

Education & the Mycelial Matrix
of Critical Ecohermeneutics
or
Eat & Be Eaten, Mean & Be Meaning

by

Michael W. Derby

B.A., Canadian Studies, University of Calgary, 2002

THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in the
Individual Program
Faculty of Education

© Michael W. Derby 2012

SIMON FRASER UNIVERSITY

Fall 2012

All rights reserved.

However, in accordance with the *Copyright Act of Canada*, this work may be reproduced, without authorization, under the conditions for “Fair Dealing.” Therefore, limited reproduction of this work for the purposes of private study, research, criticism, review and news reporting is likely to be in accordance with the law, particularly if cited appropriately.

Approval

Name: Michael Whitefield Derby

Degree: Master of Arts

Title of Thesis:

Education & the Mycelial Matrix of Critical Ecohermeneutics or Eat & Be Eaten, Mean & Be Meaning

Examining Committee:

Chair: Dr. Gillian Judson, Limited Term Lecturer, Faculty of Education

Dr. Mark Fettes
Senior Supervisor
Assistant Professor of Education

Dr. Sean Blenkinsop
Supervisor
Associate Professor of Education

Dr. Vicki Kelly
Supervisor
Assistant Professor of Education

Dr. David Jardine
External Examiner
Professor of Education, Faculty of Education
University of Calgary

Date Defended/Approved: December 12th, 2012

Partial Copyright Licence



The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection (currently available to the public at the “Institutional Repository” link of the SFU Library website (www.lib.sfu.ca) at <http://summit/sfu.ca> and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author’s written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

While licensing SFU to permit the above uses, the author retains copyright in the thesis, project or extended essays, including the right to change the work for subsequent purposes, including editing and publishing the work in whole or in part, and licensing other parties, as the author may desire.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, British Columbia, Canada

Abstract

This work conceives of critical ecohermeneutics as an eco poetic encounter with the world aimed at germinating place-based approaches to education informed by a sense of resonant interrelationality. Ecohermeneutic inquiry aims to inspire an ecological ethos by eliciting attention to our interwoven ecological-ontological relationality with an animate more-than-human world. Utilizing mycelium as a central metaphor, I envisage this process as mycoremedial; enacting both a deliquescent and remedial effect on the calcified epistemic norms of modernity. Drawing upon the hermeneutic tradition, I address the cultural-linguistic historicity informing our being-in-the-world and consider the role of metaphor in provoking ontological attention and cultural transformation. I juxtapose eco poetics and ecolinguistics in order to work towards a critical, yet lyrical, ecology of language and offer a modest ecoexegetical rendering of the hermeneutic tradition itself. Finally, an ecohermeneutic approach to curriculum is conceived as re-indigenization, a return to place-based consciousness, that necessarily entails decolonization and ethical relationality.

Keywords: ecological hermeneutics; ecolinguistics; eco poetics; ecojustice education; place-based education; ecological imagination

*For James E. Stewart & in memory of Howard W. Derby, my grandfathers.
& for the lessons I have learned from stones, my grandfathers.*

Acknowledgements

The other day I received an email tagged with the quippish postscript: *No trees were killed in the sending of this message. However a large number of electrons were terribly inconvenienced.* Although humorous, and perhaps true in a narrow sense, I found myself troubled by the misleading “eco-friendly” ethos implied by this e-signature. I felt triggered as I recalled the utopian promises of my Grade 7 Technology teacher about the enlightened and paperless society just around the corner. In the future, he had proclaimed, all the books in our library will fit onto a single, quicksilver disc called a “CD-ROM” and we will all be connected by something called the “World Wide Web.”

Awesome.

Today I find myself increasingly enmeshed in a convoluted Inter-*net* of manufactured connections and yet suffering from a fundamental kind of dys-connected being in the world. True, I am privileged to have access to tremendous amounts of information and digitally networked to a global web of friends, teachers, scientists, artists, environmentalists; but none of my pubescent enchantment with a high-tech, green utopia remains. A recent Greenpeace report claimed that if the Internet was an independent nation, it would be the fifth worst polluting country in the world (Cook & Van Horn, 2011). Indeed, beyond its voracious energy consumption and toxic effluents, I believe the Internet is responsible, in part, for untold environmental destruction of a *deeper* nature by virtue of its implication in an anthropocentric and instrumental way of encountering the world. It is part and parcel of an invasive, monocratic cosmology that I find myself incessantly at odds with despite my familiarity with its constellations and my complicity with its nodes.

Drawing attention to the philosophic roots of things such as the sacred Internet tends not to be popular with *most* people and, unfortunately, *most* educators I encounter, who have internalized the technocratic imperatives and false utopian promises of modern education systems. Despite often finding myself fervently repudiated and invariably sitting alone, I feel compelled to restore to life and to education “its original difficulty” (Caputo, 1987, p. 1). It is frequently a heart-wrenching vocation for myself, my loved ones, my comrades and for anyone else who still dares to send me an email.

For this reason, and with great humility and gratitude, it is my honour to acknowledge the following people who have inspired me, whose ecocritical work is uncompromisingly devoted to the sometimes emotionally wrenching, yet crucial vocation of *being* ecological. United by a passion for truly trying to listen to the world, the diverse meditations and insights that spring from their works are all remarkable facets of the “one fundamental vocation,” which is *learning*. As Robert Bringhurst has written, “Those who have a vocation inhabit a world where doing and being are one and the same because continuous learning unites them” (2006, p. 48). Here is to teaching as a vocation, a Way of continuous learning and listening and being.

First and foremost, I wish to acknowledge my senior supervisor Dr. Mark Fettes for his extraordinary brilliance, his metaphoric eloquence, his subtle anarchistic undertones, and his patience and support throughout this project. His insights were vital and enriching and I have thoroughly enjoyed the flow of our conversations from entheogenic pedagogy to the finer points of anarchy-feminist sci-fi. I also want to acknowledge and thank Dr. Sean Blenkinsop for agreeing (or being forced rather) to take me on as a grad student and for the opportunity to be a part of the SFU Ecolearning Research Group. I aspire to be a kind of bohemian eco-genius like Dr. Blenkinsop one day, or perhaps just roam around with him in sandals. Some heartfelt vibes to Dr. Gillian Judson, who is perhaps the most generous and authentic professor I have ever known; and sincere gratitude to Dr. Kieran Egan, Kym Stewart and Dr. Natalia Gajdamaschko in Imaginative Education for their lucid wisdom (and transcendental buffoonery). Finally, much revolutionary love and respect to the Maple Ridge Environmental School Project research team: Laura Piersol, Jodi MacQuarrie, Veronica Hotton, Dr. John Telford, Dr. Michael Caulkins, Dr. Vicki Kelly, and Lara Harvester. Thanks for the conversations, and the silent times in the forest.

To my friends and family, thank you for your understanding, this is what I have been up to for the last couple of years, I hope you find it reverberant. Thank you to my mother Morag Derby for her immeasurable love and support no matter what madness I venture into; to my father Allan Derby, who took me into the wilderness as a boy and to whom I credit much of my love for the wild; and to my sister Jolaine Derby for her obvious kintuition, her dedication to righteous art of teaching and her adventurous spirit.

To my beloved T'selpinek, you are my favourite mystery; my heart will ponder you forever. Thank you for teaching me to listen to stones. Forget all this academic verbosity, just read this poem and lets go for a walk in the forest. Maybe find some mushrooms?

Once you have learned these words
you will learn that there are more
words than you can ever learn.

The word *hand* floats above your hand
like a small cloud over a lake.

The word *hand* anchors
your hand to this table,
your hand is a warm stone
I hold between two words.

- Margaret Atwood, *You Begin*, 1987

Last but not least, I wish to acknowledge the tree flesh these words dance upon, the rivers in my veins and mycelia in my mind, the vibrant processes and sacred rhythms that resonate *beneath* all this.

Thank you for gifting me these words.

Thank you for this beautiful life that whorls between us.

Thank you for these teachings.



Table of Contents

Approval	ii
Education & the Mycelial Matrix of Critical Ecohermeneutics or Eat & Be Eaten, Mean & Be Meaning.....	ii
Abstract	iii
Dedication	iv
Acknowledgements	v
Table of Contents	viii
Some Notes on Terminology.....	ix
1. mycoremediation & the poetry of being.....	I
1.1. ecopoetic understanding.....	16
1.2. learning to listen: ecological-ontology IOI.....	34
1.3. cultural-linguistic historicity & metaphor	46
2. metaphors to live by: ecopoetics & ecolinguistics	59
2.1. the rise of autonomous linguistics	62
2.2. ecopoetics: language & resonance.....	82
2.3. ecolinguistics: a life science of language	94
3. inoculating philosophical hermeneutics.....	118
3.1. Heidegger after-philosophy: substrates for inoculation	121
3.2. Gadamerian hermeneutics & the aporias of education	148
3.3. Gadamer & the more-than-human world	165
4. mycoremediation & education.....	174
4.1. education & the quotidian holocaust of now.....	176
4.2. revitalizing the critical in ecohermeneutic inquiry	182
4.3. critical ecohermeneutics as re-indigenization	192
5. healing & the resonant ecology of things	213
References	225

Some Notes on Terminology

☼ A note on the use of *we* and other third person pronouns. I often tell students that *we* is the most dangerous word in the English lexicon and requires diligent qualification. *Who is we?* When I use *we* or any other third person pronoun I am usually referring to those immersed in Western modernity. I say this not to further align myself with this tradition, but out of respect and honour for primitive communities, Indigenous communities, communities of the Eastern traditions, and all the other communities who have lived and learned, and continue to live and learn, other than *we* do.

☼ A note on the use of masculine and feminine pronouns. I want to acknowledge that citations within this paper are verbatim and as such, they may regrettably contain a patriarchal bias or use of language. I have tried to balance this asymmetry with the use of feminine pronouns wherever appropriate. I also regret any lingering patriarchal overtones in my own writing and welcome critical feminist feedback.

☼ A note on the use of the term *Indigenous*. I want to avoid reproducing the colonial logic of pan-Indianism, which is to say, speaking about Indigenous peoples as if they are a homogenous group with uniform social practices, histories and philosophies. With that said, I would also like to humbly and respectfully speak of the worldviews of Indigenous, oral cultures (Abram, 1996) and of Indigenous knowledges. To this end I will use the definition provided by Indigenous educational scholar Gregory Cajete. The term *Indigenous* will apply broadly to the many traditional and tribally oriented groups of people who are identified with a specific place or region and whose cultural traditions continue to reflect an inherent environmental orientation and sense of sacred ecology. The term *Indigenous* will also describe the culturally based forms of education that are not primarily rooted in modern Western educational philosophy and methodology (1994, p. 15).

☼ A note on the use of *EPOCHAXis*. Early in the writing of this thesis I found myself struggling with how to indicate the interconnectivity between aspects of a worldview. I kept wanting to write, for example, something about the “ontological-psychological-axiological” aspect of a metaphor. I have used the term *EPOCHAXis* (Epistemological-Psychological-Ontological-Cosmological-Historical-Axiological is-ness) as a way of getting at the multidimensionality of things in a specific cultural-historical moment.

The text face is RialtoDF-Piccolo, designed by Giovanni Di Faccio & Lui Karner. Rialto Piccolo is a favourite of Robert Bringhurst. He used it to set his books *The Tree Of Meaning* (2006) and *Everywhere Being is Dancing* (2008). It is an unusual font because it is a digital font specifically designed for letterpress printing.

“Nothing of any significance has ever been said in Arial.” - Dr. Mark Fettes

The poet produces the beautiful by fixing his attention on something real. It is the same with the act of love. To know that this man who is hungry and thirsty really exists as much as I do - that is enough, the rest follows of itself.

The authentic and pure values - truth, beauty and goodness - in the activity of a human being are the result of one and the same act, a certain application of the full attention to the object.

Teaching should have no aim but to prepare, by training the attention, for the possibility of such an act. All the other advantages of instruction are without interest.

- Simone Weil, *Gravity and Grace* (1952), p.108

I. mycoremediation & the poetry of being

Sun, moon, mountains and rivers are the writing of being, the literature of what-is. Long before our species was born, the books had been written. The library was here before we were. We live in it...

When you think intensely and beautifully, something happens. That something is called poetry. If you think that way and speak at the same time, poetry gets in your mouth. If people hear you, it gets in their ears. If you think that way and write at the same time, then poetry gets written. But poetry *exists* in any case. The question is only: are you going to take part, and if so, how?
(Bringhurst, 2006, p. 143)

To read birds, for example, requires familiarity with the articulated sounds of each species. Learning to look with understanding at what is already “before you” in the text, field, or sandbank is essentially, then, a problem of hermeneutics. (Gatta, 2004, p. 137)

The term *critical ecohermeneutics* has a nice ring. Clean and academic undertones issue from its recognizable casting within the perennial tradition of hermeneutic inquiry. The *critical* suggests a reverberant ethical awareness, perhaps a hint of dialecticism; the lingering vibes of a bygone generation, invoking the promise of radical liberation (a relatively unfashionable nostalgia these days). The *eco* suggests an expedient and timely retrofit; setting a new tone for sustainable and holistic understanding in a postmodern world confronted by an escalating ecological crisis. Clear as a bell. But the subterranean vibrations emanating from beneath its obvious meaning have struck me unexpectedly; I have been *elicited* (drawn forth, provoked, pierced) by the deep, polyphonic shockwaves produced by this inquiry.

Gadamer: *A question presses itself upon us.*

Rilke: *Not yours, a world's.*¹

¹ As cited in Jardine, 2006, p. 271, 274.

Sometimes the question is cerulean blue. Merleau-Ponty:

... [a sensible quality, like the color blue,] which is on the point of being felt sets a kind of muddled problem for my body to solve. I must find the attitude which will provide it with the means of becoming determinate, of showing up as blue; I must find the reply to a question which is obscurely expressed. And yet I do so only when I am invited by it; my attitude is never sufficient to make me really see blue or really touch a hard surface. The sensible gives back to me what I lent it to, but this is only what I took from it in the first place. As I contemplate the blue of the sky... I abandon myself to it and plunge into this mystery, it 'thinks itself within me,' I am the sky itself as it is drawn together and unified, and as it begins to exist for itself; my consciousness is saturated with this limitless blue... (as cited in Abram, 1996, p. 54)

Sometimes the question is pressed upon us as red and white polka dots on the dome of an *Amanita muscaria*, emerging from the forest floor as it emerges from memory with the half forgotten melodies of childhood lore. Sometimes the question is an awestruck look in the eye of a young girl as she realizes the *real* meaning *between* the lines; or a journal entry of exquisitely ornate forms scribbled in fern green crayon; or a lonely clay bowl poised precariously on the edge of your writing desk,

almost *quivering*
reaching for your hand from the brink
of seismic transformation.

Sometimes these questions can - if we pay attention – evoke a kind of subliminal pantheon of voices and synesthetic incantations that whisper to us in fleeting moments of acuity. Suddenly, we are pierced and caught breathless. We find ourselves confronted by a verbose world teeming with gestures, a world of meaningful things that seem to address us from beneath our everyday awareness. A world of patterned questions pressed upon us as a sensuous continuum of being, if only we are willing to recognize its sonorous and variegated forms. Perhaps, if someone has taken the time to teach us, we may more readily make sense of these encounters.

Maybe you too have caught glimpses of an animate presence? In faces that materialize out of the patterned grains of wood; in the ethereal folds of a crumpled piece of scarlet silk; in rivulets of rain that pitter-patter down salal leaves with chaotic liquid cadence; or even in ephemeral moments of silence that *speak to us* beneath the obstinate din of modernity. In such encounters, we often sense what might be described as a conversation transpiring between the

bodies of a world. Or perhaps we feel a sense of kinship and familiarity with the flux of things that lies just beyond our ability to articulate. We sense the quickening of the world, but not *just* with our perceptual organs. We tacitly *understand* the world; we *recognize* its plurality reverberating in the plurality of our own minds.

Wittgenstein: 174. *What is strange is really the surprise; the question*
“How is it possible!” (1982)

Poet and linguist Robert Bringhurst (2006) has written, “...the life of the mind, like the life of the forest, only exists in an interactive and polymorphous form. Your life may be yours alone, but unless a lot of other things are living, neither am I and neither are you. This is true for the individual, true for the species, and true for the mind” (p. 67). Perhaps in these attentive moments we recognize ourselves as a protean confluence of clay, breath and questions pressed upon us by an equally polymorphous world? We recognize that we are *of* this multiform world and mindfulness of its patterned resonance is one of the ways we learn about *what-is*. “[A]ll that confronts us is the world, gesturing at us. The world has patterns, of which our thinking is part. It makes us feel good to experience these patterns: it is one way of coming home” (Zwicky, 2003, p. 114). Home to a world thrumming with meaning that existed before we could speak of it; a world of reverberant and writhing multidimensionality though we labour to flatten and conform it to our univocal constructs (Jardine, 1998).

Perhaps if we were consistently taught to fix our attention on something *real*, we might more readily come face to face with the resonant physiognomy of things? We might recognize an immeasurable, yet familiar, world looking back at us - balanced as it were, on a pivotal point of focus. Yet we persistently remain unable to identify the particulars of our tacit understanding of this interwoven and reciprocal existence (Polyani, 2009). Those of us raised and educated within a Western (post)modern worldview are often left uncertain as to how to even *listen*, let alone *respond* to this inquisitive world that stares back and speaks and reaches for our hand as we reach out for its living textures. Though there are many “well educated” people who are adept at

reading texts and conceptual schematics, we are largely unaccustomed to reading birds and soils,² songs and sandbanks, mountains and metaphors, uncertain of how to look with hermeneutic understanding at what already lies before us and within us. We often speak as if language is nothing but the projection of our inner, subjective *humanness* onto an outer world of inanimate matter and empty space, instead of recognizing that we dwell within language. That language too is a natural phenomenon and that we can employ it to listen to the world questioning itself, if only we are taught to recognize its manifold forms and ecological semantics. Bringhurst:

To me it is clear that things have meaning because they *are* meaning, and that language has meaning - or *can* have meaning - because it can speak, poorly but truly, of some of the things that language is not...

Language listens to the world. I listen with it. What I hear when I listen is a question, which is listening itself. The question often changes form: from silence to breathing to speaking to music to voices to visions to silence again (2006, p. 62-63).

What is to become of listening attentively to such questions - obscurely expressed and persistently ineffable, and yet, the very language of being, the literature of what-is? How might we approach language in order to listen to the polyphony of the world, instead of compressing it until it is uniform with our anthropocentric configurations? How are we to read and to listen and to respond to this ever-shifting book unfolding before us, pressing question after question upon us when all we are taught to see are disconnected *things*? A color, a bowl, a bird, a word, a student, nothing but vile mushrooms and dirt - a prosaic and ordinary world.



On the way to work she passes shopping malls, prisons, factories, office buildings, the gridlocked monotony of *human* superimposed upon the background fractals of *nature*. She feels oppressed by the anthropic geometry of the world, by its very architectonics. Although it seems the world has always been this way, she cannot elude the sense that it has always seemed to be something

² This is not to say that we should necessarily strive to read birds and soils as an educated ornithologist or pedologist may, or even as recreational bird watchers or horticulturists. Rather, the point is that we are largely unaccustomed to reading the world hermeneutically at all; to say nothing of being read by the world. For now, let us simply say that we have become too accustomed to *knowing about* what lies before us, rather than *listening with* what lies before us.

else as well. Not something *beyond*, not the transcendental cul-de-sac of Heaven or the absolute Republic of Forms, but something vibrant and alive *beneath* all this. Something *within* the world, something *between* things that speaks to her. And though she yearns to share and discuss her consanguinity with the world

it is hard to explain.

Now she stands in front of her class, reaching for this ineffable sense of kinship with things, pointing and hoping, not for explanations, but for the right kinds of questions, for what *calls for questions*. Exasperated by the humdrum volume of green solutions for modern living, the ubiquitous din of the air-conditioner, she cries out -

Pay attention!

No, not to the finger, to this!

Here.

All the other advantages of instruction are without interest.



Philosopher-poet Jan Zwicky (2003) has written, “One might say: ontological understanding is rooted in the perception of patterned resonance in the world. Philosophy, practiced as a setting of things side by side until the similarity dawns, is a form of ontological appreciation” (p. 7). Let us initially propose that critical ecohermeneutics is another way of approaching ontological understanding, of extending its insights into ecological pedagogy. It too is rooted in the perception of patterned resonance; it too endeavours to elicit ontological appreciation of ecological interconnectivity. As a practice, it might be thought of as the disciplined training of the attention to *recognize* (i.e. to re-think, to think again and again, to recycle) the resonant structure of the world (Zwicky, 2003). Or, in another sense, it is something like attuning one’s thinking to the polyphony of the world itself. I want to say it is a process of *making* connections, as in drawing a web or the chalk lines of a mind map, which is one way of looking at it. *Really* though, the connections already exist and an ecohermeneutic education is the practice of eliciting one’s full attention to the resonant ecology *between, within* and *beneath* things in living time.

Learning to recognize our embeddedness in these polysemous relations is essentially a problem of hermeneutic understanding, as educational philosopher David Jardine has written, “We are *already* connected to the Earth, to each other, to our children, albeit in ambiguous and multivocal ways” (1998, p. 22). And philosopher Shaun Gallagher in *Hermeneutics and Education*: “The living human being understands the world as he finds himself already in it, not as an anaemic egological entity eruditely confronting an opposing objective entity. Interpretation is not something that I (the epistemological ego) do, but something that I am involved in” (1992, p. 45). The world is already meaningful; we are already running with it.



Two things I found, set side by side:

Czech dissident, poet and politician Vaclav Havel (as cited in Capra, 2002, introduction):

Education is the ability to perceive the hidden connections between phenomena.

And master mycologist Paul Stamets (2005, p. 125):

Mycelium is, in essence, a digestive cellular membrane, a fusion between a stomach and a brain, a nutritional and informational sharing network. It is an archetype of matter and life: our universe is based upon these networking structures. Your job is to become embedded into the mind-set of this matrix and use its connections for running with mycelium.

Zwicky continues: “A metaphor sets one thing beside another and says, ‘See, they have the same form’. Which is to say: they make the same gesture; they mean in the same way” (2003, p. 8).



Consider a mycelial matrix, an interwoven mass of branching, thread-like hyphae that course and surge throughout many, if not most, of Earth’s ecosystems, symbiotically facilitating nutrient uptake, decomposing organic matter and generating ever-thickening layers of rich soil and humus. Although these vast networks are essential for healthy ecosystems, these processes

occur primarily beneath our everyday awareness. Occasionally we happen upon the fruiting bodies of these subterranean interweavings and only then are we reminded of the vibrant webwork beneath our normal appreciation.³ Even then, many of us have been taught to revile the intrinsic value and astonishing mysteries of fungi and their complex interrelations with the broader ecology,⁴ or to simply reduce them to instrumental and commercial human utility. Despite the fact that they crucially support and provide us life, many people are not even aware that mycelia exist. Not to mention, most people in the so-called *developed* world only ever encounter fungi in grocery stores, not sprouting amongst the lush, verdant floors of a boreal forest, just after an early autumn shower.

