the second, an
editorial from the general editors of the paper: "Lake Erie Needs More than H2O Fund to Stay a Jewel" in which the editors decry the lack of political will to fully fund and protect the Erie and its "four sisters" from human-made waste. Clearly there is much cultural work to be done. I believe the power of imaginative language, particularly of poetry, as one cultural tool that the human species can employ to restore right relationships with the other inhabitants of our shared space. As a teacher of both English and the Environmental Humanities in a Great Lakes city, I can attest that the poetry of place produced in *Waters Deep* will continue to be an inroad for students to develop a greater sense of connecting and care for the place which sustains them as I bring some of these poems into the space of the classroom.
Bibliography