A complex and resourceful structure for sharing information, mycelium can adapt and evolve through the ever-changing forces of nature. I especially feel that this is true upon entering a forest after a rainfall when, I believe, interlacing mycelial membranes awaken. These sensitive mycelial membranes act as a collective fungal consciousness. As mycelia's metabolisms surge, they emit attractants, imparting sweet fragrances to the forest and connecting ecosystems and their species with scent trails. Like a matrix, a biomolecular superhighway, the mycelium is in constant dialogue with its environment, reacting to and governing the flow of essential nutrients cycling through the food chain. (Stamets, 2005, p. 5-7)



Now consider human understanding as an interwoven mass of branching, thread-like networks that surge and vibrate predominantly beneath our everyday awareness. Fruiting bodies of knowledge emerge from our cultural-historical understandings and take shape. Unfortunately,

³ Jardine has written on the importance of a humus-filled way of life and the way we are living out our disconnectedness and disengagement in educational theory and practice in “often unnoticeable and unvoiced ways.” “As we sever our connections with the Earth, it ceases to be our abode and becomes a meaningless objective mechanism which is at the disposal of our whim and consumptive fantasies. And, correlatively, as the Earth loses its *humus*, its living, generative character, the subject loses its humanity by losing the connectedness with the humus out of which it has emerged” (1998, p. 9-10).

⁴ According to Stamets the fungi kingdom is populated with between 1 to 2 million species. “Fungi outnumber plants at a ratio of at least 6 to 1. About 10 percent of fungi are what we call mushrooms, and only about 10 percent of the mushroom species have been identified, meaning that our taxonomic knowledge of mushrooms is exceeded by our ignorance by at least one order of magnitude. The surprising diversity of fungi speaks to the complexity needed for a healthy environment” (2005, p. 10-11).

in modern times, these living bodies of knowledge have tended to become artificially hypostatized as rigid or calcified epistemologies; methodically disconnected, decontextualized, denatured, and severed from the interconnected and interpretive matrix of understanding that informs our being-in-the-world. Ideally, these fruiting bodies of knowledge would bloom, grow and say something with the world, before naturally decaying and putrefying as all things and knowledge systems must. In this way, we would come to know something of the world and ourselves as embedded in living, organic and impermanent processes within a certain cultural-historical milieu (amongst many). Viewed in this way, these bodies of knowledge would serve to draw attention to the ecological and interpretive processes *beneath* our knowing and their living vibrancy and natural decay would work to generate healthy new ecocultural soils for future generations of understanding and forms of life to flourish.

Modernist thinking has largely failed to *recognize*⁵ that methodical rendering aimed at severing understanding from phenomenology and place-based consciousness has a tendency to mechanize thinking and decontextualize ways of knowing from place (i.e. denature a knowledge system's indigenous ecology of meaning). Which is to say, when our ways of knowing and making sense of the world are institutionally reduced (i.e. schooled), universalized (i.e. divorced from place) and filtered through the univocal epistemic constructs of modernity, we lose our sense of resonance with the living ecology of possibility and are more likely to succumb to a kind of calcified or fossilized way of understanding human-world relationality. Over time, this persistent eschewal of decomposition will eventually deplete a knowledge system's humus - its generative character or potentiality - and reduce its vitality. A calcified way of understanding and being in the world will literally begin to deplete its cultural-historical soils and consume the living world on which it depends in search of the meaning it has corralled into a strictly

⁵ One might say that a disconnected or calcified epistemology is defined by its lack of *re-cognition*, its ability to *re-think* or *recycle* epistemic certainties. As Zwicky has written, this phenomenon of seeing again or seeing differently -or as Wittgenstein called it "seeing-as" - is crucial to the mystery of meaning. "The moment of recognition happens as if by magic; and yet, when we reflect on it, we see - its very name tells us this - that it is impossible without prior experience. What becomes puzzling then is the phenomenon of insight, the creation (apparently) of new meaning. Here, we forget that to recognize can mean to re-think, as in *think through differently*. It need not always signify mere repetition of a former cognition. We say in such cases not only that we recognize X (as Y) but that we realize X *is* Y... That is, 'recognition', even in apparently straightforward cases, involves re-organization of experience - an act of contextualization, a sensing of connexions between aspects of immediate experience and other experiences" (2003, p. 1).

anthropic and monolithic construct. In effect, we become dulled to the polyphonic resonance of the world, unable to attune to the manifold cadence and imaginative fecundity of what-is beyond what is readily recognizable as an epistemic norm. We become hardened to the world as we experience it, more ready to accept the mechanistic dictates of the *Inevitable Certainty* than trust our fluid coalescence and exchange with the animate Earth now and now and now.

And now.



The verb *deliquesce*, it seems to me, provides the most felicitous image to describe the process of critical ecohermeneutic decomposition. I imagine subjecting the crystalline salts of our epistemic certainties to a deep and sonorous vibration, catalyzing a fundamental shift in their ontological structures. In a process of ecophilosophic liquefaction, they melt down, restructuring and purifying as they filter through thick soils and acres of reclaimed wetlands. We drink them again, as if for the first time.

I imagine our fruiting bodies of knowledge as mushrooms. Emerging from the mycelial matrix of our cultural-linguistic understandings and developing a rigid dome and stalk, reproductive spores if the conditions are favourable, but *deliquescing* as they reach maturity, putrefying and decaying back into the Earth itself to reconnect with a planetary ecology of understanding. Thus, a critical ecohermeneutic process of inquiry might best be imagined as an accelerated decomposition of calcified knowing, or what I will call a *deliquescence* of one's EPOCHAXis presuppositions (i.e. worldview); an ecocritical reinterpretation of one's hypostatized and habitual being-in-the-world.



A spore in your mind:

When you think intensely and beautifully, something happens.

Symptoms may include but are not limited to: involuntary twitching beneath the eye; sudden awareness of the quality of light in the room; an ineffable sense of the limitation of human thought in face of ravishing beauty;⁶ being struck by the particular *thisness* of items you keep on your desk; the imagined decay of “inanimate” objects in the accelerated plexity of time;⁷ or re-attuning to the melodic literature of birdsong wafting in from the window (was it always there?)

- *oh, now I understand.*



What is the point in thinking analogically about mycelium and human understanding? Or for that matter, thinking analogically about anything at all? Conceivably, it may assist us in stitching a metaphorical thread⁸ and offering us new insight, but what does any of this have to do with ecological education? My hope is that thinking ecohermeneutically will offer new

⁶ Zwicky has written of the “unwordedness of beauty” and the connection she wants to establish between ravishment by beauty and the recognition of human limitation as a way to generate ethical awareness. She identifies three sources for this awareness, “...wisdom is thought conditioned by an awareness of *limits* to the systematically provable, articulable, or demonstrable. Whence this awareness? Plato, I think, correctly identified one source: on-going, long-term ravishment by beauty. The Dao hints at another: loss. And folk tradition to a third: working with one’s hands, in silence; attending through the body, to the rhythms of the earth and one’s own mortality” (2002b, p. 145).

⁷ David Wood has written a fascinating ecophenomenological account of what he terms “the plexity of time” and its significance to the experience of relationality. “What phenomenology does is to activate and reactivate the complex articulations and relations of things, restoring through description, through dramatization, a participatory engagement (bodily, imaginative, etc.) with things. A turn to the articulatedness of things, and to their eventuating groundedness, is a return to the conditions of human fulfillment and connectedness, but also to the sources of renewal, transformation, and resistance” (2003, p. 215). Critical ecohermeneutics also seeks to draw attention to the complex articulations and relations of things in the aspect of time. In order to get a sense of thing’s being in time I sometimes engage in an imaginative exercise whereby I “fast-forward” or accelerate the natural decomposition of an object in front of me or of all the objects around me. I find this meditation to be particularly useful in breaking down dualisms such as organic/inorganic, animate/inanimate, or human/nature. For example, early in the process of writing this thesis I attempted to describe an animistic perspective of the world to my mother, who, understandably balked: “so...what about a shoe?” I was able to offer this imaginative exercise as a way of understanding the accelerated organic decomposition of a shoe and its eventual reintegration into living soils, hence decomposing the hard and fast boundary between organic and inorganic.

⁸ One of the powers of metaphor is the way it “stitches a thread” between two things and alters our understanding of the qualities of each thing in turn as new meanings are generated *in-between*. In this sense meaning resides in the relationship between things. For example Zwicky has written: “The eyes are windows.⁷ This changes, among other things, the way we understand houses” (2003, p. 77).

metaphors to live by as it were, new ways of thinking about human-world relationality from within the flux. Or perhaps we might say that thinking metaphorically allows our thinking, at times, to resonate with the thrumming polyphony of the Earth itself? It has the power to draw us momentarily into a kind of pivotal affinity with everything else. As poet Charles Simic has claimed: “A poem is a place where affinities are discovered. Poetry is a way of thinking through affinities” (as cited in Zwicky, 2003, p. 47). An affinity between human and fungi discovered by Sylvia Plath in her poem, *Mushrooms* (1998, p. 37):

Overnight, very
Whitely, discreetly,
Very quietly
Our toes, our noses
Take hold on the loam,
Acquire the air.
Nobody sees us,
Stops us, betrays us;
The small grains make room.
Soft fists insist on
Heaving the needles,
The leafy bedding,
Even the paving.
Our hammers, our rams,
Earless and eyeless,
Perfectly voiceless,
Widen the crannies,
Shoulder through holes. We
Diet on water,
On crumbs of shadow,
Bland-mannered, asking
Little or nothing.
So many of us!
So many of us!
We are shelves, we are
Tables, we are meek,
We are edible,
Nudgers and shovers
In spite of ourselves.
Our kind multiplies:
We shall by morning
Inherit the earth.
Our foot's in the door.

Despite poetically interpreting a somewhat ominous aspect of fungi, the metaphoric way in which Plath was able to think *with* mushrooms lends itself to some interesting insights that may offer us new metaphors to think with, new ways of approaching complex matters as ecological educators. In the first place, the piece can be used (that is, ecohermeneutically read) to draw us towards some interesting ecological questions. For what calls for questioning now that “morning” is upon us. How, one might ask, did the bland-mannered “nudgers and shovers” multiply? What made them earless and eyeless to the world? What role does meekness play in this foreboding scenario? The affective dimension of poetic thinking opens space for us to critically think about the way we are in the world that is different from straightforward cognitive analysis. This is not to say that Sylvia Plath need replace the Ecology textbook, but that developing the metaphoric capacity characteristic of good poetry is, in a sense, a pedagogic practice of central concern to ecological education.



My contention is that metaphoric thinking is an important skill and practice for educators to develop, especially in a time of ecological crisis. We have come to live and understand our lives within a cultural-historical context of fragmented relationality; exacerbated by the privileging of anthropocentrism, reductionism, linear causality, and dualism in modernist thought. Critical ecohermeneutics seeks to initiate a mycoremedial process upon these persistent epistemic toxins and revitalize the landscape of fecund existential possibility. In other words, critical ecohermeneutic inoculation works to accelerate the decomposition of the rigid aspects of worldviews. In the chapters to come, I will attempt to inoculate education with the spores of critical ecohermeneutic inquiry in order to enable a kind of mycoremediation of this pivotal social institution, essential both for cultural reproduction and for cultural transformation.⁹ Reconsidering the intimate relationship that exists between education and hermeneutics will be a key aspect of this inquiry, as will *recycling* (i.e. ecohermeneutically reinterpreting) some of the difficult aporias they share. As Gallagher has maintained:

⁹ This is not to claim that the educational system is *necessary* for cultural transformation or even for education per se (see Esteva & Prakash, 2008; Rasmussen, 2011); or that education offers us a universal panacea for confronting the ecological crisis. This is only to acknowledge that it is a key institution in the cultural reproduction of an ecologically destructive worldview and, as such, presents a crucial site of inoculation.

Reproduction, authority, and conversation; objectivity, distortion, and transformation: these are issues that both hermeneutics and education must deal with. If education involves understanding and interpretation; if formal educational practice is guided by the use of texts and commentary, reading and writing; if linguistic understanding and communication are essential to educational institutions; if educational experience is a temporal process involving fixed expressions of life and the transmission or critique of traditions; if, in effect, education is a human enterprise, then hermeneutics, which claims all of these as its subject matter, holds out the promise of providing a deeper understanding of the educational process. (1992, p. 24)

I share the idea that thinking hermeneutically, that is, recognizing the cultural-linguistic historicity of our understanding, is crucial if we are to reach for deeper understanding in education. I also share the idea that the ecological crisis is a product of modern thinking (Blenkinsop, 2010) and if there is to be change then it has to be deep change at the cultural level, seismic change from a worldview which is ecologically destructive in its practices and its structural underpinnings (i.e. its EPOCHAxis presuppositions) to one that is ecologically inspired. But this begs the question, what is *deeper*? After all, hermeneutic inquiry is nothing new, how might ecohermeneutics allow us to see *deeper*? Zwicky:

Lyric thought is a kind of ontological seismic exploration and metaphors are the charges set by the seismic crew. A good metaphor lets us see more deeply than a weak one. (2006, p. 44)

Boom.



Something beautiful happened.
Her clumsy yellow rain boots slowed her mad rush home, considerably.
She was stalled again by her mother's doubt & incessant vacuuming,
But finally, they were on their way back to investigate.
She had discovered it earlier that morning in the schoolyard.
A giant ring of mushrooms, a perfect circle of magic.
When a bell rang, she ran home.

She heard the mechanized drone
Before she saw the slow, crimson machine,
Before she realized what it *meant*.
Mr. Bacon, the groundskeeper, waved gaily to them
From his brand new, streamlined riding mower.
The schoolyard was immaculate, and without enchantment.
The school bell rang.



Perhaps seismic charges and exploration crews are not the most ecological metaphors for describing an ecohermeneutic approach to education? Instead, let us envision tiny bell-shaped fungi scattering the forest floor, which, as I have claimed, are sometimes able to elicit attention to the vast network of interconnected processes beneath us. I want to consider how an ecohermeneutic approach to education might elicit a similar kind of ontological attunement to the resonant ecology that reverberates beneath our everyday experience.

Most schools today tend to utilize a mechanized bell in order to call students to attention and - in alignment with the cultural values and imperatives of industrialism - order the experience of students' lives (perhaps indefinitely as they graduate from school bells to alarm clocks and work whistles?). What if students were provoked to respond to an ontologically different order of bell? A prayer bell of sorts, though not the ecclesiastical variety confined within the church spire or clock tower, but a "bell ringing in the empty sky" such as the one heard in a dream by Japanese Zen priest Kyochiku during which he attained enlightenment ("that moist, green, Earthy enlightenment that de-spirited Western aspirations seem only to look down upon" - Jardine, 1998, p. 85). Perhaps an educational experience that called us to attention in a such might be able to draw us into the sense of both the exquisite solitariness of nature, and the vibrant interrelatedness and resonances of Earth? Both the intertwining kinship of things and the uniqueness, individuality, and utter irreplaceability of every *thing* (p. 88).

Whereas a church spire inspires me to lift my eyes to the heavens above, entering a tea room inspires in me something different. The entrance to the ceremonial tea room, by the very way it is built, urges me to incline my body and to bow, bringing me closer to the earth whose textured layers of humus allow buds of tea trees to leaf. The savouring of the tea allows me to touch again this earth that cradles and nourishes both my body and soul. During the Tea Ceremony, I come to respect the fullness of silence, and I become aware of how silently I participate

in the constituting of the silence. And in that silence, I experience being-one-with-the-earth. (Aoki as cited in Jardine, 1998, p. 85)

What kind of education might inspire an experience comparable to the tea ceremony? How might we intentionally draw students towards the resonances of Earth, urging them towards sustained and humble reflexivity upon the textured, interpretive and multidimensional layers of their understanding?

In order to avoid getting bogged down in the “standard objections” (logistics, assessment, politics, prescribed learning outcomes, etc.) to ecological education, or the well-meaning, yet persistently unimaginative offerings of many ecological education programs (Judson, 2010), let us first recognize (i.e. re-think) what thinking and understanding are in education in the *deepest* sense. This will eventually lead us to a critical ecohermeneutic recycling of philosophical hermeneutics itself in Chapter 3. But for now I would like to explore ecohermeneutic inquiry as a kind of *ecopoiesis* or *ecopoetic understanding*. This will take us deeper into a discussion of metaphoric thinking, for if we are to try to approach language as a way of drawing attention to the Earth and inspire students to reflect upon the textured layers of humus that inform our ontological understandings, we must dig deep to the metaphorical roots, the mycelium as it were. Or put differently, we might ask if so many of us have been schooled to read the world as dead matter and mechanism, how might we begin to think differently? How might we approach language in order to inspire a respect for the fullness of silence (or at least active listening)? What kind of ontological understanding urges us to recognize our sensuous permeability with life, our participatory reciprocity with a living, breathing planet?

1.1. ecopoetic understanding

It starts with rhythm, that much I know. I mean the way the poem moves in time – its pace and gait and proportions. A poem can unfold with the shapely aplomb of a gavotte, or meander, or move with a quicksilver stutter and glide. Each rhythm shapes the energy flow with a distinct logic; each parses the world with a syntax of its own. A poem thinks by the way it moves.

But that raises another question, for rhythmic logic is not conceptual. How can you translate its native terms into categories your mind can deal with? How do you talk about moves your body grasps in a flash? (Lee, 2002, p. 19-20)

I think I summed up my attitude to philosophy when I said: philosophy ought really to be written only as a poetic composition. (Wittgenstein, 1984, p. 24)

A poem *thinks* by the way it *moves*. One is tempted to say all writing *thinks* by the way it *moves*; it *means* by the way it *is* (and what it is not, what dimensions of experience it omits, muzzles, flattens, deadens). A thesis *also* thinks by the way it moves, as does a love letter, a scientific document, a philosophical treatise, and an educational journal article. This is not to say these things think or move in the same ways, only that they *are* what they *enact*. Or what they are able to enact as limited as language is; they point to something in as much as language can speak of something it is not. Lee has claimed, “A poem tries to enact that wordless tumble and surge in its own medium - in line breaks and pauses, syntax and sound, the ripple and clarion strut of sense on the page. It tries to recreate the cadence of how things are, through the nitty-gritty of craft” (2002, p. 19). My contention is that the way a “good poem”¹⁰ moves, enables it to

¹⁰ I use the term “good poetry” here as Zwicky explains it: “Good poetry, like all meaningful thought, traces a gesture of address. It enacts ontological attention. Metaphor is one of the means it uses to do this” (2003, p. 58).

recreate the “cadence of how things are” in a way that retains much of the ambiguity, the multidimensionality, the “tumble and surge” of the world’s resonant ecology. Or as Zwicky argues, “...those who think metaphorically are enabled to think truly because the shape of their thinking echoes the shape of the world” (2003, foreword).

A love letter and a scientific document *also* recreate a certain ontological cadence through the nitty-gritty of craft. The way each one moves tells us much about the way each one thinks about and experiences the world. Imagine a love letter crafted in the cold standardized aloofness of a conventionally “objective” scientific document. Or an elementary particle physics dissertation that employed the playful innuendo and emotionally-laden imagery of romantic embellishment. Although these hybrids may initially seem absurd, or even a counter-productive, could we not say that the love letter is at least written in the same language of information¹¹ as the scientific document - though its *real* meaning may be discernable between the lovers only?¹² Could we not also say that the absence of colourful imagery and emotionality typical of love letters is the result of a methodological choice in the writing of scientific documents, an intentional reduction, not a reflection of the experience of *doing* science within the passionate and mercurial flux of life? Are we not limited, in a sense, by this methodical rendering? Or as American evolutionary biologist Steven Jay Gould has written:

We often think, naively, that missing data are the primary impediments to intellectual progress – just find the right facts and all problems will dissipate. But barriers are often deeper and more abstract in thought. We must have access to the right metaphor, not only to the requisite information. (1985, p. 151)

¹¹ Wittgenstein: “888. The way music speaks. Don’t forget that even though a poem is framed in the language of information, it is not employed in the language-game of information” (1980).

¹² Vygotsky has written a fascinating piece on the relationship between thought and speech between lovers in the final chapter of *Thought and Language* (1986, p. 237). Drawing upon the writings of Tolstoy, Vygotsky explores how the role of speech is rendered redundant when people maintain “close psychological contact”. Essentially Vygotsky is trying to draw attention to the “multifunctional nature of language” (p. 240) and the importance of context in interpretation, “Every sentence that we say in real life has some kind of subtext, a thought hidden behind it” (p. 250). Indeed, and critical ecohermeneutics endeavours to reveal the EPOCHAXis presuppositions and worldview subtexts hidden behind, or rather *beneath*, our sentences, but also to revitalize the living relationship between words and the resonant structure of the world. Or as Vygotsky claims, “The relation between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing...” (p. 255). For Vygotsky this is a cultural-historical relation, not an ecological relation per se, but an interesting parallel I think nonetheless.

And Wittgenstein:

What compels us *so* to form the concept of identity as to say, e.g., “If you really do the same thing both times, then the result must be the same too”? – What compels us to proceed according to a rule, to conceive something as a rule? What compels us to talk to ourselves in the forms of the languages we have learnt? (as cited in Zwicky, 2003, p. 13)

In any case, such texts are crafted and given form on the page in order to assist the reader in recreating and reinterpreting an experience imaginatively. To be sure, the experiences *are* different, the role of emotion is different, the level of training or depth of lived experience needed to interpret the texts is different, and so on. The central point here is that language is never entirely true to the experience, be it rendered methodically or romantically. In other words, as univocal directives would have us believe, $A = A$, or that is one way of looking at it. But within the phenomenological surge of time, in moments of ontological insight or paradox, sometimes $A = B$. And secretly between you and me $A = Z$; but for the purposes of this paper we must have access to the right metaphor, so $A = A$ bell which reminds me of small mushrooms. Jardine has addressed, in a much more cogent fashion, obedience to methodology and the historical rise of univocal discourses, claiming that the paradigm of clarity in Western knowledge cannot allow for ambiguity, metaphorical speech, poetry or analogy, or in other words, A must equal A . “To speak truly is to adhere to the univocal frontiers of things themselves (or to adhere to the univocal frontiers of reason itself which reproduces its own frontiers by constructing objects of knowledge in light of those frontiers). Discourse must revolve around ‘one name’” (1998, p. 14).

My intention here is not to let saccharine love letters and poetic fluff off the hook or to romanticize their power (one can just as easily reproduce a calcified phenomenology using dead metaphors in these forms as well – i.e. roses are red, violets are blue). Rather, the point is to reiterate the phenomenological and multidimensional relation between meaning and things; and the role of metaphoric thinking in drawing from this interrelated ecology to engender imaginative engagement and new possibilities for understanding. There is much literature now pointing to the importance of imaginative imagery and metaphor in innovative mathematical thought (Bahls, 2009; Jardine, 1998; Lakoff & Nunez, 2000; Zwicky, 2003) as well as scientific

thought and scientific writing itself (Shepard, 1988; Harre, Brockmeier & Muhlhausler, 1999).¹³ This reemphasizes the importance of metaphoric thinking in our thinking and writing, though its explicit influence is often suppressed and reduced by the way our forms of knowing move and manifest according to cultural norms.¹⁴ In other words, the imaginative and poetic generativity of our thoughtforms tend to be compressed – in modernist thought - into univocal norms and determinate forms in order to be culturally legitimate.

Education, of course, plays a key role here in generating methodical doubt about the phenomenological significance of our experiences. It has a tendency to inculcate a kind of second-guessing of our intuitions, our emotional being, our sense of the interpretability of things (i.e. A must only equal A). A poetic orientation, however, is sometimes able to resist (or even decompose) epistemic hypostatization through the nitty-gritty of craft; which is to say, it can recreate an affective and phenomenological tumble and surge that emulates the cadence and ambiguity of how things are within the living flux. This is not to suggest that ornithological or mycological analyses be composed as haikus, but to recognize that ecopoetic understanding offers us a polysemous orientation to birds and fungi that, by advent of its multivocality, works to deliquesce rigid univocal presuppositions. An ecopoetic education is not anti-science, or even anti-reductionism, rather it is an attempt to resituate these interpretations as one approach within an ecology of meaning.

¹³ Harre, Brockmeier and Muhlhausler have written: “It is now widely agreed among philosophers and sociologists of science that scientific writing derives its power to convince at least as much from its narrative structures as from its logical organization” (1999, p. 69). Which makes me wonder how much power scientific and mathematical languages derive from their *poetic experience* (aesthetics, ethics, and something *beneath* these categories, *something else*)? Euler’s Identity has commonly been dubbed “the most beautiful equation in the world”, and I have spoken with several mathematicians who have described a threshold in “pure mathematics”, where math becomes a kind of poetry to describe the world. Do scientific and mathematical languages also seek to “rejoin” the poetic? How would the fundamental character of science and mathematics shift if they were taught, assessed and embodied as poetics (or at least acknowledged to *contain* a poetic dimension)? Zwicky has also briefly touched upon this subject: “Geometry, like metaphor, is a form of seeing-as. But unlike metaphor, geometry is uninflected by temporal awareness. It is thought cut loose from time’s gravity” (2003, p. 69).

¹⁴ The pervasiveness of metaphor and poetry, or in other words, its un-extraordinary usage, has also been argued by anthropologist-linguist-poet Paul Friedrich in *The Language Parallax* (1986). Similarly Nelson Goodman has written, “Metaphor permeates all discourse, ordinary and special, and we should have a hard time finding a purely literal paragraph anywhere. In the last prosaic enough sentence, I count five sure or possible – even if tired – metaphors” (as cited in Friedrich, 1986, p. 23).

Imagine educational philosophy written in a way that resoundingly embraced our real, lived experience as educators. Our complex and emotion-laden affinities with students, institutional power dynamics, subject matter, the overwhelming responsibility of educating the next generation of ecologically-conscious citizens, and particular events in the classroom that have reached out and pierced us (Jardine, 1998). Why should the variegated, ineffable and unrepeatable experiences of our educational practice conform to the prosaic fossilizations of culturally predetermined methodologies and formats? Why should it not ravel and unravel as real life does? Knotting and unknotting, interweaving the multiple threads of our sometimes ambiguous, sometimes contradictory, but always interrelated existences? Why should educational philosophy not embody an eco-poetic understanding, a polysemous way of thinking that resonates with the mycelial-like interconnectivity of the Earth itself?



One of the tasks of critical ecohermeneutics, we might say, is to point to the mycelial or interconnected nature of our lived experiences by provoking engagement with the invisible or subterranean threads running beneath our attempts at communication and meaning.¹⁵ In other words, it seeks to draw attention to the fact that multiple ways of knowing co-exist and that our ability to travel between them echoes, in a sense, the polyphony of the world itself.¹⁶ This reflexive and imaginative capacity is by and large a learned discipline and is often, generally speaking, at odds with the dominant epistemic assumptions of modernity. Alas, so much of the multidimensionality of our experience is rendered invisible, nonsensical, or is simply flattened by the cultural-historical norms that we acquire through schooling. An eco-poetic understanding attempts to keep the conversation between realms of discourse, between human and more-than-human, and between teacher and world-as-co-teacher (Blenkinsop & Beeman, 2010), cycling and

¹⁵ Robert Hass has also reached for *invisible* and *subterranean* metaphors when attempting to describe a poetic encounter with the world: “Often enough, when a thing is seen clearly, there is a sense of absence about it – it is true of impressionist painting – as if, the more palatable it is, the more some immense subterranean displacement seems to be working in it; as if at the point of truest observation the visible and invisible exerted enormous counter pressure” (as cited in Zwicky, 2003, p. 54).

¹⁶ The reverse is also true, and an important aspect of ecological education, which is to say teaching and drawing attention to the polyphony of the world will ideally lead to a more reflexive understanding of the analogical relationship between realms of discourse.

recycling in order to draw us towards ontological dwelling in ecological kinship with the animate Earth.

Despite its concern with aesthetic experience¹⁷ and poetics, critical ecohermeneutics should not be narrowly considered an aesthetic theory; which is to say, the goal is not to simply write more *poetically* about our slow ecological suicide or wallow in solipsistic, self-referential fine arts. Rather, the true vocation of a critical ecohermeneut is to listen, to read and be read, to train the attention to respond with *wisdom* to opportunities and moments that arise. And to teach others to listen.

Weil: *The rest follows of itself.*¹⁸



What does all this mean for a critical ecohermeneutic approach to teaching? How would the thinking and teachings of an ecohermeneut *move* - on the page, in the classroom, in the forest? What might her teachings enact, what do they say, however limited, about the cadence of what-is? Zwicky has written, “Other than pointing and hoping, there are no rules, no algorithms, by which human perception of a gestalt may be facilitated” (2003, p. 117). Initially, this may seem unacceptably passive: is there nothing more we can do as educators than point and hope? How many times have I taken groups of students into the forest, pointing at the rings of severed trees and lifting logs to expose the gossamer tufts of mycelia, hoping that they would come to understand that *this* tree and *this* soil really exist, or rather co-exist with them. That these things are connected and symbiotic with each other, just as we are connected and, when

¹⁷ For an insightful discussion on what is meant by “aesthetic experience” here and why Gadamer discusses aesthetic experience as an introduction to the nature of philosophical hermeneutics see Jardine, 2006. Essentially, the aesthetic experience here is not simply “art appreciation” or a study of “good poetry”, but an attempt to describe those rich and memorable experiences that catch our attention and ask things of us, those questions that the world *presses upon us*. “This is what Gadamer means by suggesting that, at the core of hermeneutics, at the core of ‘what happens to us over and above our wanting and doing,’ is something akin to an ‘aesthetic experience’. Aesthetic experience, Gadamer suggests, is the experience of being drawn out of our subjectivity and into the teeming world of relations that lives ‘beyond our wanting and doing’. The task posed to understanding at such a juncture cannot be simply one of corralling that teeming world back into the confines of our constructs” (p. 271).

¹⁸ 1952, p. 108.

thinking and acting ecologically, symbiotic with the more-than-human world. Hoping that the rest would follow of itself. More often than not, however, my students have already been conditioned to think about the world as essentially meaningless dead matter and think of themselves as encapsulated and definitively bounded beings. Worse yet some barely notice the change of environment because they are too engrossed in their hand held computers to pay attention. Even if they are begrudgingly compelled to ask: *what kind of tree is this?* I fear that what they mean is, what is the taxonomic categorization of this organism? Or perhaps, what is this natural resource used for? Or maybe even, how much is this tree worth? How many board feet of useful lumber are in this tree? If we cut this tree down, how much money do you think we could we get for it?

It seems to me that a critical ecohermeneutic educator would try to draw students' attention towards the multidimensional ecology of meaning that unfolds around or whirls about *this* tree as an ecological process that we participate and co-exist with within a broader planetary co-existence. This is not to put *human* and *world* on equal footings per se, a crucial aspect of this lesson must include coming to understand that we need the forest much more than it needs us – after all, this is a pedagogy of humus and humility (Jardine, 1998).

In a sense, there is *always* an element of pointing and hoping when attempting to precipitate fundamental perceptual shifts; ontological appreciation cannot be forced or inculcated,¹⁹ but this process should not be thought of as passive. Ontological attentivity is an active, conscious and intentional discipline. As Zwicky has insisted, “There is a psychological element here, as well as a talent for seeing-as. One has to be able to see what *is* there, rather than what one hopes or expects. This requires a certain sort of strength” (2003, p. 95). Or more specifically, “That practice is better understood as an exercise of attention disciplined by discernment of the live, metaphorical relation between things and the resonant structure of the world” (2003, p. 117). How, then, might this disciplined practice be envisioned and enacted by teachers? How might we think about germinating a critical ecohermeneutic spore in our own

¹⁹ This is, in essence, similar to the idea proposed by eco-educational philosopher Sean Blenkinsop (2005) in his discussion of Martin Buber and the impossibility of forcing the *I/Thou* relationship in education. “Buber agreed that the moment of change, or the moment of insight, can't be forced into existence and must come from and to the student, as if by grace, but that does not mean that we do nothing to prepare, to set the stage consciously for when the moment arrives” (p. 292).

minds as educators, in order to prepare for, and maybe even coax, the possibility of a moment of ontological insight? How do we approach language in order to listen to the world and co-create situations where students are invited to open their minds, hearts and senses to new possibilities and modes of being?



Initially a critical ecohermeneutic process, as I have envisioned it, involves a deliquescence of the calcified forms of thought and behaviour that are culturally normalized. An example of this with respect to trees is presented in the writings of ecophilosopher Derrick Jensen, who has written about a quote from a Canadian lumberman that effectively sums up the most grotesque sentiments of the modern capitalist ethos.

“When I look at trees I see dollar bills” (2002, p. 221).

Jensen goes on to offer what I consider to be a piercing and deliquescent critique of the modern Western worldview, situating how we understand trees hermeneutically within a cultural-historical context.

Before we can deforest the planet, we have to change the way we perceive it. Up until five hundred years ago, the people in what we now call North America lived in basic equilibrium with the forests, as part of a complex web of relationships. Then another culture and the beginnings of the industrial system were brought in from the “outside.” Before the trees could be cut, they had to be redefined as private or public property. But even before that they had to be redefined as property at all. (p. 221)

As crucial and powerful as deliquescent work such as this is, it is nothing new to frame critical perspectives in the context of cultural-historical understandings per se. As Jensen himself has claimed, “I am not the first to remark that our financial riches come at the expense of the planet, those we enslave, our capacity to engage in relationship, and our humanity” (2002, p. 224). Which brings us to the remedial or relational capacity, which is to say, the metaphoric and lyric aspect of critical ecohermeneutic recycling.

In a *deeper* sense, the deliquescence of calcified epistemic structures seeks to enact what might be thought of as a mycelial function; reconnecting ways of knowing (i.e. stitching and intertwining threads) to the multidimensional phenomenology of being in time. Acting upon and working with the root metaphors that we live by is one of the most important aspects of this

kind of inquiry. This entails an ability to establish both a critical distance for cultural-historical analysis, and, perhaps more importantly, or at least more rarely, an ability to interweave our disconnected strands of thinking in order to elicit ontological attentivity. Or as Zwicky has claimed, “The real discovery is the one that will let philosophy resume thinking metaphorically when it needs to.” (Zwicky, 2003, p. 116)

Critical ecohermeneutic inquiry seeks to draw attention to what is invisible, to heal what is severed, to make polymorphous what is single-minded, and to expose what is systematically prosaic to on-going, long-term ravishment by beauty. Critical ecohermeneutic inquiry may not necessarily tumble and surge with

line breaks & pauses,

or move with the ripple and clarion strut of sense on the page like poetry (or sometimes it may), but it always endeavours to *think* with eco-poetic understanding.

Much of the remainder of this thesis will be devoted to exploring the possibilities of such an eco-poetic encounter, but for now perhaps we might inoculate, by way of a few thoughtful accounts, the Canadian lumberman’s instrumental perspective with the spores of more ontological, or at least pedagogical, encounters with trees. These metaphor-rich accounts are offered as a way to further deliquesce the calcified univocity and normalcy of instrumentalism *and*, perhaps more importantly, to remediate the landscape of ontological possibility, to draw us out of our hypostatized knowing of what a tree is into the resonant ecology of meaning that whorls between us and trees.



Geneticist David Suzuki and science writer Wayne Grady have written a beautiful little book entitled, *Tree: A Life Story* (2004), which tells the five-hundred year story of a single Douglas-fir and the complex ecological relationships that sustain it. Speaking of trees in the introduction, they have written:

Rooted securely in the earth, trees reach towards the heavens. All across the planet, trees – in a wonderful profusion of form and function – they literally hold the world together... Trees are remarkable beings. Yet they stand like extras in life’s drama, always there as backdrops to the ever-changing action around them, so familiar and omnipresent that we barely take notice of them. (p. 1-2)

Poet Kahlil Gibran (2007), on the other hand, offers what might be seen as an intuitively trenchant and poetic response to the lumberman's shallow avarice:

Trees are poems that the earth writes upon the sky. We fell them down and turn them into paper that we may record our emptiness. (p. 178)

In a somewhat more melancholic, yet undeniably profound encounter, the main character in Jean-Paul Sartre's novel *Nausea* (1964) experiences an existential moment of insight with a tree.

Of course a movement was something different from a tree. But it was still an absolute. A thing. My eyes only encountered completion. The tips of the branches rustled with existence which unceasingly renewed itself and which was never born. The existing wind rested on the tree like a great bluebottle, and the tree shuddered. But the shudder was not a nascent quality, a passing from power to action; it was a thing; a shudder-thing flowed into the tree, took possession of it, shook it, and suddenly abandoned it, going further on to spin about itself. All was fullness and all was active, there was no weakness in time, all, even the least perceptible stirring, was made of existence. (p. 132)

Conversely, Neil Evernden (1993) experiences an equally profound, though somewhat less forlorn, ontological insight inspired by his contemplation of a tree:

A tree, we might say, is not so much a thing as a rhythm of exchange, or perhaps a centre of organizational forces. Transpiration induces the upward movement of water and dissolved materials, facilitating an inflow from the soil. If we were aware of this rather than of the appearance of a tree-form, we might regard a tree as a centre of a force-field towards which water is drawn. The object to which we attach significance is the configuration of the forces necessary to being a tree. The visible structure is the indicator that life is happening, just as a dog's bark is an indicator of the existence of that animal. The bark is not the dog any more than the visually delineated object is a tree. We do not mistake the bark for the dog, but we habitually mistake the shape for the tree. Only the visible is regarded as real. It is not necessarily the case that whatever exists must be sharply bounded: in fact, rigid attention to boundaries can obscure the act of being itself. (p. 41)

But existential philosopher Martin Buber has, perhaps, best illustrated the multidimensional possibilities of ecohermeneutically encountering a tree. Blenkinsop and Beeman (2010) refer to Buber's work in their discussion of "world as co-teacher," remarking that early in Buber's most famous work *I and Thou* (1970) he begins a new section with the sentence, "I consider a tree." Buber continues in an unmistakably lyrical tone:

I can look on (a tree) as a picture: stiff column in a shock of light, or splash of green shot with the delicate blue and silver of the background. I can perceive it as movement: flowing veins on clinging, pressing pith, suck of the roots, breathing of the leaves, ceaseless commerce with earth and air - and the obscure growth itself. I can classify it in a species and study it as a type in its structure and mode of life. I can subdue its actual presence and form so sternly that I recognize it only as an expression of law... I can dissipate it and perpetuate it in number... In all this the tree remains my object, occupies space and time, and has its nature and constitution. It can, however, also come about, if I have both will and grace, that in considering the tree I become bound up in relation to it. The tree is no longer *It*. I have been seized by the power of exclusiveness. (p. 34)

It is difficult (though not impossible) to imagine spontaneously shifting from the kind of worldview that sees trees as nothing but dollar bills to such a nuanced, relational and polysemous ability to see-as. For the most part, it is a *learned* discipline, a kind of wisdom requiring not only a talent for seeing-as, but the will and psychological strength (and perhaps grace?) to consider a vast ecology of meaning; to truly listen to the world “over and above our wanting and doing” (Gadamer, 2004, p. xxvi).

Teaching should have no aim but to prepare, by training the attention, for the possibility of such an act. All the other advantages of instruction are without interest. (Weil, 1952, p.108)



Weil has written about the real purpose of art and of words, claiming: “Their function is to testify, after the fashion of blossoming apple trees and stars” (1974, p. 67). Bringham expands upon her definition and relates it to a way of learning *about*, or perhaps more accurately, participating *with* the world.

When words do what blossoming apple trees do, and what stars do, poetry is what you read or hear.

Aristotle called this process *mimesis*. This has been translated as “imitation”, but *participation* would be closer. It is imitation in the culturally significant sense of the word: the sense in which children imitate their elders and apprentices their masters. *Mimesis* means *learning by doing*. And words, as Weil reminds us, are not just poker chips used for passing judgements or passing exams. Words are the tracks left by the breath of the mind as it intersects with the breath of the lungs. Words are for shining, like apple blossoms, like stars, giving a sign that life is lived here too, among the human beings, just as it is out there in the orchard and up there in the sky, and in the forest, in the oceans, in the mountains, where no humans are around. (2006, p. 144)

For Bringhurst, poetry *exists*, the question is only: are you going to take part, and if so, how? A good question indeed, what does it mean to breathe life into language so that our thinking echoes the shape of the world? How do we move beyond thinking instrumentally about language as poker chips that we use to pass exams or advance careers? How do we use words to testify, after the fashion of blossoming apple trees and stars; to listen to the deep and patterned tautology of being? What can poetry say, in as much as it can say something about what it is not, about the world?

According to Bringhurst, “It says that what-is *is*: that the real is real, and that it is alive. It speaks the grammar of being. It sings the polyphonic structure of meaning itself” (2006, p. 43). And elsewhere, “Poetry is the language of being: the breath, the voice, the song, the speech of being. It does not need us. We are the ones in need of it. If we haven’t learned to hear it, we will also never learn to speak it” (2006, p. 44). Bringhurst has gone as far as to suggest that philosophy, poetry and language are all human universals, characteristics of what-is, a part of the “natural flora and fauna” where humans occur. “It seems to me, in fact, that poetry *provokes* human language to exist, and that poetry is what language - even philosophical language - generally aspires to rejoin” (2006, p. 210). For poet Gary Snyder, poetry also helps reveal the world as *real*, a critical function in a time of simulacra and synthetics:

The real work is what we really do. And what our lives really are. And if we can live the work we have to do, knowing that we are real, and that the world is real, then it becomes right. And that’s the real work: to make the world as real as it is and to find ourselves as real as we are within it. (1980, p. 82)

In other words, we might come to think of ecopoiesis as one mode of eliciting attention and attunement to the *really real*, which is to say, relational nature of being.²⁰ This may take some getting used to for those of us schooled in (post)modernity. As poet Jane Hirshfield has written, an imaginative kind of “encirclement,” or what might be thought of as ecohermeneutic recycling, requires nothing less than a reorientation to how we normally *think*.

²⁰ William Doll has written: “Classroom vigour and possibility come from seeing anew, from seeing hermeneutically. In seeing hermeneutically one looks to read any particular event in terms of its fullness, its wholeness, its richness in undeveloped, even unseen, potential. Relationships are, to borrow a phrase from Alfred North Whitehead, the *really real* of life” (as cited in Jardine, 2003, p.x).

To recognize imaginative encirclement as a primary mode of thought is to remake one's relationship to knowing. It is to understand that the cognitive tropes particular to poetry are as aboriginal as its music - not illustration, not the ornamentation of abstract thought, but central devices for ordering the plenitude of being. (1997, p. 111)

In this sense, *ecopoiesis* is not simply “illustration” or “ornamentation” for more serious, abstract thinking, nor is it aimed at beautifying pre-existing constructs or the dominant monoliths of modernity. It is a recognition of the interpretive, relational, imaginative and *ecological* basis of all human understanding. It is a recognition of the power of opening oneself to being addressed by the polyphonic structure of meaning itself (Bringhurst, 2006), or in other words, the resonant ecology of things (Zwicky, 2003), the animate more-than-human world (Abram, 1996).

One of the tasks of ecohermeneutic pedagogy, therefore, is to train the attention for the possibility of “remaking”²¹ one's relationship to knowing and hermeneutically encountering the world *ecologically*. In other words, learning how to *read* and *hear* the world and to *respond* to the tacit questions that address us and press upon us from a place of ontological implicatedness. Jardine (2006) has described this experience as being *drawn out* of our subjectivity, our “our”-centeredness, into a teeming world of living relations.

What addresses us does so from beyond our wanting and doing, beyond our constructs. We experience the limits of our experience by experiencing something that calls us to go beyond the limits of experience. Less philosophically put, we live in a world and that world houses us and our thinking and experiencing. We do not house it in our constructs. This, of course, is an *ecological* and a *pedagogical* point as much as it is a commentary on research methodologies in education. (p. 271)

Gadamer retained the term *hermeneutics* from the early writings of Heidegger, not to denote a methodology, but to describe “a theory of the real experience that thinking is” (2004, p. xxxiii). Similarly, critical ecohermeneutics is not a prescriptive proposal for research methodologies or a technique for doing ecocritical text analysis in educational research, but an attempt to elicit attention to the real experience that thinking is from an ecological-ontological perspective. In a

²¹ Though it should be reiterated that this process is perhaps not so much one of “remaking” our relationship to knowing, as “uncovering” the inherent relationality of being (i.e. we are already relational with the world) that modernist culture has tended to school out of us.

sense then, *ecopoiesis* is thinking that acknowledges that our imaginative or generative potential is *housed*²² in the world; that we are *of* this world and that this world has environmental limits that cannot be pushed to conform to our calcified epistemic constructs despite our wanting and doing. Or perhaps we might say, somewhat haphazardly, that thinking is never *really* disconnected from an earthen ecology on some level - *thinking is also an ecological phenomenon*. This is not to say that calcified epistemic norms or thinking in ways that are ecologically destructive are not possible, but to acknowledge that this kind of thinking inevitably depletes its regenerative humus and catalyzes an ecological crisis. To fit one's thinking and being to calcified cultural-historical thoughtforms instead of the resonant ecology of things is to risk further ossification, fossilization, and invariably, extinction. On the other hand, to think ecologically is the listen to the world and attempt to fit our thinking to its patterned resonance, to remain fluid, attentive, open to reciprocation and living accordingly.



Zwicky (2003) has claimed, “Wisdom is a form of domestic understanding” (p. 96) and, “To know the meaning of what-is is wisdom” (p. 86). I read the first statement as a recognition of the *meaning of ecology*. If being is the manifest interrelatedness of things, then human thought in attunement with what-is is a form of wisdom. In a sense this domestic wisdom is attained through *allowing* the world think through oneself over and above our wanting and doing, instead of superimposing anthropic constructs onto the world to force it to yield to our consumptive desires (Catton, 1982; Jensen & McBay, 2009). This move does not necessarily subsume individuality, as Mick Smith has written, “One does not need to espouse an isolated conception of an autonomous and bounded subject in order to argue that we are, to a degree, self-constructed, internally motivated and so on. The world does not *just* speak through us” [emphasis added] (2001a, p. 224).

I read Zwicky's second claim as a recognition of the *ecology of meaning*, which is to say, meaning is relational, interpretive, and emergent - so a certain ambiguity is in order when we attempt to correlate our ideas with what the world tells us. Put another way, there is a certain wisdom in ambiguity, an honesty in its ability to describe the ever-shifting cadence of what-is, to

²² In the etymological sense of *eco-*, as in the Greek root *oikos*, as in *house* or *household*.

imaginatively order and re-order the plenitude of being, but as with all things in life, the closer we get to what-is, the more disciplined attention is required to maintain our awareness in the flux of time. What is this? What does this mean? What is *this*? What does *this* mean? Or as Wittgenstein has reminded us:

*To repeat: don't think, but look!*²³



To summarize then, critical ecohermeneutics thus far has been construed as a kind of *ecopoiesis* or *ecopoetic understanding*. It seeks to reconcile the interpretational experience of *embodied thought* (perception-emotion-cognition-movement-rhythm-etc.)²⁴ with *matter* in the aspect of time; or put differently, to provoke the mind into paying attention to the interrelatedness of the world in which it is already immersed.²⁵ Etymologically speaking, the term *poiesis* might serve equally well here, particularly as Heidegger defined it, as a “bringing-forth” as in the blossoming of a blossom or the cascading snow melt of a swelling waterfall (Ferrari Di Pippo, 2000). But as we will see, it is possible to speak *poetically*, even to speak

²³ (2009, p. 36)

²⁴ I want to avoid reproducing a Cartesian mind/body dualism here, or rather replace the image of a mind-in-a-brain-in-a-body with an image of the organism-in-environment-in-time, which entails a shift from a representational to a relational models of knowledge (Fettes, 2000). This is difficult because the words *thought* and *mind* have become so much associated with the brain in modern thought. Lee (2002) has also resisted this notion and written on what he calls *kintuition* or *kinaesthetic knowing* or *body music*, which is, the way we “physically” apprehend rhythm and the effect that has on our thinking.

²⁵ Although Vygotsky never claimed to draw from the hermeneutic tradition, his fundamental insight situates him amongst theorists who emphasize cultural-linguistic historicity and who grapple with the possibility that the world is thinking through us (though in a “cultural” sense, not so much an “ecological” sense). For example, Vygotsky (2004) has written on what he calls the “circular path” between elements of reality (“external”) and the complex reworkings that they undergo in the imagination of the human mind (“internal”) before cycling back into reality as “crystallized” artefacts. This circle is by no means confined to technical thinking and Vygotsky maintains that the emotional and the intellectual are equally necessary for an act of creation (p. 21). He provides a story from Pushkin to elucidate the “complex relationships” of life, claiming the emotional language of the artistic imagination elicits, “what cold prosaic reasoning could not have achieved” (p. 23). The reciprocal nature of his remarks and circular metaphors strike me as essentially hermeneutic, and his use of poetic understanding via Pushkin to reveal a “particular clarity” about the complex relationality of life is central to *ecopoetic understanding*.

poetically about nature,²⁶ and yet, remain entrenched within a fundamentally disconnected and ecologically destructive worldview. Which is to reiterate the point that ecopoiesis is not an aesthetic experience *about* the world, but a poetic encounter *with* the world, from *within* the flux and intended to draw one into relational proximity with the more-than-human other. In this sense, cross pollinating *poiesis* (or *hermeneutics* for that matter) with the prefix *eco-* is way of reminding us (as in a bell ringing in the empty sky) that thinking is always participatory and reciprocal, always *housed* within and *of* a living ecology that is greater than the self, and in many ways, a source of self.

Bringhurst has written, “The mind is part of the body, the body is part of the world, and the world is part of the mind” (2006, p. 52). Even though Bringhurst seems to be *getting at* a similar point to the one I am trying to make, it is interesting to note the way his words and syntax *could* perpetuate a kind of fundamental disconnection between mind, body and world. Perhaps we could say that mind emerges from body-world, and as such, to say that thinking is housed in an ecology is accurate, but the really interesting implication here is that, in part, *the ecology thinks through us*. This is partly what Merleau-Ponty was getting at when he said our consciousness, when we are confronted by the colour blue, becomes saturated by this limitless blue, or that the sensible “think[s] itself within me” (as cited in Abram, 1996, p. 55). More interesting still is the implication that reductionism and objectivism are *also* parts of an ecology that thinks through us – ecological features that are premised on the radical separation between humans and the more-than-human world. Being that ecological-ontological separation is not *really* possible (which is to say it is an epiphenomenon of the emergence of particular cultural-historical milieu), this is a kind of fragmented consciousness, but obviously one of considerable longevity and persuasiveness for the modern mind.



²⁶ Which is to say, an ecohermeneutic inquiry endeavours to elicit an ecopoetic encounter *with* and *within* the more-than-human world, not to speak *poetically about* it such as American poet-lecturer Ralph Waldo Emerson (1968) has done. Or put in an educational context, we might say that an ecohermeneutic approach seeks to learn not only *in* and *about* place, but *from* place as a co-teacher (Blenkinsop & Beeman, 2010).

In the face of such univocal certainty then, let us reconsider the wisdom of ambiguity. Jardine has addressed ambiguity as a key feature of phenomenological methodology²⁷ and has spoken of “the love of ambiguity in phenomenological approaches to education” (1998, p. 5). Defending this love affair, he aptly critiques,

...the tendency in some areas of educational theory and practice towards specification, univocity, clarification, and, essentially, the overcoming of ambiguity. The deep ambiguities of life as it is actually lived, the deep difficulties in living our lives with children are often designated, either explicitly or implicitly, as the enemy of discourse and therefore as the enemy of true understanding. These difficulties and ambiguities are understood as problems to be fixed, things to be “cleared up” through the diligent pursuit of research which takes as its first gesture a fundamental severance with its object of inquiry so that it can heed only its own desire for clarity and distinctness. (1998, p. 10)

Ultimately, however, ecohermeneutic inquiry must be both ambiguous and lucid, imaginative and sensible (Abram, 1996), piercing and healing. In the words of poet Charles Simic: “Ambiguity is the world’s condition. Poetry flirts with ambiguity. As a ‘picture of reality’ it is truer than any other. Ambiguity is. This doesn’t mean you’re supposed to write poems no one understands” (as cited in Zwicky, 2003, p. 59).

²⁷ This “problem” of writing a book with a phenomenological “methodology” was referred to by Gadamer as a “problem of phenomenological immanence” (2004, p. xxxi). The experience of being drawn *out into* the world strikes me phenomenologically as *immanent*, as opposed to the *transcendent* experience of being drawn *up* or *away*. Perhaps this is “too far” but there is an interesting tension between directionalities throughout the paper and I found myself having to be diligent in my use of “immanent” metaphors that implied a trajectory *into*, *down* and *beneath* the earth as opposed to “transcendent” metaphors of rising *upwards* and *away* (towards Heaven?).



Here. Two things I found for you:

Interlacing mosaics of mycelium infuse
habitats with information
sharing membranes. (Stamets, 2005, p. 2)

Our words are a refinement of our deeds. At root
The act, the open hand, like music pulls us to it,
Grips us in a shadow of the world's embrace.
The greening symmetry of plants is accidental,
Means not end; and so our lives have system
Not in structure but in function.
We are weavers, always weavers of the cloth.
We draw the patterns after us, wind, wrap it,
In our simplest, most convolute of gestures.
(Zwicky, 1986, p. 41)

The educator produces the beautiful by fixing her attention on something *real*.

1.2. learning to listen: ecological-ontology 101

As places animate the ideas and feelings of persons who attend to them, these same ideas and feelings animate the places on which attention has been bestowed, and the movements of this process - inward towards facets of the self, outward towards aspects of the external world, alternately both together - cannot be known in advance. (Basso, 1996, p. 107)

For these other shapes and species have coevolved, like ourselves, with the rest of the shifting earth; their rhythms and forms are composed of layers upon layers of earlier rhythms, and in engaging them our senses are led into an inexhaustible depth that echoes that of our own flesh. The patterns on the stream's surface as it ripples over the rocks, or on the bark of an elm tree, or in a cluster of weeds, are all composed of repetitive figures that *never exactly repeat themselves*, of iterated shapes to which our senses may attune themselves even while the gradual drift and metamorphosis of those shapes draws out awareness in unexpected and unpredictable directions. (Abram, 1996, p. 63-64)

The term *ontological elicitation* keeps ringing in my mind. Etymologically drawing upon the Latin *elicitus*, to “draw forth or out, or to entice.” Perhaps because the phoneme *-licitus* sounds to me something like a whispered “*listen-to-us*,” an incantation that whirls between stands of western red cedars or sighs imperceptibly from the other side of the room (you whip around from writing notes on the board - *what was that?* - *oh, it's nothing but an old globe and some haphazardly strewn paper clips*). The “*eI*” evokes the ancient Phoenician expression for “god” or “head of the divine pantheon.” *Elicitus*: to be drawn forth or out, to “*listen to us*” (the plural godhead, the pantheon of being, the animate Earth), to be enticed by the world *outside* our our-centeredness, the reverberant world of iterative shapes and repetitive figures that never exactly repeats. An etymological trick perhaps, a textual bamboozle? - or something else, something that strikes a chord or maybe rings a bell?



Reading, for me, is the proof of being at home: a quintessential part of the equation that enables us to reach across the fence between the world and ourselves without destroying what we find. The most basic parts of that equation, surely, are eating and being eaten. Can't have one without the other. May not seem so in the restaurant or the bookstore, but walking in the forest or sitting by the stream, we know it works both ways: being fed and feeding, reading and being read. (Bringhurst, 2006, p. 9)

Still, I am left to wonder how these words will strike you, *really*? And how might the dialogue change if we *were* walking in a forest or sitting by a stream. If the meaning of the words approached you, took you by the hand, traced the opposing cones of an interlocking gyre in the alluvium, or across the breadth of your back? Whispered sensuous pre-Socratic axioms in your ear, *pssst*:

Herakleitos: *All things think and are linked together by thinking.*

Parmenides: *To be and to have meaning are the same.*²⁸

True, these words will never quite meander with the presence of a stream. The stream swells and cascades beyond our ability to capture it in our signifiers and constructs.²⁹ But I hope they will point to a stream,³⁰ recreate the echo of its ripples in the clarion flow of sense upon the page, remind you why a metaphor such as *stream of consciousness* is so insightful. That describing ourselves, our incessantly meandering thoughts, as a stream is not only *useful* (i.e. pedagogical), it is *accurate* (i.e. ontological).

We stream.

²⁸ As cited in Bringhurst, 2006, p. 139.

²⁹ Tim Lilburn: “The river that is registered in the inchoate, leaping delight of the senses is an absence in reason, a silence in language, a silence even within the excesses of ecstatic speech. At best the chaotic river, alive in the senses briefly, is discountable, has no standing in definition; before the severity of Cartesian doubt, it does not exist” (as cited in Zwicky, 2003, p. 53).

Herakleitos: “We step and do not step into the same rivers, we are and are not” (as cited in Zwicky, 2003, p. 74).

³⁰ My sense is that this experience will have more potential for place-based consciousness if we are in fact pointing to *this* stream that meanders beside us as we learn, speak, write, listen and play with it. The resonant experience lies somewhere between the live interaction of stream, metaphor and knowing – which is to say there is an equally dangerous flipside in some meditative traditions that seem to consider water and river metaphors without actually considering *this* river that they sit beside.

I want these words to be wildcrafted herbs gathered into a healing salve and offer them to you with some fresh chanterelles I picked this morning at dawn. To be a gesture of possible affinity, an emerging relation with an other, to inspire thinking intensely and beautifully for a sustained amount of time - an ecohermeneutic initiation. I want this inquiry to approach you and invoke the ancient rite of gifting.³¹

Here.



... all truly meaningful speech is inherently creative, using established words in ways they have never quite been used before, and thus altering, ever so slightly, the whole webwork of language. Wild, living speech takes up, from within, the interconnected matrix of the language and *gestures* with it, subjecting the whole structure to a “coherent deformation.”

At the heart of any language, then, is the poetic productivity of expressive speech. A living language is continually being made and remade, woven out of the silence by those who speak... And this silence is that of our wordless participations, of our perceptual immersion in the depths of an animate, expressive world. (Abram, 1996, p. 84)

How, then, might an ecopoetic understanding of the world begin to enrich educational practices? What does it mean, in a time of ecological crisis, if educators bend ears and minds to the world and hear nothing but the monotone hubbub of *Man* - the stupefying and immutable drone of a cultural-historical understanding that has all but drowned out the world’s poetic polyphony? How is one to teach an interwoven ecological-ontology, if the ecological resonance

³¹ Jardine: “If we play for a moment with the etymology of “data”, we find that it originally means, ‘that which is given’ or ‘that which is granted’. Inquiry must open itself to that which is given or granted. It must be able to listen or to attend to that which comes to meet us. Inquiry need not prepare itself by arming itself with methods which demand univocity and clarity.. Rather, it must do what it has always claimed to do - it must ‘gather’ data. This metaphor should not be lost. What is given or granted is precious and delicate, and it must be gathered with all the love and care with which we gather the fruits of the earth, careful not to do violence, careful not to expect too much, prepared to wait, prepared - dare we admit it? - for the possibility that *nothing* will come forth...” (1998, p. 30).

of the world has not yet elicited them from their own deafness?³² Or put more simply, how are we to *participate* with the world in healthy ways if we do not learn to *listen* to the world?

I want to say something to the effect of: one cannot teach what one *is* not. Or put differently, the most important and consistent thing we teach is *who we are*. Although the ontological nature of teaching is emphasized in each, both statements seem too passively uniform, too deterministic, too persistently anthropocentric. Perhaps we could say, one cannot teach what-is when one does not wonder at what one is in relation to the other (including the more-than-human other).³³ Put less abstractly, it seems to me that deep reflection upon one's ecological implicatedness is crucial to the practice of teaching, all the more so in an age of ecological crisis. A disciplined ecocritical (i.e. cultural-historical analysis of human-world relationality) and ecopoetic (i.e. a talent for seeing-as) *way of thinking* needs to be nurtured as part of the ontological vocation of being a teacher – of what calls for teaching.



Some important questions for educators that you will not likely find in teacher training programs: What kind of ontological relationships (or EPOCHAXis presuppositions) with the more-than-human world have precipitated the ecological crisis? How are these dysfunctional relationships reproduced in our classrooms? What is the role of language in the ecological crisis? How might we begin to think about and enact different relationships with the more-than-human

³² Wittgenstein: “The question now arises: Could there be human beings lacking in the capacity to see something *as something* - and what would this be like? What sort of consequences would it have? - Would this defect be comparable to colour-blindness or to not having absolute pitch?” (2009, p. 224).

³³ Heidegger (translating a play by Sophokles, and translated by Bringhurst, 2006, p. 157) has written: *May no one who does not still wonder / what he is and what he does / suddenly arrive at my fireside*. Indeed, and may he or she not suddenly arrive in the classroom, with presuppositions and certainty, more answers than questions, and a standardized test to assess the prescribed learning outcomes. But unfortunately this is what *does* happen when the vocation of teaching is severed from its ontological depths and the ecology of meaning. Bringhurst has written beautifully on *The Vocation of Being* (2006) as a fundamental vocation of *learning* which is an important message for all educators: “A vocation is work instead of a job. Hunting, fishing, farming, cooking, healing, nursing, mothering, fathering, painting, writing, teaching, composing, performing, watching the sky, talking to plants, talking to animals... All these ancient and recent vocations... are facets or forms or corollaries of the one fundamental vocation, which is *learning* - and maintaining and refining and protecting and sharing whatever we can of what we have learned” (p. 49).

world? How can we begin to view the world as co-teacher (Blenkinsop & Beeman, 2010), as the living matrix of relational meaning from which our forms of life emerge?



These are *educational concerns*, questions that should not be relegated to specialized environmental discourse or marginalized as part of a peripheral ecological education initiative. Questions such as these also tend to reach deeper than stereotypical eco education activities, such as picking up litter, or recycling neighbourhood aluminum cans, or writing letters to local politicians to save a city park. They are important because if we do not learn how to listen to the more-than-human world, to the way it moves and questions and fluctuates, to the way the Earth *means*, we may unconsciously reproduce the same philosophical presuppositions that initiated the ecological crisis and perpetuate it today (Bowers, 2008b).

How then do we learn to listen when all we have been taught are the metaphors of inanimate matter, dead pictures, objects we manipulate, resources we exploit? How do we read the world when we do not recognize the living calligraphy before us is a form of communication? As I think of it, critical ecohermeneutics primarily involves *learning to hear the questions properly*, to listen to what the world means above and beyond our wanting and doing. The response, the answers to these questions, the forms of life that emerge take us beyond ecohermeneutic understanding into the vast expanse of human knowledge and possibility, but first we must learn to listen,

hear.



Writing in another discipline, Northrop Frye had this to say on the often-paradoxical ideals we are faced with as educators. “The English teacher’s ideal is the exact opposite of ‘effective communication’, or learning to become audible in the market place. What he has to teach is the verbal expression of truth, beauty and wisdom: in short, the disinterested use of words” (1988, p. 26). Borrowing from Frye, we might say that the ecohermeneutic educator’s ideal is *the exact opposite of “sustainable development”, or learning how to compete for voice in the market place. What she has to teach is the resonant ecology of truth, beauty and wisdom: in short, the interpretability of things.* Both statements are attempts to move beyond the industrial values of efficiency and management (i.e. the cultural presuppositions of “the market place”)

towards “the authentic and pure values” (as Weil might say). According to Bringhurst, this involves a fundamental reinterpretation of the role of language and the *ontological* vocation of being a teacher.

The *school* may indeed exist for the purpose of adjusting the student to society. But the *teacher* exists for the purpose of frustrating that adjustment. Why? Because vocation is better than adjustment, and the two are not the same. Vocation is articulate; adjustment hums along. But why, in a healthy society, should vocation be a form of maladjustment? Because society is never healthy in that sense. Health in society *means* that maladjustment can be fruitful. (2006, p. 54)

Fruitful indeed. A critical ecohermeneutic educator must work to inoculate the monoculture of modernity with myriad spores and wild spawn to nurture healthy maladjustments to our ecologically destructive agribusiness-as-usual. For as Weil has claimed: “The fixed point of view is the root of injustice” (1970, p. 270).

But again we must ask, how? How do we approach language *ecologically* in order to address the linguistic dimension of the ecological crisis? How do we learn to read the dissolving forms of glaciers or the delicate plant guilds of bluff ecologies or the yearning of the boreal forest for fire and rebirth? How do we attune ourselves to the repetitive geometry of the world that never exactly repeats, that is simultaneously familiar and estranged?

Herakleitos: *Who does not expect to find the unexpected will not find it, for it is trackless and unexplored.*³⁴



The Ecological-Ontology of Education 101 is not a required course you somehow missed in teacher’s college between *classroom management* and *methods of assessment*. In fact, the process of becoming *educated* in modern Western culture could, in part, be described as the time-honoured process of severing our sensuous bodies and minds from the *voice* of the Earth. Neil Evernden referred to this modern educational rite of passage as a process of attaining “sufficient detachment,” a process that culminates in the ultimate act of the vivisectionist -

³⁴ As cited in Zwicky, 2003, p. 117.

“severing the vocal cords of the world” (1993, p. 16). Jardine has similarly described the managerial and bureaucratic approach that reigns when the living character of education is methodically rendered by a desire for clarity and objectivity in line with Cartesian thought, “All the ambiguous ways in which things were experienced to be out there cannot withstand his [Descartes’] methodical doubt. The living Earth and our lives together withdraw into silence” (1998, p. 20-21). My contention is that the epistemic severance of our minds from all of the ambiguous ways in which things are experienced is, at least partly achieved, by corralling, containing and bottling up meaning as a phenomenon of exchange solely between human language users. In this sense, we have been severed from the semantic significance of being and form (or in Bringhurst’s terms, we have severed “the identity of poetry and thinking” – 2006, p. 158). We are institutionally schooled in the ways of methodical doubt to the degree that we resoundingly mistrust and mute our own bodies’ silent conversation with things (Abram, 1996, p. 49). What, then, might an ecological-ontology imply about the *meaning* of communication with the more-than-human?

Bringhurst has succinctly summarized a postmodernist approach to meaning and offered what might be thought of as a more ecological-ontological interpretation:

The postmodernist view is (1) that the place to look for meanings is in relations involving human beings and (2) that these relations may be altogether different for different human beings. That opinion is now very widely held - in amusement parks and universities, in the city and on the reserve. I take a different view myself. It seems to me that things have meaning before they are ever seen or touched by human beings, and that humans can participate, as trees can, in the meaning-making process. I think that humans can put meanings into things in such a way that they will stay where they are put, and other humans can come by, even centuries later, and draw those meanings out. Some meanings - if that is the right word for them - are highly individual; some are peculiar to certain communities and cultures; but there is a rich fund of meanings that is shared by the whole species, and a fund of meanings richer yet that is the common property not of the species but of the planet. (Bringhurst, 2006, p. 213)

But how are we meant to *enter into dialogue* with this rich fund of planetary meaning? How do we use words, as reticular and embedded in power relations as they are, to say something *with*

the world; to undo the spells that this ecologically abusive culture casts over us and express a more ecological kind of *ontological insight*?³⁵

For Abram,³⁶ the first step is acknowledging the body as “the very means of entering into relation with all things” (1996, p. 46).

To acknowledge that “I am this body” is not to reduce the mystery of my yearnings and fluid thoughts to a set of mechanisms, or my “self” to a determinate robot. Rather it is to affirm the uncanniness of the physical form. It is not to lock up awareness within the density of a closed and bounded object, for as we shall see, the boundaries of a living body are open and indeterminate; more like membranes than barriers, they define a surface of metamorphosis and exchange. The breathing, sensing body draws its sustenance and its very substance from the soils, plants, and elements that surround it; it continually contributes itself, in turn, to the air, to the composting earth, to the nourishment of insects and oak trees and squirrels, ceaselessly spreading out of itself as well as breathing the world into itself, so that it is very difficult to discern, at any moment, precisely where this living body begins and where it ends. (p. 46-47)

Abram has also claimed:

Communicative meaning is always, in its depths, affective; it remains rooted in the sensual dimension of experience, born of the body’s native capacity to resonate with other bodies and with the landscape as a whole. Linguistic meaning is not some ideal and bodiless essence that we arbitrarily assign to a physical sound or word and then toss out into the “external” world. Rather, meaning sprouts in the very depths of the sensory world, in the heat of meeting, encounter, participation. (p. 75)

³⁵ Zwicky: “To use language to undo certain spells it casts over us is to redeem it from cultural abuse. For example, to use it as Herakleitos or Wittgenstein does is to show that language is capable of expressing ontological insight. This is a profoundly political act in any culture that believes truth is the exclusive property of non-metaphorical sentences. (And, of course, if we have been brought up in such a culture, this may show itself in our inability to entertain the idea that there may be such a thing as ontological insight).” (2003, p. 84)

³⁶ Merleau-Ponty himself never attempted a phenomenology of reading and writing, nor did he explicitly address “environmental theory” per se; however, Abram’s interpretation (1996) of his work strikes me as an exceptional example of ecohermeneutic interpretation or what might be deemed *ecoexegesis*. Although not framed in these terms, his poetic interweaving of ecological ethics, interconnectivity, the ecology of language and the importance of orality all seem to be healthy constituents of a rigorously lyrical critical ecohermeneutic rendering.

Perhaps we could say that, sometimes, meaning *sprouts* from the world as mushrooms from the dark humus of a forest floor. We happen upon this emergence of an other presence - a question is pressed upon us - a kind of fungal problem for our bodies to solve; the mushroom *thinks itself within us*. This is what is meant by reading and being read by the world. But the *real* problem is that many of us are no longer able to *read* or *recognize* these encounters as communicative in the first place. We have been conditioned to recognize communicative meaning only in the superstore or the classroom, not the filthy forest floor.³⁷ How many people can even differentiate between edible meanings and poisonous meanings these days? Between healthy ways of *being ecological* and toxic habits inculcated by a profoundly sick society (Shepard, 1982; Jensen, 2002; Forbes, 2008). How many even look down in the first place, with eyes and ears and hearts open?

Acknowledging the more-than-human world as the sensuous source of all human cognition and the importance of somatic understanding is important, but obviously *something has happened*. Something has precipitated a crisis of participatory reciprocity with the world (this is the *real* ecological crisis) that has left most of us feeling alienated and forlorn from the “natural world” despite our tacit biophysical interface. True, in a sense, the body is the means of entering into relationship with all things, this is essentially the same idea expressed by Bringham: “The mind is part of the body, the body is part of the world, and the world is part of the mind” (2006, p. 52). But I am less convinced of the body’s “native capacity to resonate with other bodies and with the landscape as a whole” (Abram, 1996, p. 75). Or I am at least suspicious of the wording of this statement because educators may infer a potentially dangerous misinterpretation due to the dominance of Piagetian thinking about “stages of development” (Egan 1997; Judson, 2010). If it truly were a “native capacity,” a kind of inevitable or genetic understanding that occurred in the body as a stage of normal growth, then perhaps we need to just get “culture” and interpretation out of the way? Perhaps we just need to get outside and let our native capacity resonate?

I share the point that Abram is getting at - that the body is biophysically and perceptually immersed in a world of participatory exchange, that we are *of this world*, and that,

³⁷ Socrates in *Phaedrus*: “...I’m a lover of learning, and trees and open country won’t teach me anything, whereas men in the town do” (as cited in Abram, 1996, p. 102). He then proceeds to hold the Thaeus outside of Athens under a tree...

on some level, *all* communicative meaning is sensual and affective, from sprouting mushrooms to spouting lectures. Critical ecohermeneutic inquiry, it seems to me however, is insistent upon the live, *metaphorical* relation between things and the resonant structure of the world. Ecohermeneutics does not seek “direct” somatic or perceptual interface in a narrow sense, it does not presume that we are able to step away from cultural-linguistically mediated understanding.³⁸ Although intimately related to somatic understanding and perception, ecopoetic understanding is by no means a “native capacity;” it is a learned and developed capacity for ecocritical awareness and attunement that involves a talent for seeing-as. Metaphorical thinking is essentially what keeps the phenomenology of language and our thinking alive and shining, like apple blossoms and stars.

Metaphor is one way of showing how patterns of meaning in the world intersect and echo one another. The ability to think analogically is a reflection of sensitivity to ontological form. (Zwicky, 2003, p. 6)

True, we must venture into the world itself with senses open, but we *must* integrate language and a learned capacity to see-as in order to deepen our *reading of (and being read by)* the birds and fungi as they appear before us, especially in education. We must learn to recognize the poetry of being, to think ecohermeneutically.

To eat and be eaten, mean and be meaning.



For me, ecological-ontological attentivity begins and begins again recyclically (I picture an Ouroboros, eat and be eaten) as we sensuously and imaginatively whorl and interface with the living ecology of being. *Or* it could be construed as an evolving intermittent dance, an interweaving alpha-helix of relation between self and other, knowing and meaning, particular and universal (I picture a Caduceus, mean and be meaning). Either way it strikes me as both mycelial and serpentine, sinuous and meandering, complex and yet, simpleminded.

³⁸ An interest that Abram obviously shares as the vast majority of *The Spell of the Sensuous* (1996) is devoted to exploring the relationship between language, perception and the more-than-human other.



As simpleminded as it may sound, we too are close to the Earth, of its flesh and verses. I often need to be reminded of this (*pay attention!*) - as do those we teach.

I hold the very simpleminded view that everything is related to everything else - and that every one is related to everyone else, and that every species is related to every other. The only way out of this tissue of interrelations, it seems to me, is to stop paying attention, and to substitute something else - hallucination, greed, pride, or hatred, for example - for sensuous connection to the facts. I think it is not the world's task to entertain us, but ours to take an interest in the world.

I also subscribe to the view - not original with me - that the world is constructed in such a way as to be as interesting as possible. This is a deep tautology. Our minds, our brains, our hearts are grown out of the world, just as buttercups and mushrooms are. The world is us, and we are little replicas and pieces of the world. How could the world be anything other than as interesting as possible to us?

Yet all it takes to break that link is to try to control the world, or take it for granted, or ask it not to change or not to complain while we continue to carve it up. All it takes - and this is not, evidently, very difficult to do - is to sever the identity of poetry and thinking. (Bringham, 2006, p. 157-158)

And Wittgenstein:

Again and again there is the attempt to define the world in language and to display it - but that doesn't work. The self-evidence of the world is expressed in the very fact that language means only it, and can only mean it. As language gets its way of meaning from what it means, from the world, no language is thinkable which doesn't represent this world. (as cited in Zwicky, 2003, p. 26)

I like the idea of meaning as a deep tautology of patterned resonance. The idea that our hearts and minds sprout from the world just as mushrooms sprout from the forest floor, both innately attuned to the interconnected polyphony of what-is. That no language is thinkable which does not represent this world and that *this* is all we really have to teach, the real work, the rest will follow of itself. How could the world be anything other than as interesting as possible to us? And yet, *something has happened*. Despite our technological advancements, our specialized vocabularies and the prolific manufacturing of educational theory and academic literature, our kinship with the Earth remains severed, our ontological reciprocity with the more-than-human distorted and hypostatized. Perhaps an ecological-ontology in education calls for more "simple-mindedness" and less "single-mindedness," more ambiguity as a form of wisdom and less certainty as a form of knowledge. Or as Jardine has written,

...perhaps what is required is what Thomas Berry (1988, p. 5) called “post-critical naivete” – a naturalness or simplicity of speech that disrupts our burgeoning edifices of knowledge which are threatening to collapse under their own weight, threatening to do nothing more than exhaust us in their nightmarish hurry to finally get things right. This is the naïve, perhaps impossible hope of phenomenology – to turn us away from our idealized and admittedly beautiful and seductive edifications and grand theories, and back to life as it is actually lived. It is perhaps an impossible hope that we can recover our humility, our humanity, our humus, our living place on the Earth. (1998, p. 12-13)

Austrian poet Rainer Maria Rilke suggests that we need to heal our severed kinships, to recognize the birds, in order to *come home*. This is *really* the only prescribed learning outcome of an ecohermeneutic curriculum.

Ah, not to be cut off,
not through the slightest partition
shut out from the law of the stars.
The inner – what is it?
If not intensified sky,
hurled through with birds and deep
with the winds of homecoming.³⁹

³⁹ Rilke as cited in Abram, 1996, p. 261

1.3. cultural-linguistic historicity & metaphor

The recognition that all understanding inevitably involves some prejudice gives the hermeneutical problem its real thrust. (Gadamer, 2004, p. 272)

A metaphor can appear to be a gesture of healing - it pulls a stitch through the rift that our capacity for language opens between us and the world. A metaphor is an explicit refusal of the idea that the distinctness of things is their most fundamental characteristic.

But their distinctness is one of their most fundamental ontological characteristics (the other being interpenetration and connectedness). In this sense, a metaphor heals nothing - there is nothing to be healed. (Zwicky, 2003, p. 59)

Critical ecohermeneutics joins with other ecocritical theories in attempting to inoculate the taken-for-granted or hypostatized presuppositions (EPOCHAXis) of *normal*. Specifically, it endeavours to guide attunement to the *really real* (i.e. ecological-ontological relationality) in the face of spectacular distractions, distortions, illusions, ideologies, ossifications and calcified ways of knowing. Its particular potency stems from its recycling of Western language, traditions and modern ecological discourses for a truly *radical*⁴⁰ approach to education.

Why should educators or environmentalists or anyone else care about metaphors and cosmological presuppositions? Or, for that matter, scholarly concepts like ontology or historicity, or the study of poetic tropes? How will foregrounding the interpretability of the world inspire insight into the very tangible, very alarming realities of our burgeoning ecological crisis? How are we to expect (eco)poetics to “solve” a crisis of this magnitude? Do we not require technical and scientific solutions to these urgent problems? The facts, the statistics, the climate change simulations produced by fancy supercomputers somewhere in Switzerland and presided over by elite scientists (all funded, of course, by Rockefellers and Morgans and other such financiers ostensibly turned eco-philanthropists).

⁴⁰ Ecolinguist Sune Vork Steffensen has written on the etymology of *radical* in a way that complements the mycelial conception of ecohermeneutics: “The literal meaning of *radical* is that it goes to the *radix*, i.e. the root, of either the problem or the discipline. From these roots it is then possible to develop a true alternative that is not entangled in a development that no matter how promising it was and has been turns out as a literal threat to the continuance of our existence” (2007, p. 15).

In the short term, *perhaps*. Yet the kind of mechanistic, technocentric and capitalistic thinking that we have been culturally bequeathed, and that we regenerate and reinforce to each subsequent generation via schooling, is the true fountainhead of the ecological crisis (Bowers, 2008b). Critical ecohermeneutics attempts to address the linguistic dimension of the ecological crisis by pointing to the *cultural-linguistic historicity* of our understanding at the level of metaphor and worldview. This recognition is what Gadamer called the “real thrust” of the hermeneutic problem (2004, p. 272); the cultural-historical situationality, and thus prejudice, of all interpretation as manifested in the language we use to communicate and think with. Gadamer’s project was aimed at elucidating the role of tradition in our understanding, not in the sense of being rigidly bound to its trajectories, but in articulating how the world is a world of *living* ancestry and *living* historical relations. Drawing upon Gadamer in order to consider the fecundity of a new teacher’s account of entering the classroom for the first time, Jardine has written:

Interpretation thus becomes a movement of shaping and making something of this instance and its human topographies, while, at the same time, shaping and making something of myself in the midst of this world in which I work as a teacher, a writer, a scholar, a parent, and so on. Differently put, I become someone in the process of coming to know about the world in which I live... I have to let my pre-understandings and prejudices and presumptions fully engage this new teacher’s words... Hermeneutics is thus not a form of methodological imperviousness but is, rather, precisely the opposite. I must let what I have come to know about this world be susceptible to being supplemented, enhanced, transformed, further-changed, embarrassed, perhaps even humiliated... (2006, p. 281)

This is difficult and often painful existential work, especially now as we are faced with an emergent ecological understanding fraught with shame, anxiety and despair at how we have treated the more-than-human world. An ecohermeneutic understanding is all the more difficult being that we are so deeply embedded in a cultural-historical-linguistic matrix that seeks to sever historical consciousness from the present crisis. Although we move through a world of living ancestry, it is largely invisible and not only difficult to perceive, but intentionally obscured and distorted by ideological interests who use the education system to perpetuate dominant cultural norms.

Remember,
even as we walk on concrete
somewhere hidden, *beneath*
soil & bone.



The education system is undoubtedly one of the pivotal social institutions for the reproduction of cultural norms and has, thus, contributed greatly to the regeneration and maintenance of the ecologically destructive aspects of modernity (Bowers, 2009; Blenkinsop, 2010; Orr, 1991). Ironically, it is also the social institution most often charged with “solving” the ecological crisis, and, to that end, “sustainability” and even the so-called “Aboriginal science” of “Traditional Ecological Knowledge and Wisdom” (BC Ministry of Education, 2008) have been integrated into curriculum rationales as new additions to the multitudinous and, largely irreconcilable objectives of education (Egan, 1997). Though admittedly, these *sustainability* initiatives seem more intent on sustaining instrumental trajectories, a capitalist ethos and the business-as-usual status quo, than provoking any truly transformative cultural shifts.

As Blenkinsop has written, the education system “sits at the vanguard of this environmentally and socially unjust and destructive worldview,” and if we are to effect cultural change, we must address the non-environmental, if not anti-environmental, roots of this crisis inherent within modernity (2010, p. 6). But how do we approach the formidable task of generating critical distance from our deeply embedded presuppositions, in order to even get a sense of the ecologically destructive aspects of our worldview? Blenkinsop has begun to seriously explore an educational project aimed at cultural change drawing upon the work of ecofeminists (Plumwood, 2002; Merchant 1980) and ecojustice educators such as Bowers (2008a, 2008b), who believe that the problem lies in the very root metaphors upon which Western culture is mythopoetically founded and sustained. What does it mean to work with metaphor at the level of cultural change? Blenkinsop offers this explanation:

As we all do, our students live immersed in a plethora of social and cultural messages. The structure and function of schools tells us what is important and what is not, what to be aware of and what to ignore, how systems work, and how the culture works... the point is that these messages reflect the culture. Within schools, environmental education may be undone by the conflicting messages created by these cultural artefacts. For example, a teacher may spend the day discussing interdependence, then a bell sounds summoning students to a different classroom and a different discipline, or homework is returned with each student receiving an individual, independent mark. Such mixed metaphors are all too common, and a major challenge has been to try to find metaphors appropriate to an ecologically based education. What are we saying to the community when we use metaphors? What are their effects —positive or negative— and how does one underpin or undermine the effect of metaphors? (2010, p. 11)

A similar critique could be made of many of the current approaches to ecological education. Many do not, for example, adequately acknowledge the role of imagination in engendering *ecological understanding* (Judson, 2010). Often experientially focused (this is to say focused on experiential activities such as canoeing or geocaching, not what comprises a meaningful pedagogical *experience*), they lack a suitably trenchant critical analysis of the dominant culture, a developmental framework, an explicit approach or philosophy of language, and fewer yet seek to fundamentally transform human-world relationality through addressing the role of metaphor. Oftentimes these initiatives subtly, yet fundamentally, work to reinforce the root cultural-historical presuppositions that perpetuate the ecological crisis, despite their sustainability rhetoric and well meaning, eco-friendly aspirations.



One of the root problems with education has to do with its inculcation of epistemic norms (that conceal any deeper ontological dimensions to understanding) characterized by a fundamental severance from the cultural-linguistic historicity of understanding. This as essentially a problem of hermeneutics, a crisis of understanding the manifold life forms before us in their interrelational and resonant multidimensionality. Others have described this crisis in different terms: suppressing the body's silent conversation with things (Abram, 1996); cutting the vocal cords of the world (Evernden, 1993); dishonouring the rich rhythmic manifold and diverse frequencies of being in the world (Lee, 2002); colonizing the sky with a Cartesian cosmology (Bringhurst, 2006); silently living out Descartes'-dream-turned-nightmare (Jardine, 1998); a culture of make-believe (Jensen, 2002); a *wetiko*⁴¹ disease of exploitation, imperialism and terrorism (Forbes, 2008). A culture that eats but is not eaten, reads but is not read, means but does not open itself to the polyphonic structure of meaning in the world.

⁴¹ Powhatan-Renape and Delaware-Lenape scholar (and founder of the American Indian Movement), Jack Forbes has explained the *wetiko* concept as such, "Wetiko is a Cree term which refers to a cannibal, or more specifically, to an evil person or spirit who terrorizes other creatures by means of terrible evil acts, including cannibalism... I have come to the conclusion that *imperialism and exploitation are forms of cannibalism and, in fact, are precisely those forms of cannibalism which are most diabolical or evil*" (2008, p. 24).



What does learning how to read and be read by the world mean? Bringhurst has described the world as the “original book”, the one that we did not write or publish, the one that we live within and the only book that “*calibrates* the mind” (2006, p. 138).

Letters, like words, are things - but letters, like words, and like language itself, are also metaphors, and metaphors, I think, stand in much the same relation to the mind as proteins and amino acids to the body. All the more reason to give them convincing and tangible forms: forms with which our bodies, minds, and memories can really interact.

The original book is, of course, the world itself. People in all cultures read that book. Especially people without writing. Especially hunter-gatherers, who study the great book day after day, night after night. People who have writing make their own books - little models of the world - and often study those instead, as if their little books were somehow more correct or more important than the book in whose immense, detailed pages we all live. In the twentieth century, replete with comforts such as central heating and air conditioning, and awash in printed books and magazines, films, cassettes and compact discs and non-stop broadcasts on TV, a lot of people ceased to read the original book. In the course of the same century, most people came to live in cities, under constant artificial sounds and light. Many now have never seen the night sky, the grasslands in the spring, the hardwood forests in fall, the taiga or the tundra or the desert or the mountains, except as pictures on TV or printed images in magazines or illustrated books. When people raised in this way read books, their reading is untested in a way. It hasn't been calibrated against the original book. (2006, p. 132-133)

Unfortunately, it is very much possible to live in the world today and *never* learn how to read the original book, or worse yet, to have the idea of an original book belittled and schooled out of you. To pass through the modern rite of education and become, as Evernden (1993) has put it, sufficiently detached from the voice of the Earth. Perhaps it is not surprising then that some religious fundamentalists who extol the Truth of a *single* “little book” and some postmodernists who castigate the untruths in *all* “little books” are, in a sense, equally un-calibrated against the original book that is the world.

But, alas, we are not hunter-gatherers (for the time being) and we are not accustomed to studying the original book day in and day out as many oral cultures do and have done. Getting out into the world then, which is to say, trying to get away from our twenty-first century comforts and the constant artificial light and sound of the city is obviously a part of the solution to our ecological illiteracy. Which is, of course, the primary objective of most “experiential,” “environmental” and “ecological” education initiatives. But letters and words and language itself

are things of the world too - ecological phenomena - and though we want to avoid repeating the tendency to treat our little books as more important than the original book, we would be foolish to deny our minds the metaphoric proteins and amino acids it requires for healthy and imaginative thinking. We are already in this modern wasteland of broken images, awash in electronic books and handheld devices and digital networks (What are the roots that clutch, what branches grow / Out of this stony rubbish? – Eliot 1962, p. 29) All the more reason to give words convincing and tangible forms - forms with which our bodies, minds, and memories can really interact with.



Recall Gatta: “To read birds, for example, requires familiarity with the articulated sounds of each species. Learning to look with understanding at what is already ‘before you’ in the text, field, or sandbank is essentially, then, a problem of hermeneutics” (2004, p. 137). Indeed, reading birds does involve familiarity with the sonic expressions of different species (in a taxonomic sense), but it also involves a certain way of thinking *with* birds and focusing on the unique particularities of every encounter. In this sense, our thinking can resonate with birds and, if we pay attention, we may learn something or gain new insight from calibrating what we know of birds to the living particularities of *this* bird. This might be thought of as attuning to the living ecology of meaning. Which is to say, reading birds ecohermeneutically is more than familiarity with specific aural vibrations as they travel through sonic space and categorizing them as such; it is attunement to the multidimensionality of birds in relation to everything else. Birds can *speak to us* on so many levels: mythic, religious, biological, ecological, economical, philosophical, pedagogical. *Birds teach us what-is.*

The modern ornithologist and the auspice of ancient Greece have both presumably learned to *read* birds in alignment with their cultural-historical understandings and ontological presuppositions. Despite the devotion of each to his or her craft I think it is safe to assume that the ancient oracular discipline of the auspice - divining and reading omens from the observed flight of birds - would not be well received by most modern Western scientists. A critical ecohermeneutic recycling seeks to open the possibility of understanding this cross-cultural and historical ecology of meaning in order to elicit new ontological insight for the living. Reading *across* traditions and disciplines must surely be one of the most compelling ways to get a more multidimensional sense of what a bird *means*, but even a comprehensive cross-cultural analysis

can be abstracted from the living resonance of the world. What about the breathing bird in front of you, flitting this way and that, doing and being a bird, what about *this* bird?

Pay attention. You'd be surprised.



I imagine Rachel Carson (2002) listening to the birds, or rather, listening to their heartbreaking absence. Ten years after an increase in the use of synthetic pesticides sanctioned by the United States Department of Agriculture in the 1950s, Rachel was bedridden from duodenal ulcers and had discovered cysts in her left breast just as she was completing the drafts of a chapter on cancer for her book on the deadly effects of pesticides. The cancer metastasized and reached languidly for her liver. Under the weight of fierce criticism from powerful corporations such as DuPont and their ticker-tape parade of lobbyists, payroll scientists and politicians - and the very real possibility of being sued for libel - she published *Silent Spring* while still undergoing radiation treatment. It was difficult to decide on that title for the book. *Silent Spring* was originally just the title for a chapter on birds, but Carson agreed that it should become a metaphoric title for the entire work, drawing attention to a bleak future for the whole natural world should we continue down this path (Lear, 1997). *Silent Spring* became a watershed for environmental consciousness in North America.

Although weakened by her treatment
& the sadness in her left breast
in the end, Rachel Carson
died of a heart-attack.

A year after her death, her publisher arranged for the publication of a narrative essay (intended to be a book), entitled *The Sense of Wonder* (Carson, 1965), about her adventures in the more-than-human world with her nephew. More importantly, however, the book was an educational kind of entreaty about how to maintain a child's inborn sense of wonder. In that book she writes:

Hearing can be a source of even more exquisite pleasure but it requires conscious cultivation. I have had people tell me that they had never heard the song of a wood thrush, although I knew the bell-like phrases of this bird had been ringing in their backyards every spring... Take time to listen and talk about the voices of

the earth and what they mean – the majestic voice of thunder, the winds, the sound of surf or flowing streams.

And the voices of living things: No child should grow up unaware of the dawn chorus of the birds in spring. He will never forget the experience of a specially planned early rising and going out in the predawn darkness. The first voices are heard before daybreak. It is easy to pick out these first, solitary singers. Perhaps a few cardinals are uttering their clear, rising whistles, like someone calling a dog. Then the song of a whitethroat, pure and ethereal, with the dreamy quality of remembered joy. Off in some distant patch of woods a whippoorwill continues his monotonous night chant, rhythmic and insistent, sound that is felt almost more than heard. Robins, thrushes, song sparrows, jays, vireos add their voices. The chorus picks up volume as more and more robins join in, contributing a fierce rhythm of their own that soon becomes dominant in the wild medley of voices. In that dawn chorus one hears the throb of life itself. (1965, p. 68-69)

Rachel Carson, I think, opened herself to reading the world ecohermeneutically. She recognized the value of metaphor and lyric in writing about science, both as a kind of pedagogy of wonder and an ecoethical call to action. She was a biologist *and* an auspice.

She *really* listened to birds.



Poet Don McKay has also provided a brilliant example of his reading of bushtits, and the profound ecological-ontological lessons they can elicit (reminding us first that, for the ancient Chinese, the heart was an organ of thought):

To be next door to nothing: it's not only their nests, but the bushtits themselves that convey this paradoxical power. They are 'creatures of the air' not only because they fly through it, but because it comprises so much of their bodily presence. All birds, in fact, live close to the edge. Typically, they draw air into sacs throughout their bodies, and even, in some cases, into their hollow bones. They also expel all the air from the lungs with each exhalation, without holding back, as we do, a reserve. Nor do they put on fat they aren't about to burn up in migration. Birds do not need a Lao-tzu to remind them of the non-being their lives depend on. (2002, p. 74-75)

This gorgeous account of thinking *with* bushtits seems to me to be a good example of giving words forms with which our bodies, minds, and memories can really interact. But perhaps this is only the province of the master poet? How might we think about translating metaphorical thinking, about birds for example, into practical pedagogy and curriculum?

In her new ecological approach to Imaginative Education,⁴² Gillian Judson (2010), building upon the work of educational philosopher Kieran Egan (1997), offers us a glimpse of how we might think about the role of metaphor in curriculum for a Grade 8 class studying hummingbirds. Central to this approach is embedding the student's learning within an emotionally and imaginatively engaging narrative about the elegance, fearlessness and truly remarkable powers of flight of this tiny creature. This narrative dimension is supplemented by learning about hummingbirds in ways that meaningfully engages students' bodies and by developing what Judson has called *place-making cognitive tools* (p. 65-97).

They [students] are encouraged to employ their senses in observing the rhythms of the hummingbird, the great speed of its wings, the sound a bird's wing movement creates, the directionality of its flight. They are given opportunities to become hummingbirds. They express in various ways, from this new perspective what the world looks and feels like... They explore the musicality of birds, playing with ways to recreate the music created by the rapidity of hummingbird wings in motion... researching more about this species. What makes this species unique? The hummingbird is a fearless flier – what makes a robin, bluejay, or crow unique? (p. 2-3)

In this way, writes Judson, “the natural interdisciplinarity of the curriculum emerges” and students are ideally inspired to branch off and study other birds they observe in their communities. For example, perhaps the study of migration draws natural connections to social studies; the study of bird flight draws connections to the science of movement, gravity, or evolution; observations about the unique beak of the hummingbird draw connections to pollination and sustainability issues, food security, corporate agribusiness? Students even come to think about the relationship between birds and language; for instance, what does it mean when something is “for the birds” or if someone is said to have a “bird brain” or that “birds of a feather stick together” (p. 3)? Students may even begin to recognize and reconsider the root metaphors of the idioms, proverbs and myths that have helped construct their worldviews. Perhaps, if they are provoked by the teacher and elicited by the world-as-co-teacher in meaningful ways, they may discover that these metaphors are no longer resonant, that they lack a living phenomenology that makes sense in today's world? Perhaps they may discover new metaphors that strike them with new insights and new ways of understanding? Insights that

⁴² I address Imaginative Education in more detail in Chapter 3 beginning on p. 133.

inspire thinking that glimmers like stars or resonates like bells or moves with the elegance and fearlessness of hummingbirds?

There is no doubt that metaphor is a powerful cognitive tool. Although the hummingbird lesson offered by Judson provides us a practical and thoughtful example of the role that metaphor can play in imaginative engagement, a critical ecohermeneutic inquiry is, in a sense, of a different order. Although getting at the importance of somatic understanding and the natural interdisciplinarity of the curriculum is important epistemologically, a critical ecohermeneutic approach endeavours to get deeper to the innate, or better yet, *ecological* multidimensionality of being and meaning. Perhaps we could even say that the interdisciplinarity of knowledge is the resonant echo of this deeper, ontological ecology of meaning that is immanent in the world itself. In this sense, it is vital that we continue to develop an interdisciplinary knowledge base, general theoretical schemes, reflexivity, even continue to explore empiricism and instrumental rationality, but that radical epistemic doubt needs to be supplemented by an even deeper ecological-ontological understanding (both as a way to deepen epistemic doubt and open to relational development with the more-than-human other). Eco-poiesis aims to be one of the ways to elicit such an encounter.

What makes metaphoric thinking such a central aspect of critical ecohermeneutic inquiry? Metaphor is one of the ways the “wild, participatory logic of the weblike perceptual world” (Abram, 1996, p. 84) resonates with our language and potentially works to deliquesce the calcified (i.e. non-metaphorical) aspects of our epistemic certainties. As Zwicky (2003) has written, “Metaphor results from an over-riding of calcified gestures of thought by being” (p. 8). This can have an intensely critical effect, but metaphors can also remediate and reconnect our thinking to the resonant ecology of things, precipitating a deepening of our relational capacity with the more-than-human. “Metaphor is one way of showing how patterns of meaning in the world intersect and echo one another” (p. 6).

American poet Louise Gluck has claimed that the role of metaphor is not one of a standardized service (i.e. it is not strictly speaking, *only* a tool for thinking or cognitive development). “Its service is to the spirit, from which it removes the misery of inertia. It does this by refocusing an existing image of the world...” (as cited in Zwicky, 2003, p. 8). The ecological crisis is, in part, a problem that has to do with a persistent image of the world, a monolithic, absolute, objective image of the world with aggressive colonial tendencies. The power of metaphor is its ability to refocus an image of the world and to remove the “misery of

inertia.” Although this will certainly involve a good deal of *knowledge*, the point here is that more knowledge, even interdisciplinary knowledge, is not necessarily what is called for. What is called for now is a reorientation to knowing, a new kind of ontological engagement with the more-than-human. This is the task of ecopoiesis, pointing to the interconnected, participatory, animate, multivocal, ambiguous, contextual, polysemous and pedagogical aspects of being in order that our thinking might echo and resonate *with* the world.

When we think intensely and beautifully, *something happens*.



So what are the specific “learning outcomes” of an ecohermeneutic curriculum? We have discussed teaching as a process of training the attention, of revealing the hidden connections between phenomena, of developing metaphoric thinking, as a kind of domestic wisdom, but what would an ecohermeneutic curriculum look like *on the ground*? I want to say the only real learning outcome of an ecohermeneutic curriculum is to recognize our *indigeneity* to place (i.e. our place-based consciousness), to *re-indigenize* our thinking and being so that they are calibrated with the place(s) we are *of*. No doubt this is a potentially provocative and politically charged statement, especially being that as I write these words I occupy unceded Coast Salish territory in a colonial State that has used its educational system, both historically and contemporarily, to perpetrate genocide against the Indigenous peoples of this land (Alfred, 1999; Cardinal, 1969; Maracle, 1996; Forbes, 2008; Jensen, 2002).

When I initially began writing this work I did not necessarily foresee having to address issues of indigeneity and of Indigenous politics, but as it turns out, these issues emerged as the natural culmination of thinking about critical ecohermeneutic education in Canada. I will expand upon the complexities of indigeneity in further detail when I consider ecohermeneutic education as a process of re-indigenization in Chapter 4. As we will see, re-indigenization must include a concurrent process of decolonization, which is to say, it must engender an *ethical relationality* between Indigenous and non-Indigenous peoples. To this end I will draw upon the writings of Indigenous scholar Dwayne Donald (2009) and offer his reading of *Indigenous Metissage* as a curriculum sensibility in order to provide one way to politically and ethically enact a curriculum of re-indigenization in the colonial state of Canada.

For now, allow me to briefly introduce and outline some of the key features of an ecohermeneutic curriculum in order to gain a sense of where we are going. Kulnieks, Longboat, and Young (2010) are among the few educational theorists to explicitly describe their project as an *ecohermeneutic* approach to education. This interpretation includes some of the following key features:

- engendering a deep and participatory understanding of place;
- recognizing and revitalizing oral traditions in the curriculum;
- focusing on interpretive and experiential inquiry with an emphasis on storytelling;
- connecting to ecojustice frameworks to analyze the linguistics of the ecological crisis.

An ecohermeneutic pedagogy recognizes that, to oral cultures (and, potentially, to literate cultures), “text is not necessary because the discovered truth may be a non-human truth that is panelemental...” (Kulnieks et al., 2010, p. 17). This is to say that *ecohermeneutics* extends the hermeneutic project by moving from interpretation of text and tradition to, as Gatta has claimed, “Learning to look with understanding at what is already “before you” in the text, field, or sandbank...” (2004, p. 137). Drawing upon the work of Bringhurst, Kulnieks et al. point to the linguistic connection between land and human expression, suggesting that the orature of Indigenous knowledges offers us ways to integrate and synthesize the ecology of interpretative meaning of place.

Utilizing Bringhurst’s insight on the linguistic connection between land and human expression, it is possible to understand how nature can be understood both as a source and record of meaning. Therefore, we understand literary tradition as being part of oral tradition rather than oral tradition being part of literary tradition... This being said, we do not see a hard and fast dichotomy between oral and literary tradition in cultures that employ both as means of representing knowledge because they can become part of one another.

Ecological hermeneutics requires the orature of Indigenous knowledge (IK) precisely because IK works on the ability of the teller to integrate and synthesize knowledge that provides an ecological and temporal location vis-à-vis the natural world. From those constituents, the story is told not as a static text but dynamic meaning derived from the restless and changing energies of the Earth and her dynamics in human form with a transaction of the ecology of meaning. Here we do not mean that there is no right or wrong meanings. That is left to the listener. Rather, there is a methodology for interaction and the unification of mind with place for the realization of the lesson that place has to teach. (2010, p. 17)

Although I would hesitate to describe ecohermeneutic inquiry as a “methodology” for interaction, I share in the idea that in order to truly understand that places are pedagogic, to recognize that they are both a source and record of meaning, we need to first reconsider our understanding of the linguistic connection between land and human expression. Although Indigenous knowledges and the logics of oral traditions offer potentially fecund ways to re-think about participatory and storied relationships with place, in the next two chapters, I would like to first consider Western conceptions of language (via eco-poetics and ecolinguistics, Chapter 2) and interpretation itself (i.e. philosophical hermeneutics, Chapter 3) before returning to an Indigenous conceptualization in Chapter 4.

In the next chapter, I will consider an ecological approach to linguistics and how eco-poetics corresponds to ecolinguistics, particularly how it seeks to establish an appropriately critical, yet lyrical, ecology of language. Although eco-poetic understanding foregrounds the role of metaphor in the ecological crisis, we have yet to discuss a specific framework or praxis for analyzing these metaphors. How, for example, are ecohermeneutic educators expected to root out ecologically destructive metaphors and expose the archaic cultural-historical nature of their toxicity? Furthermore, how exactly are educators to establish the critical distance necessary to discern EPOCHA's presuppositions inherent in our language use and, at the same time, engender an interwoven and caring relationality between human and place? Does this process not pull us in opposing directions? Zwicky has responded writing, “... critique, too, is empty unless the space it clears becomes home to insight” (2003, p. 21). So then how might we begin to think about building a home for insight in this otherwise empty critical space? How might we learn to weave so many threads?

The voices, layered voices, shimmer
Brilliant, chafing, lapping over one another,
Echo in the salt light. Great twisted rope,
The vision we will ride in flight
Above the twilit world. How ever can we learn
To hear each one distinctly,
Fragile threads in the enormous chorus?⁴³

⁴³ Zwicky, 1986, p. 62.

2. metaphors to live by: ecopoetics & ecolinguistics

Metaphor is a way of understanding the world; it comes naturally to nearly all language-speakers. Any account that makes it out to be odd or queer in relation to 'the norm' is itself odd or queer. We think we need such an account only because we have misconstrued the nature of 'the norm'. A good account will be as much a critique of standard Western European assumptions about meaning's relation to language as it will be a positive discussion of metaphor. (Zwicky, 2003, p. 115)

The identity of the psychic dimension (of ecosystems) developed in the ecosphere in co-evolution with the organisms, long before man as a new species entered the scene. A growing complexity of cognitive abilities, intelligent behaviour, and systematically organized forms of communication came into existence, language so far being one of the last. Language, however, provided the human animal with a means entirely new in the history of the evolution of life: it enabled us to actively construe new systems, systems of thinking and believing, of values, opinions and abstract knowledge, of not only behaviour but action... (Finke, 2001, p. 85)

What happened? How did Western culture become so estranged from the more-than-human world? When did we learn to turn a deaf ear to the mellifluous buzz of honeybees; to suppress the verdant incantations that rise incessantly from living soils; to tune out the nuanced rustle of leaves as they touch one another and fall to tap us on the shoulder? Or as Abram (1996) has asked more specifically, "how did civilized humankind lose all sense of reciprocity and relationship with the animate natural world, that rapport that influences (and limits) the activities of most indigenous, tribal peoples? How did civilization break out of, and leave behind, the animistic or participatory mode of experience known to all native, place-based cultures?" (p. 137). Abram claims that our animistic sensuality and perceptual reciprocity was never actually *lost* (indeed, where might our sensual perception go?) but that it was *transferred* to the "synesthetic magic" of written words with the emergence of phonetic alphabets. Thus, only with the advent, and often belligerent and invasive propagation, of an inherently anthropocentric phonetic writing system did the rest of nature begin to lose its voice (p. 138).

Despite finding much provocative insight in the explicitly anti-civilizational perspectives of writers such as Fredy Perlman (1983), Paul Shepard (1998), Marshall Sahlins (2008) and

Derrick Jensen (2002, 2004)⁴⁴ - and although I agree with Abram that we must reconsider the relationship between language, perception and the ecological crisis - I am wary of condemning *all* “civilization” as having forsaken its reciprocity with the more-than-human world. I am equally wary of positing an enigmatic, but categorically healthy relationality shared by *all* indigenous and place-based cultures. It seems the further back we try to extend our claims and the more universalizing the implications, the more susceptible our statements become to a kind of conceptual fossilization. This is not to condemn the important work of these writers or the critical task of looking deeply into history or anthropology, but only to say that we must be vigilant and attentive to the particulars and complexities of how we reinterpret the world and the way our language conceals presuppositions.⁴⁵ For instance, to reproduce a hard and fast duality between *civilization* and *tribal* is, I fear, to hazard the reproduction of the kind of rigid dualistic thinking that has culminated in, or at least contributed to, the ecological crisis (Plumwood, 1993).

There is *something* there of course - there is something in the way that *this* modern Western culture (as foremost representative of “Civilization”) has emerged from the historical and ontological possibilities of being in the world in its current dominant form. Likewise, there is something in the way *many* indigenous and place-based cultures were and are able to embody and engender a different kind of ecological-ontological relationality with the more-than-human world. Which is to say, a civilization-tribal duality is one way of looking at it. Pointing to the appropriation of a phonetic alphabet by the ancient Greeks and its two thousand year expansion to the rest of Europe is another, particularly perspicacious, way of looking at it (Abram, 1996). There are *other* ways of looking at what happened with modern Western culture with respect to language and ecology though. In lieu of straining to glimpse back into the obfuscated gradient of anthropological timeframes, I would like to focus on the history and politics of *modern*

⁴⁴ For additional readings on the subject see John Zerzan’s (2005, Ed.) fascinating collection of anti-civilizational writings and reflections in, *Against Civilization*, which includes reflections from diverse thinkers such as: Jean-Jacques Rousseau, Henry David Thoreau, Theodor Adorno, Charles Fourier, Max Horkheimer, Ivan Illich, Ursula K. LeGuin, John Mohawk and many others.

⁴⁵ Mick Smith (2007) has written a critical but legitimate and important critique of “ecological anarchism” and the way some of its presuppositions are characteristic of the same social histories it claims to struggle against. “Re-wilding understandings of self and nature offer diverse ethico-political possibilities but only if it is recognized that self-identities, idea(l)s of nature, and even conceptions of individual autonomy are partly constituted by the same social histories that primitivism dismisses” (p. 470).

linguistics as a way of illustrating how language and language study shapes our ecological relationality. My hope is that not only will this discussion help to frame and situate ecopoetics and ecolinguistics within, or as we will see, without the field, but here too I think we find a manifestation of that *something* that estranges us from deeper connections to the more-than-human other. Here too we see manifestations of the ecologically pernicious aspects of the Western EPOCHAxis, extending back into the cultural-historical development of modernity and severing language not only from its connection to the animate Earth but from meaning itself, from poetics and indeterminate creativity, from any social or ecological significance at all.

2.1. the rise of autonomous linguistics

An uncompromising but controversial solution to the basic problem for a science of language is that represented by the version of the language myth enshrined in the orthodox tradition of modern linguistic theory. Those working within this tradition, while not denying in principle that the specific contexts in which utterances occur affect their interpretation, have usually taken the view that it is not the business of the linguist to account for such matters. A language in their view is to be treated as a system of decontextualized verbal signs, organized into complexes called “sentences,” and mastery of a language is interpreted as mastery of the decontextualized system. Some such idealization, it is claimed, is theoretically essential if there is to be a science of language. (Harris, 1981, p. 32)

Modern linguistics dates from the end of the eighteenth century, when Sir William Jones of the East India Company delivered a paper suggesting a common origin between the Sanskrit languages once spoken in India and several modern European languages. This presentation gave rise to the field of comparative linguistics and would eventually lead to the autonomous orientation to language that dominates the field today (Newmeyer, 1986, p. 17-19). I would like to draw upon the work of Friedrich Newmeyer (1986), Roy Harris (1981, 1990), Hayley Davis and other linguists who feel that modern linguistics is at a critical stage in its development and needs to be *redefined* in order to address the criticisms that have been launched against its rigid, decontextualized and segregationalist standards (see Davis & Taylor, Eds., 1990). Although this process of redefinition has already been initiated (Harris, 1981), ecopoetics and ecolinguistics offer an ecological orientation to language that, until very recently, has not played a prominent role in redefining our approach to language.

The pervasiveness of language in the human condition is perhaps best reflected in the diverse ways in which we approach and study its effects. Newmeyer (1986) has conceived of the field of modern linguistics, most generally, as representing three essential orientations: humanistic, sociological and autonomous. The interests of humanistic linguists are most recognizably embodied in the related subfields of poetics and stylistics, and are devoted primarily to the study of the figurative, aesthetic and creative uses of language (mostly in literature). Sociolinguistics, represented by subfields such as pragmatics and discourse analysis, is concerned with the functioning of language in society, such as the effect of cultural norms and social power relations on language and, conversely, the influence of language on these social relations. Autonomous linguistics, on the other hand, might be best described as grammatical theory and work in the related subfields of phonology, morphology and syntax. In essence, this

branch of linguistics attempts to formulate the principles governing structural regularity in language (Newmeyer, 1986, p. 8).

Obviously not every branch or dimension of linguistic analysis falls neatly into these categories; for example, both semantics (the study of meaning) and historical linguistics encompasses all three orientations, not to mention all of the other areas of language study claimed by scholars of rhetoric, philology, dialectology, hermeneutics, etc. So what is *linguistics* then? As Davis has written, many linguists have ignored the problem of definition simply by saying, “Linguistics is the science of ‘language itself’” (1990, p. 2). But what “language itself” *is*, is by no means incontrovertible. As we have seen, for example, according to Bringhurst (2006) we live in the literature of what-is and language is something that extends across the spectrum, from the solemn howls of wolves to the sprouting of mushrooms to the endless pontificating of literary professors. Why does this perspective of language not fall within the present definition of linguistics? Who has decided which aspects of communication are suitable for linguistic consideration and which aspects are “extra-linguistic”? What about the phonetic effects of language; its gestural significance as vibrations in aural space?⁴⁶ (Davis, 1990, p. 4; also see Abram, 1996). The lack of consensus on what language is, and what aspects of language fall within the definition of a “science of language,” is indicative that linguistics is not a subject with a clearly defined subject-matter. Be that as it may, modern linguistics is very much dominated by an autonomous orientation to language and any humanistic, sociological or alternative perspective (i.e. an ecological orientation) must first struggle against this narrow and irrefragable definition of what constitutes “normal” linguistic inquiry. While some notable figures in linguistics such as Edward Sapir and Roman Jakobson have combined different approaches to language, the pervasive tendency has been to insist that language must only be studied “scientifically.” Or as Newmeyer has claimed, “... the term ‘linguistics’ has continually been redefined to exclude whichever approaches happen to be out of favour” (1986, p. 10). How have we arrived at such a rigid and fossilized conception of linguistic analysis? What is the

⁴⁶ For example, Bringhurst has beautifully illustrated the relationship between language and voice, writing, “The voice has an anatomy, like the arm, the heart, the foot. The voice is made of breath. A sentence or a paragraph that pays no attention to the reach and rhythm of the voice is uncomfortable or painful, like a shoe that doesn’t fit the human foot or a glove on the wrong hand. But a sentence that does fit the anatomy of voice and breath will touch, through them, some other rhythms of the body: those of the heart and hands and feet, and of the memory and mind” (2006, p. 47).

relationship between the ideological presuppositions of autonomous linguistics and our estrangement from the more-than-human world? Before we address some of these questions, and position ecopoetics and ecolinguistics within Newmeyer's framework, let us first consider the political and historical rise of autonomous linguistics.



Though the methods of early comparative linguistics would eventually come to inform an autonomous orientation to language, these linguists certainly did *not* view language as an autonomous entity (Newmeyer, 1986, p. 19). Being that historicism was a major intellectual movement of the nineteenth century, theorizing about language at that time was dominated by a *diachronic* orientation (i.e. considering the historical aspects of language, as opposed to the *synchronic* or ahistorical aspects). In fact, comparative linguistics arose during the period of European Romanticism that in many ways rejected Enlightenment rationalism and attempted to understand the human condition in relation to society and the past that had shaped it (p. 22). Be that as it may, the actual practice of comparative linguistics became increasingly divorced from the Romantic project and, before the end of the nineteenth century, one could begin to speak of a privileged autonomy of language. The thinking of one Swiss linguist in particular, Ferdinand de Saussure, had such a profound effect on the field that all subsequent linguists have had to deal with his fundamental tenet of autonomy.⁴⁷ In other words, his claim that the synchronic aspects of language - its principles of sound patterning and word formation - can be studied as autonomous entities. Or as Saussure put it, simply, "The true and unique object of linguistics is language studied in and for itself" (as cited in Newmeyer, 1986, p. 28). Redefining linguistics in this way gave the discipline its essential academic profile, which it has retained to the present day (Harris, 1990; Bang & Door, 1997).

⁴⁷ Although Saussure has come to be regarded as one of the intellectual giants of modern times, at the time of his death in 1913, according to Newmeyer, this idea would have "generated laughter" (1986, p. 31). He devoted the majority of his writing to diachrony; even when it was discovered in the 1950s that "his" *Cours de Linguistique Generale* which was edited and published posthumously by two of his colleagues, and for which he is most famous, diverges in serious ways from his own lecture notes and from those student notes on which it was based, his reputation has not diminished. "The myth is now greater than the man, and, not surprisingly, a mini-industry has flourished devoted to sorting out what Saussure 'really believed'" (p. 32).

Saussure's redefinition of linguistics in his *Cours de Linguistique Generale* would come to be known as structural linguistics. By the 1930s it was flourishing in academic centers (particularly in America) and structuralist ideas were spreading rapidly to other academic disciplines such as anthropology, psychology and literary criticism.

The central principle of the *Cours* is that the systematicity of language is confined to a well-defined subpart, which can be abstracted from the totality of speech. This subpart Saussure called "*langue*", which he contrasted with "*parole*," or "speech". *Langue* represents the abstract system of structural relationships inherent in language, relationships that are held in common by all members of a speech community. *Parole*, on the other hand, represents the individual act of speaking, which is never performed exactly the same way twice. Saussure compared language to a symphony. *Langue* represents the unvarying score, *parole* the actual performance, no two of which are alike. Since, in the Saussurian view, *langue* forms a coherent structural system, any approach to language devoted to explicating the internal workings of this system has come to be known as "structural linguistics" or simply as "structuralism". (Newmeyer, 1986, p. 32)

The product of a structural analysis is called a *grammar* and is considered an autonomous entity; that is, the principles governing *langue* emerge with their own internal logic and are not reflections of principles in other fields such as sociology, physiology, psychology, history, etc. (Newmeyer, 1986, p. 32-33). Models of *langue* typically consist of three grammatical components: phonology, morphology and syntax. A structuralist description typically takes an inventory of the phonemes, morphemes and syntactic categories of the language under analysis. This conceptualization forces autonomous linguists into some extraordinary assumptions and idealizations about what language is and what enables communication. According to this orientation, for example, communication is possible because all speakers of the "same" language share the same correlations of forms with meanings and without such a series of determinate units there could be no science of language, because there could be no way of systematically analysing language. In other words, in an endeavour to make language a scientific object of inquiry, autonomous linguists must posit an idealized and abstract system, or a fixed code, in order to explain how language makes communication possible (Davis, 1990, p. 5-7).

The implicit assumption of the determinacy of language has incited some provocative critiques of autonomous linguistics. Harris (1990), for example, has demonstrated that the postulation of a fixed code rules out the possibility both of innovation in language and of learning a new word. For if the fixed code is shared between two speakers, and one person asks another about the meaning of a word, she must either already know the meaning, or they must

have different codes and, being that the codes are fixed, she will never come to understand the meaning by asking the other speaker. As any language teacher will tell you, clearly this does not correspond to how people learn new words and push the limits of creative language use. Talbot Taylor (1990) has attacked linguistic determinacy for excluding the moral, political and cultural aspects of language, as it is the social normativity of language which explains *why* it is the sort of patterned behaviour it is. Which is to say, linguistics matters to people precisely because of these normative dimensions of language use that have been defined as “external” to the “internal” regularities that provoke so much structural analysis. According to Talbot, even “internal” structural regularities have a social-cultural source, “The patterning of language is of our own making: to explain it we must examine it *in the making*” (1990, p. 147). Meanwhile, for Paul Hopper (1990), language is not something that *is*, rather it is something that is *emergent*, a real-time, social and temporal phenomenon. According to Hopper, the structure of language is not rigidly fixed but is provisional and negotiable in the living moment of its emergence. Nigel Love (1990) has challenged linguistic determinacy by drawing attention to the origins of language and the lack of explanation from autonomous linguists as to how this fixed code appeared in the first place. “For when primordial A first spoke and B understood, there was no possibility of their having come to any prior agreement on linguistic units; neither, therefore, could their understanding have arisen by means of antecedently given units” (as cited in Davis, 1990, p. 8).

Thus, the notion of language as based on determinate form and meaning has been thoroughly disputed, and yet autonomous linguistics is still considered, by and large, to provide the objective norm, the only truly “scientific” way to define linguistics? What explains this intellectual hegemony? The answer is to be found in the historical and political developments that contributed to the rise of autonomous linguistics in the first place.



By the 1940s, structuralism had firmly established itself in American academia. Although linguistic study between America and Europe had always differed to a certain extent on the role of poetics and literature in society, the structuralists’ explicit focus on grammatical theory would come to characterize much of American linguistic analysis to the present day. Newmeyer has pointed to three factors that were responsible for the structuralists’ success in the United States.

- First, they found a highly visible issue (linguistic egalitarianism) that served to distinguish them from most other linguistic scholars and around which they could rally;
- Second, in a time and place in which the prestige of science was at its apex, they were able to project themselves as having the only “scientific” orientation to language;
- Third, they were able to win the patronage of powerful and wealthy interests who helped to sustain them, both financially and organizationally. (1986, p. 39)

Linguistic egalitarianism describes the principle that, in some fundamental sense, all the languages of the world are equal and there are no dialects that cannot be productively described in terms of an autonomous structural system (Newmeyer, 1986, p. 39). Interestingly enough, one of the earliest proponents of egalitarianism was the German-American anthropologist Franz Boas, who campaigned vehemently against claims that the sounds of non-Western languages (such as coastal First Nations’ languages in Western Canada) were vague and variable, and whose work has inspired and been carried on in many respects by Bringham (1999, 2006). In addition, one of Boas’s students was Edward Sapir, who was one of the earliest linguists to write on the relationship between language and environment (2001) and is considered a kind of proto-ecolinguist by some (see Fill & Muhlhausler, Eds., 2001).

These connections between early “structuralists” and the historical development of ecological linguistics are useful, in part, to guard against an unequivocally anti-structuralist tone. An ecohermeneutic approach acknowledges that autonomous linguistics provides percipient insights in a certain sense; it is not that linguistic egalitarianism or the study of morphology or syntactical analysis is inherently misguided, only that autonomous linguistics has gotten locked into an excessively calcified and segregationalist perspective (Harris, 1990). Indeed, by rallying around egalitarianism, despite the scorn American structuralists received from European linguists, other academics and the general public, early structuralists were able to stay in the public eye and maintain a visibility that helped them recruit bright students and compete successfully for support (Newmeyer, 1986, p. 46). The remaining two factors contributing to structuralism’s success in America, however, point to more iniquitous and problematic reasons for the rise of autonomous linguistics and the development of its rigid segregation from sociological and humanistic orientations to language.



According to Newmeyer, it is impossible to overemphasize the importance of structural linguistics’ self-definition as the only “scientific” orientation to language in America in the 1940s

and 1950s (1986, p. 47). During this period, “scientific” was essentially synonymous with a kind of empiricism, and the attempt to incorporate empirical assumptions into linguistic theory virtually guaranteed structuralism prestige and admiration within the academy. This empirical stance, however, led to an interesting rupture between American and European scholars on the subject of meaning. For Europeans, understanding the role of language in conveying meaning had always been a principal preoccupation; their interdisciplinary attention to semantic function meant that their language theories were constantly contiguous with philosophy, psychology, historicism and literary criticism. Many American linguists, on the other hand, “attempted to expunge the study of meaning altogether from the field of linguistics. They felt uncomfortable even addressing a concept so notoriously difficult to quantify and operationalize” (Newmeyer, 1986, p. 48-49).

The attempt to expunge the study of meaning from linguistics has obvious hermeneutic implications. As we have seen, an ecopoetic understanding attempts to re-situate meaning in the world of interrelational being itself, that is, the live, metaphorical relations between things and the resonant structure of the world (Zwicky, 2003, p. 86). Although it must be acknowledged that certain penetrative ways of knowing the world are revealed through empirical analysis, the objective assumptions of empiricism are part and parcel of some of the destructive aspects of modernity that have contributed to our estrangement from the more-than-human world. Hence, the segregationalist approach adopted by autonomous linguistics has significant implications for the ecological crisis and, as such, critical ecohermeneutic inquiry endeavours to reintegrate an interdisciplinary study of meaning into the field of linguistics. Before we consider what an integrationalist (Harris, 1990) redefinition of linguistics might entail, I want to consider Newmeyer’s third factor for explaining the success of structuralism in America.



Structural linguists were not only able to garner support in American academics, but also enticed powerful interests in the American government and military, as well as religious organizations, who recognized the colonial and evangelical promise of a structural approach to foreign language acquisition. The structuralist orientation was so appealing to these imperial interests due to its alliance between empiricism and instrumental rationality. It is important to keep in mind here that language has always, in a sense, been a tool of empire (Abram, 1996; Plumwood, 1993; Illich, 1980; Martusewicz et al., 2011; Zerzan, 1999, p. 31-43), but the possibility of mechanizing it as a technical resource was a new enterprise.

As Newmeyer has written, one of the reasons the American government found it in its interest to sponsor, directly or indirectly, structuralist research in the post World War II period was to further its “international relations” and imperialistic aspirations⁴⁸ (1986). This “special relationship” was stimulated and inspired by structural linguists’ achievements in analyzing unwritten American Indian languages, and government officials (fuelled by the claims of many structuralists themselves) reasoned that they might meet with equal success in the analysis of languages that, “were likely to be of strategic importance in the worldwide conflicts... considered inevitable” (Newmeyer, 1986, p. 51). In particular, the structuralists were called upon (and well funded by the Rockefeller Foundation) to provide language instruction manuals and training to the American military and boasted that, opposed to other orientations, the scientific approach of structuralism lent itself directly to pedagogical applications (p. 51-52). The imperialistic motivation to support linguistic research was only heightened by Cold War tensions and the ensuing ideological spectacle of globalized warfare.⁴⁹ Mortimer Graves, the executive secretary of the American Council of Learned Societies (one of the major organizations that provided grants to academics at the time) called linguistics a major weapon of war, saying, “In this war for men’s minds, obviously the big guns of our armament is [*sic*] competence in languages and linguistics” (as cited in Newmeyer, 1986, p. 56).

Outside of the American industrial-military complex, organizations related to the Christian Church and its evangelical missionaries also heavily supported the rise of structuralism. For example, the Summer Institute of Linguistics (SIL) has practiced linguistic research as a preliminary to Bible translation and has published thousands of books, journal articles, and technical reports on linguistic matters. American structuralists have consistently been affiliated with the organization whose “one uniting factor” is a belief that every person should be able to have the New Testament in his own language (Newmeyer, 1986, p. 60). The SIL presents itself as an odd mixture of purely scientific linguistic research from a “faith-based” perspective, although its political orientation has always been patently right-wing and it has been charged with acting

⁴⁸ After World War II, the Foreign Service Institute of the State Department offered future diplomats or foreign administrators courses such as, “Public Opinion Formation in Foreign Countries”, “Economic Development of Underdeveloped Countries”, “Oil and the Middle East”, and “Linguistic Theory” under some of America’s most prominent structural linguists (Newmeyer, 1986, p. 54).

⁴⁹ For example, Newmeyer has commented on how “the identification of Communism with Satan is a consistent theme” in the SIL’s writings (1986, p. 61).

on behalf of one or another national government, particularly when that government's interests have coincided with American foreign policy. Newmeyer has observed, "Indeed, there are charges that SIL has gone so far as to put its resources at the disposal of U.S.-based multinational corporations and the CIA... many feel that SIL's practice has been to 'Americanize' as much as to Christianize, thereby hastening the destruction of the indigenous culture in areas in which it operates" (1986, p. 61). The decades of support by organizations such as SIL have contributed to an international presence that structural linguistics could never have hoped to establish otherwise.



The story of the rise and fossilization of autonomous linguistics does not end with structuralism. By the mid 1950s a new theory of linguistics was proposed by Noam Chomsky that, although diverging from some of the fundamental tenets and behaviourism at the core of structuralist theory,⁵⁰ and expanding further into syntactical analysis, was nonetheless firmly entrenched within the autonomous orientation (Newmeyer, 1986, p. 61-62; Harris, 1990; Love, 1990). For instance, Chomsky has always been insistent upon the validity of Saussure's distinction between *langue* and *parole*, which he has in turn called *competence* and *performance* respectively (Newmeyer, 1986, p. 72). As such, I will consider the Chomskyan Revolution an extension of autonomous linguistics and will not analyze it in any great detail (for detailed critical analysis see Newmeyer, 1986; Harris, 1990; Love, 1990). The central theme I want to evoke here is how the power of vested interests, particularly the ideologically-laden interests of the American military, have worked to define and shape the linguistic agenda. In particular how, as Newmeyer has referred to it, the "special relationship" between autonomous linguistics and power institutions in the United States was reinvigorated with the advent of the technological implications proposed by Chomskyan linguistics - despite his outspoken anarcho-syndicalist leanings (Newmeyer, 1986, p. 84). For example, the linguistics department at the Massachusetts

⁵⁰ A part of why the "Chomskyan Revolution" was so expeditious and popular is because it drew attention to the psychological and philosophical implications of linguistics. Chomsky's critique of behaviourism is widely considered the most important refutation and from his earliest writings, he has challenged the empiricist foundations of American structural linguistics. As such, his focus on transformation and change (combined with his radical politics) came to be seen as intrinsically progressive and appealed to young students who were eager to challenge the institutional rigidity associated with structuralism (Newmeyer, 1986, p. 72-81).

Institute of Technology (one of America's largest military contractors), where Chomsky has been employed since receiving his PhD, was funded by the Department of Defence for "command and control" military computer systems until the 1970s.⁵¹ Chomsky has dismissed these charges as irrelevant, especially in a capitalist society where *all* academic funding is the product of excess labour (p. 85). Instead of becoming entangled in character assassination and finger pointing at Chomsky himself, I would like to focus more on the kind of linguistics that the Chomskyan Revolution has produced.

Although British philosopher Trevor Pateman (1987) offers an extended defense of Chomskyan linguistics, his outline of some of the (primarily Wittgensteinian) critiques levelled against Chomskyans provides a good summary of the kind of linguistics generated by the modern autonomous orientation. According to Pateman, critics of the Chomskyan Revolution charge linguists of this orientation with:

- treating something essentially social as if it were individual;
- treating something essentially public (outer) as if it were essentially private (inner);
- treating something rule-like and normative as something law-like and predictive;
- treating something open-ended (creative) as something closed. (p. 120-146)

Despite these charges, Chomsky's influence on linguistics is undeniable and subsequently he has become one of the most admired, and most disputed, scholars in the field. Unfortunately, the majority of linguistic critiques levelled at Chomsky rarely call into question the quintessential presuppositions of an autonomous orientation to language (Newmeyer, 1986, p. 101). This is not to say, however, that critical inquiries have not been voiced from other orientations and fields. Now that we have considered some of the historical, cultural, philosophical and political factors in the rise of autonomous linguistics I would like to consider some of the oppositional perspectives presented by Newmeyer (1986), situate ecopoetics and ecolinguistics within these

⁵¹ Funding and grants for "generative grammar" (i.e. Chomskyan linguistics) from the Department of Defence were also used to bolster technocratic "think tanks" such as the RAND corporation, the MITRE corporation, and System Development Corporation, which sought to use formal grammar to help develop computer-aided translation of languages and question-answering systems (Newmeyer, 1986, p. 85).

alternative orientations, and reflect on how an integrationalist redefinition of linguistics might include an ecological understanding of language and communication (Harris, 1990).



Let us return to Newmeyer's other two orientations to language, the humanistic and the sociological. Keeping in mind that multifaceted fields rarely ever fall neatly into prescribed categories, it seems as if ecopoetics corresponds most appropriately to a humanistic orientation, whereas ecolinguistics corresponds to a sociolinguistic orientation. Although this may provide a useful distinction as we continue to discuss the intricacies and offerings of each of these approaches to an ecohermeneutic understanding of language, the distinction is always considered fluid and permeable. In a sense then, a critical ecohermeneutic redefinition of linguistics endeavours to deliquesce the rigid uni-disciplinary thinking that has resulted in the segregationalist approach adopted by many autonomous linguists. This decompositional process acknowledges the potential insights attainable vis-à-vis autonomous linguistic inquiry (i.e. critical ecohermeneutics does not propose that *nothing* can be gained from studying syntactic structures autonomously); but, more importantly, it endeavours to critically assess the negative ecological implications of this orientation and to reconnect linguistics to an interdisciplinary or integrationalist perspective (Harris, 1990) that includes an ecological orientation to language. My contention is that ecopoetics and ecolinguistics are two potentially fecund reorientations to language that not only work to augment an integrationalist redefinition of the field, but point to ecological dimensions of linguistics that have remained overlooked and silenced until very recently. Or put differently, perhaps we might ask what happens to both humanistic and sociological orientations to language when they go *ecological*?

The humanistic critique of autonomous linguistics has historically taken the form of elitist scorn and contempt directed at the field from classical philologists and literature departments, but it would be a mistake to regard this as the only humanistic opposition (Newmeyer, 1986). In more recent times, those of a humanistic bent have viewed their approach to language as embodying the essence of human freedom and they object to the *depersonalization* of language implicit within cold, autonomous inventories of grammatical elements (Newmeyer, 1986, p. 102-103; Goodman, 1971; Steiner, 1998). Many of these critiques attempt to decompose the idea that we are beholden to the sterile and mechanical rules of grammarians' constructs, arguing instead that the essence of the human creative spirit is manifest in the very transcendence of these structures. As American literary critic, philosopher, translator

and educator George Steiner has written, “To know more of language and translation we must pass from the ‘deep structures’ of transformational grammar to the deeper structures of the poet” (1998, p. 114). Similarly, many humanistic opponents have singled out the langue-parole / competence-performance dichotomies as distorted constructs that offer little real-life insight into the wonder and marvel of using (not to mention being) language (Harris, 1981, 1990; Robinson, 1975; Davis, 1990). As Robinson has put it:

In the end it must be a kind of philistinism in a linguist to think, as Chomsky does with his doctrine of universals, of all languages as pretty much alike. It means that he has lost that wonder at the splendid multiplicity of language and languages which is the other side of the wondering at language as a common human possession. Chomsky’s semantic universals are as if a critic were to try to explain great poems (as is not unknown) by looking for an underlying Great Poetry that they share. To do so would inevitably be to have lost interest in poems, as well as in the possibility of discussing poetry in general. (1975, p. 102-103)

Unfortunately these lyrically scathing critiques have been easily ignored in modern linguistics as they are seen to emanate from beyond the field of serious, “scientific” linguistic inquiry (Newmeyer, 1986, p. 104) and are viewed as concerns and questions that should not concern linguists.

Ecopoetics would seem to share in many of the oppositions raised by those with humanistic sensibilities; and yet, it seeks to deepen this opposition by drawing attention to the interwoven relationality (ecological-ontology) of language and ecology. Ecopoetics not only objects to the *depersonalization* of language implicit within an autonomous orientation, but it also objects to linguistic *decontextualization* (or perhaps a more accurate descriptor would be *denaturation*?), particularly, the disconnection of language and meaning from place. Indeed, a critical ecopoet might be quick to point to the anthropocentrism inherent in the term *humanistic* orientation. In this sense, we might *deepen* Steiner’s statement, adding that to know language, we must pass from the deep structures of transformational grammar to the deeper structures of the poet *to the resonant structure and ecology of the Earth itself*. Ecopoetics delights in the wonder, creativity and splendid multiplicity of human language *and* the multimodal languages which are the common expressions of the more-than-human world. But more than this, an ecopoetic encounter with the world seeks to elicit the underlying relationality implicit in these communicative gestures between things. As Abram has observed, “Ultimately, then, it is not the human body alone but rather the whole sensuous world that provides the deep structure of language. As we ourselves dwell and move within language, so, ultimately, do the other animals

and animate things of the world; if we do not notice them there, it is only because language has forgotten its expressive depths” (1996, p. 85). Similarly Bringhurst has claimed, “Both literature and language are human universals, as natural to us as feathers are to birds. We extend them and elaborate them, yes - but as Aristotle knew, poetics is rightly a branch of biology. Neither literature nor language is entirely man-made” (2006, p. 33). Bringhurst goes on to challenge the narrow speech-centric assumptions of autonomous linguistics pointing to the gestural significance of sign languages:

Most of the words we use to talk about language - including the word *language* itself - seem to rest on the assumption that language comes out of the mouth. Words like speech, and words like *linguist* and *phonology* and *phonetics* are all part of this conspiracy...

Well along in the twentieth century, linguists finally began to study sign languages closely - and so began to understand that linguistics, despite its etymology, has to reach out way beyond the mouth. Speech is just a special case of gesture: a half-hidden kind of gesture, producing an audible trace. Language begins when the mind hitches a ride on signals transmitted by the body and another mind receives (through the aid of another body, as a rule) at least some of what is sent. (2006, p. 128-129)

This leads us back of course to Bringhurst’s eco-poetic idea that being is the literature and poetry of what-is, that poetry has been around as long as, “things have been thinking and dreaming themselves, which might be as long as things have existed, or maybe somewhat longer” (2006, p. 140). This is perhaps one way to think about what happens to a humanistic orientation when it goes ecological. In this sense, the last line of Tomas Tranströmer’s poem, *From March ’79*, might serve as an axiomatic definition for an eco-poetic orientation to the more-than-human:

Tired of all who come with words, words but no language
I went to the snow-covered island.
The wild does not have words.
The unwritten pages spread themselves out in all directions!
I come across the marks of roe-deer’s hooves in the snow.
Language, but no words.⁵²

⁵² As cited in Abram, 1996, p. 137.



The sociological orientation has had perhaps a more significant, or at least a more sustained oppositional influence on autonomous linguistics by means of rejecting the premise that any aspect of a language should (or even can) be analyzed independent of the society or cultural context in which it arises. A particularly lucid expression of this idea evolved out of the tradition of Marxist writings about language and is linked to the Marxist idea that consciousness (and therefore language, or rather due to language) is a social phenomenon (Newmeyer, 1986, p. 105-106; Vygotsky, 1986). Marxist linguists view language as a super structural phenomenon, not just in its social and cultural aspects but in all its manifestations (including grammatical), and have claimed that autonomous linguists present language as an ahistorical, closed system that is, “incompatible with the true nature of language” (Newmeyer, 1986, p. 109).⁵³ Many Marxists (as well as linguists outside the Marxist milieu⁵⁴) view Chomsky in particular as nothing but the latest in a long procession of intellectuals who, by relegating social class to a peripheral position, objectively serve ruling class interests consciously or by virtue of their presuppositions (p. 113).

Marxists are not the only sociolinguists, however, to oppose an autonomous orientation. American linguists Edward Sapir and Benjamin Whorf, for example, have lent credence to the idea of an intimate linkage between language structure, social norms and worldview (Newmeyer, 1986, p. 110-112; also see Friedrich, 1986). In addition, many American linguists and feminist scholars have confronted the autonomous orientation, not so much for its content per se, but on ethical grounds. While they recognize that studying an autonomously functioning mental grammar may yield certain insights, many feel that devoting the linguistics field to constructing

⁵³ Newmeyer provides a fascinating account of how Stalin asserted the autonomy of grammar into Soviet linguistics and censored the idea that grammar has super structural qualities in order to strengthen the ultra nationalistic directives of his regime at that time (1986, p. 114).

⁵⁴ Taylor has commented on Chomsky’s peculiar position with respect to deep ideological reproduction, stating, “Although Chomsky does not recognize it linguistics thus seems to be in a similar position to political analysis in that academic linguistics cannot help but reflect and reproduce the prejudices, preconceptions, and ideologies of our culture” (1990, p. 146). Likewise, Davis has written, “So because language is a human activity which, like all other human activities, influences and is influenced by social and political norms, it is irredeemably ideological. To treat it as if it were not is simply to impose a particular ideology. This is a point rarely acknowledged by traditional [autonomous] linguists, sometimes even denied” (1990, p. 9).

such grammars forsakes important political and ethical responsibilities (Newmeyer, 1986, p. 121; Hymes, 1974; Kuykendall, 1981). Linguists Harmut Haberland and Jacob Mey have summarized the sentiments of some of these sociolinguists and have pointed to the potential contradictions and irrelevance of a linguistics that sets itself apart from socio-politics:

Many linguists deeply regret that they have to earn a living by a science that can be used for the construction of military information systems, psychological warfare, counterinsurgency strategies, and the like. They dedicate their books to “the children of Vietnam,” or make up a few anti-imperialistic sentences as examples. But there is not much help in such a practice: a linguistics that pretends to be “emancipatory”, while going about its strictly linguistic business as usual, has little to contribute to what we consider a worthwhile pragmatics. (Haberland & Mey as cited in Newmeyer, 1986, p. 122)

Many linguists from the sociolinguistic orientation have also come, in recent decades, to deeply regret the negative ecological implications of decontextualizing and denaturing language. The term *ecolinguistics* has been used to describe this relatively new holistic approach to linguistic inquiry that explores the interrelations between language, society and ecology (Fill & Muhlhausler, Eds., 2001). There are obvious links between the Marxist roots of much sociolinguistic inquiry and the Dialectical Linguistics of the Danish *Odense School*, which made an “ecological turn” in the late 1980s and 1990s and now count themselves among a family of ecocritical approaches to linguistic analysis (Steffensen, 2007, p. 5; Bang & Door, 2007). In the latter part of this chapter I will go further into the historical development and definition(s) of ecolinguistics, including its relationship to ecopoetics and its potential for informing a critical ecohermeneutic approach to language. For now, let us propose that when sociolinguistics goes ecological it refocuses on contextualizing language, or what ecolinguists Jorgen Bang and Jorgen Door refer to as *deixis analysis* (2007).

The phenomenon of deixis makes knowledge of the situational conditions of communication necessary for proper interpretation; in other words, in order to make a sensitive interpretation of an utterance or a morpheme you must have a contextualized understanding of the exchange. For this reason the dialogue, as it takes place in a situational topos, is considered the smallest unit of human communication in ecolinguistics - a position that is clearly anathema to autonomous linguists who break language into phonemes and morphemes and divorce it from its social significance (Steffensen, 2007, p. 23-24). Interestingly, Bang and Door have also pointed to the predominance of Saussure and Chomsky as “father figures” of the central paradigm of modern linguistics and have spent decades opposing the calcified definition of the field as these two “patriarchs” have defined it (2007, p. 33-34). They have charged the dominant modern

linguistic paradigm (autonomous linguistics) with teaching and perpetuating what they call the *Platonic-Cartesian postulate*, that is:

The paradigm was and is a continuation of the tradition which splits the universe of discourse into one part occupied with language as a closed system within itself (theoretical linguistics) and one part occupied by people using language in social praxis (applied linguistics). Consequently, the social contradictions which are characteristic of our society, - for example, *sexism*, *classism* and *ecological devastation* - were out of focus and illegitimate categories for theoretical linguistics. (2007, p. 36)

In other words, they too have noted how autonomous linguistics maintains a segregationist approach, in that it regards other theories which do not share its fundamental beliefs or methods as, “not really doing linguistics” (p. 36). Interestingly enough Bang and Door have also described the autonomous orientation as a kind of epistemic hypostatization, claiming that they, “try to obstruct the theoretical dialogue by a strategy in which they propose a universal grammar through the hypostatization of a privileged set of descriptions” (p. 36).



Perhaps an ecohermeneutic conception of what it means to shift from an autonomous to an ecological orientation might best be described as a process of decomposing this hypostatized and privileged set of descriptions, of inoculating its calcified structures with the spores of ecopoiesis? In this sense, an ecohermeneutic recycling of the segregated aspects of the linguistic field would work to stimulate mycelial interconnectivity between different realms of discourse, while endeavouring to *recontextualize* or *renaturalize* (perhaps *revitalize*?) the relationship between language, society and ecology. Though this begs the question - perhaps the philosophical mycelia that connects ecolinguistics and ecopoetics also needs to be more interwoven in order to stimulate conversation, exchange, and decay? Before we get to that, however, let us further discuss the integrationalist programme of linguistics and how ecolinguistics ostensibly corresponds to this redefinition, but upon closer examination, runs deeper.

Although a call to redefine linguistics has already been initiated by linguists and critics from a variety of backgrounds in order to avoid the “theoretical pitfalls of modern structuralist and generativist” approaches (Davis & Taylor, Eds., 1990), it seems more limited than the ecological reorientation being proposed here. Davis has claimed that the primary goal of redefining linguistics should be “to demonstrate that language is not an objective matter” (1990,

p. 16), that, “Rather than strive for a mythical objectivity a linguistics redefined would look at how we interpret and construct our day-to-day communication acts, what views of language are shared by and opposed by societies, and the source and roles that these views play in our living and learning experience” (p. 17). Harris has proposed an integrationalist programme that offers an entirely new approach to the study of language in that it treats linguistic communication as a continuum of interaction which may be manifested both verbally and non-verbally⁵⁵ (1990, p. 45).

An integrationalist redefinition... adopts a perspective which, in Saussurean terms, is neither synchronic nor diachronic but panchronic. It considers as pertinent to linguistic communication both the integration of simultaneously occurring events and also the integration of present events with past events and anticipated future events. This integration is governed by a single ‘principle of cotemporality’, which postulates a chronological parity between linguistic and non-linguistic events in human experience. (p. 47)

In other words, communication proceeds on the assumption that every linguistic act is integrated into the individual’s experience as a unique event, which has never before occurred and will never again recur exactly (p. 48). Ecolinguists Bang and Door have also addressed this aspect of language-use, “Even when persons share a language and participate in communication in particular situations, they do so from different positions, pretensions and intensions, and from different social and emotional backgrounds. The point is that language and communication are ecological processes of living beings rather than the mechanical processes of machines” (2007, p. 197).

On the surface, an ecolinguistic approach seems to correlate with the integrationalist programme proposed by Harris and others (Harris & Taylor, Eds., 1990); providing an additional voice of opposition to autonomous linguistics and sharing much ground with sociolinguistic approaches. That being said, once we dig a little deeper, we are immediately confronted by the

⁵⁵ A detailed exposition of Harris’ integrationalist model is regrettably beyond the scope of this paper, however, just to get a sense of the scope of this programme, his redefinition works to, “dispense with at least the following theoretical assumptions: (i) that the linguistic sign is arbitrary; (ii) that the linguistic sign is linear; (iii) that words have meanings; (iv) that grammar has rules; and (v) that there are languages... What is called into question, in other words, is whether the concept of ‘a language’, as defined by orthodox modern linguistics, corresponds to any determinate or determinable object of analysis at all, whether social or individual, whether institutional or psychological” (1990, p. 45).

inherent human-centeredness of this integrationalist programme and its impetuous backgrounding of the more-than-human world. What's more, an ecological orientation does not simply offer "an additional voice of opposition" to the segregationalism of autonomous linguistics, but endeavours to breathe life into a paradigmatic shift aimed at decomposing and transforming Western worldviews, sciences and ideologies through language. As Steffensen has claimed, ecolinguistics offers a "truly non-dualistic, non-objectivist, non-positivistic alternative to the current linguistics. This is arguably Bang and Door's main contribution to ecolinguistics: the awareness that linguistics can and ought to be done in a way that transcends the limits of traditional Western scientific ideology. This ideology does not just underlie Western science, but also the capitalist mode of production" (2007, p. 22). Indeed, linguistics *ought* to be done in a way that calls the ecologically malignant aspects of the Western worldview into question. This includes, of course, calling into question the privileged positioning of empiricism and instrumental rationality in scientific ideology, and challenging the detrimental economic imperialism of unfettered capitalism, but it *also* includes questioning the oft-overlooked, and perhaps deeper-seated, anthropocentric core of the Western philosophical edifice. Essentially, an ecolinguistic inquiry represents a seismic shift in thinking about and doing linguistic work that runs deeper to the philosophic core of the ecological crisis than the proposed integrationalist programme recognizes.

But what does transcending the Western scientific ideology look like in this new linguistic paradigm (or, for that matter, this new ecohermeneutic educational paradigm)? After all, this is not necessarily a new revelation, many scholars have called anthropocentrism into question (Abram, 1996; Bennett, 2010; Jensen, 2004; Cajete, 1994; Shepard, 1982) and although scholarship addressing the linguistic dimension of the ecological crisis is relatively recent,⁵⁶ the attempt to enlighten the public about ecological interconnectivity using scientific approaches is not. As Paul Shepard has written,

Certainly intuitions of the interdependence of all life are an ancient wisdom, perhaps as old as thought itself, occasionally rediscovered, as it has been by the science of ecology in our own society. At mid-twentieth century there was a widely shared feeling that we only needed to bring businessmen, cab drivers,

⁵⁶ For a short historical overview of some of the key works in linguistics that address the relationship between language and ecology see Fill & Muhlhausler, Eds., 2001.

housewives, and politicians together with the right mix of oceanographers, soils experts, or foresters in order to set things right. (1982, p. 1)

Would adding a couple of ecolinguists or critical ecological educators to the mix help to set things right? Are ecolinguistic models for *deixis analysis* or prescribed learning outcomes devoted to explaining the link between systems theory and sustainability the missing pieces that will bring coherence to ecological consciousness and catalyze the transcendence of Western ideologies? How are educators supposed to integrate the critical findings and analyses of ecolinguistic research into their lessons in ways that businessmen and cab drivers and housewives, not to mention adolescent students, understand and connect with? In ways that *really* speak to people?

Perhaps the rigorous and adamant transcendence of Western ideology should not be transcendent at all, but rather an attending to the immanence (the *within-ness*) of life as it is lived beyond our wanting and doing? My contention is that an eco-poetic understanding may offer us just this kind of encounter with the world *and* a way of employing language that retains certain perceptual, emotional and intellectual resonances. This is not to undermine the critical foundations of ecohermeneutics. The critical distance required to discern ideological presuppositions (especially our own) is a crucial space to generate through inquiry. But what of our participatory immersion in the enfolding literature of what-is? What of using language and aesthetic experience to interweave our thinking and being into an ecological ontology? By retaining a critical remove, a hardening of the skin and sharpening of the intellect, do we not threaten to forfeit our sensuous connection with the world? Or put differently, if ecolinguistics endeavours to transcend the cold, prosaic reasoning of Western scientific ideology, why is it so consistently cold and prosaic? Or to repeat the words of Zwicky: "... critique, too, is empty unless the space it clears becomes home to insight" (2003, p. 21).



Harris has attempted to recontextualize the synchronic and diachronic elements of linguistic study in historical time (as well as the anticipation of future events) by describing the integrationalist programme as *panchronic* (1990, p. 47). Perhaps we might consider describing the renaturalization of linguistics via eco-poiesis as both *panchronic* and *panelemental*. Which is to say, eco-poetics approaches linguistic study from an interpretive, interrelational and animistic understanding of the communicative resonance of the more-than-human world, including the

significance of gesture. To be sure, the gestural significance and interpretative matrix of communication are addressed in ecolinguistics; for example, Bang and Door have stated, “In communication we use many gestures, mimics, movements, and signs. We sometimes use these more or less deliberately and consciously and sometimes more or less automatically and unconsciously. In both we are creating, constructing and interpreting signs” (2007, p. 202). Be that as it may, my contention is that an eco poetic understanding runs *deeper* than many integrational linguists, or even ecolinguists, have been willing to delve. Eco poetics points to something intimately related to integrationalist and ecolinguistic analyses, but *differently*. It points at something *else*. For example, it could hardly be said that Zwicky’s contemplation of metaphor *fits* into either the integrationalist programme or ecolinguistics, and yet, its wisdom and insight into the relationship between language and ecology is pivotal. For example, the following excerpt addresses something that neither integrationalist linguistics nor ecolinguistics seem concerned with, and yet, I share the contention that the relationship between metaphor and *thisness* is a key insight into the emergence of a thoughtful and sensuous ecological understanding.

The phenomenological power of both metaphor and *thisness* derives from an awareness of an extreme tension between being and time. *Thisness* is the lyric comprehension of this tension; an instant of time opens to embrace the resonance of all that is; time is present, but suspended - held in balance. Metaphor, by contrast, is a form of domestic understanding: wholeness overrides mortality, but does not erase it. The distinctness of things remains the foundation of their resonant connexion. In metaphor, *gestalts* glitter: those inflected by being and those inflected by time, flashing back and forth over the hinge of what is common. (Zwicky, 2003, p. 67)

Or recall the sentiments of Weil and Bringham: the function of words is to testify “after the fashion of blossoming apple trees and stars” (Weil, 1974, p. 67). They too, I think, in essence are speaking of this glittering of *gestalts* as illuminated by metaphor. What is happening when we are elicited by the phenomenological *thisness* of the world, astonished by its interconnected resonance? Polish poet and translator Adam Zagajewski has written, “To defend poetry means to defend a fundamental gift of human nature, that is, our capacity... to experience astonishment and to stop still in that astonishment for an extended moment or two” (as cited in Zwicky, 2003, p. 108). Perhaps a critical ecohermeneutic orientation to language needs to draw upon the strengths and capacities of both ecolinguistics and eco poetics in order to oscillate between critical distance and relational proximity.

2.2. ecopoetics: language & resonance

One metaphor for the excitement of metaphors is to say they are entry points where wilderness re-invades language, the place where words put their authority at risk, implicitly confessing their inadequacy to the task of representing the world. Their very excess points to a world beyond language, even while it cuts a fancy linguistic figure. (McKay, 2002, p. 61)

As we have seen, the historical rise and fossilization of autonomous linguistics can be better understood in terms of its “special relationship” to powerful socio-political institutions and interests. This is *not* to claim, however, that generativists work overtime on ecocidal grammars in collusion with some depraved corporate cabal presiding over the military-industrial complex. Rather, the segregationalist approach in autonomous linguistics must be seen as a special case in point of a more generalized estrangement from the more-than-human world. That is, an autonomous orientation to language only becomes *thinkable* because of the emergence of a particular cultural-historical ontology. Abram has suggested that the “more overt reason” for the dominance of autonomous linguistics is to be found in Western philosophy’s yearning for human specialness. Philosophers since Aristotle have been concerned with how to differentiate human being from the rest of existence and how to set us apart from and above Nature (1996, p. 77). Abram goes on to suggest that the urgency for human deification was amplified in the modern age in order to justify the increasing manipulation and exploitation of nonhuman nature by and for civilized humankind, particularly European Empires (p. 77; also see Perlman, 1983; Zerzan, Ed., 2005).

The necessity for such philosophical justification became especially urgent in the wake of the scientific revolution, when our capacity to manipulate other organisms increased a hundredfold. Descartes’ radical separation of the immaterial human mind from the wholly mechanical world of nature did much to fill this need, providing a splendid rationalization for the vivisection experiments that soon began to proliferate, as well as for the steady plundering and despoilment of nonhuman nature in the New World and other European colonies. (1996, p. 77-78)

By the 20th century, Darwin’s evolutionary theory had somewhat disrupted the seemingly self-evident anthropocentric trajectory of European philosophy and science, and it was necessary to find more naturalistic evidence of human superiority over the continuum of earthly life. Hence language, as an arbitrary or strictly conventional set of signs, was employed tautologically to aggrandize human excellence and was praised as the sole provenance of human users.

And only thus, by conceiving language as a purely abstract phenomenon, can we claim it as an exclusively human attribute. Only by overlooking the sensuous, evocative dimension of human discourse, and attending solely to the denotative and conventional aspect of verbal communication, can we hold ourselves apart from, and outside of, the rest of animate nature. (Abram, 1996, 79)

The rise of autonomous linguistics in the modern age, then, and its subsequent utilization as an instrument of globalization, must be viewed as a continuation of earlier European colonial projects and embedded in ancient presuppositions within the Western philosophical trajectory.

Abram has claimed language is always, in its depths, physically and sensorially resonant⁵⁷ and by attending solely to the denotative and conventional aspect of verbal communication we are able to hold ourselves apart from animate nature (1996, p. 79-80). In the attempt to isolate “language itself” as an object of scientific inquiry we have, in a sense, ossified the fluid interchange between language, perceptual sensuousness and the live, metaphorical relation between meaning and the resonant structure of the world. Although Abram (as well as many ecolinguists) have pointed fingers at scientific inquiry as drawing us away from ecological understanding, the deeper and more common problem perhaps, is the very *architecture* of modern life. The mental chatter and systematically over-stimulated existence of the urbanized human - bedazzled and enamoured by the sheer volume of modern, technical Man. I was going to write something about how we have constructed a perfectly shaped specimen jar for every little thing in the world, but this is not the right metaphor; rather we have fashioned our own isolated enclosure, an anthropic echo chamber where the canticles of human specialness reverberate ad nauseam.

Although I deeply sympathize with the ideological critique, instead of pointing fingers at the logic of scientific inquiry again, let us simply say that once we start attending to words and

⁵⁷ This claim gets at a crucial distinction between the perceptual phenomenology of Abram (1996) and the phenomenology of domestic wisdom of Zwicky (2003) with respect to *resonance*. When Abram, who is drawing upon the work of Merleau-Ponty, refers to the sensorially resonant significance of words, I believe he is referring primarily to their verbal vibrations in aural space. When Zwicky refers to resonance she is trying to describe the phenomenology of focussed analogical thinking. “In metaphor we experience a gestalt shift from one distinct intellectual and emotional complex to another ‘in an instant of time.’ A metaphor, then, is also a meta-image. It is multiply resonant” (2003, p. 4). This is important to ecopoetics because it gets at why some metaphors die or become calcified and why the revitalization of resonant metaphors is fundamental to new ways of thinking (i.e. ontological attention).

constructs *about* experience, more than experience *itself*, we may begin to lose our “calibration” with what Bringhurst called “the original book.” We learn to read, but not be read. How then might we begin to think about attuning to the more-than-human in the midst of our (post)modernity and all the manifold distractions of modern life? Once again the idea of simply transcending these obstinate and tenacious realities, even with the rigor of critically-minded systematic approaches, seems hopelessly futile and superficial. If the Western tradition has been mired in anthropocentrism for so long, where might we look for evidence of other relationships between language and the world?



It is primarily non-Western, Indigenous cultures that have done a better job of expressing and honouring an intimate relationship between language and world. As Kulnieks et al. (2010) have written, “The hermeneutic conceptualization that language is a gift from what Abram calls the more-than-human world, is not unique to Greek culture. It is also a belief shared by many indigenous cultures, including that of the Anishnaabeg, Mushkegowuk and Haudenosaunee in eastern North America” (p. 15-16). Indeed, much of Abram’s work (1996), is devoted to exploring the relationship between his ecophenomenological reading of Merleau-Ponty and the place-based wisdom of Indigenous elders and shamans from Nepal and Bali to North American First Nations. For Abram, the practice of language among oral, indigenous peoples seems to carry a different animistic kind of significance than it does in the modern West (1996, p. 70; also see Sapir, 2001; Malotki, 1983; Vizenor, 1970; Bringhurst, 1999). He explores why, “...in indigenous, oral cultures... language seems to encourage and augment the participatory life of the senses, while in Western civilization language seems to deny or deaden that life, promoting a massive distrust of sensorial experience while valorizing an abstract realm of ideas hidden behind or beyond the sensory appearances” (1996, p. 72). What is it exactly about so many Indigenous, oral traditions that induces a participatory and interwoven relationality with the more-than-human world? Or, perhaps more importantly, how can an ecohermeneutic curriculum respectfully and appropriately learn from Indigenous and oral traditions in order to re-establish a deepened, animistic relationship with the more-than-human world?

Both Bringhurst and Abram are *significantly* influenced and inspired by Indigenous, oral cultures. Bringhurst is an award-winning translator of Haida storytellers Skaay and Ghandl, and has written many essays concerning Native American oral literatures (1999; 2006; 2008). Abram is, of course, best known for his attempt to connect phenomenology and ecological issues and

draws upon the work of a diverse but ecologically concerned group of thinkers including James Hillman, Ivan Illich, Gary Snyder, Wendell Berry and Paul Shepard. But he has also drawn heavily upon his own experiences learning from and with indigenous peoples in Indonesia, Sri Lanka and Nepal, and North America, and some Indigenous scholars from these regions (1996; 2010). He has written that, “Merleau-Ponty’s notion of the flesh of the world, along with his related discoveries regarding the reciprocity of perception, bring his work into startling consonance with the worldviews of many indigenous, oral cultures” (1996, p. 69).

I will return to issues of indigeneity and Indigenous-ness in further detail in Chapter 4. For now, I would like to continue to draw upon thinkers that hail from the Western tradition, particularly the late Wittgenstein, in order to explore how his relational understanding of language, seeing-as and different language-games or realms of discourse might be recycled as way to ecopoetically approach a “delicate kinship” with the more-than-human other.



Although a comprehensive reading of Wittgenstein is beyond the scope of this paper, I have been impressed by his effect on both ecopoetic and ecolinguistic thinkers, and I think it is important to address, however modestly, some of the implications of his philosophy of language for critical ecohermeneutics. Not to mention that Wittgenstein represents a kind of philosophic poster boy for ecohermeneutics, in the sense that he was so deeply embedded in analytic thinking early in his life and in his later years was drawn (perhaps by the ample time he spent as a kind of hermit in the wilderness?) towards a more interpretive and relational perspective on language and its kinship with the world.

To this end, I would like to briefly consider Jardine and Zwicky’s ecoexegesis of Wittgenstein for the purpose of bringing out “the delicate kinship and interrelationships of and with the Earth” (Jardine, 1998, p. 28). Although Wittgenstein is more well known for his rather austere style of philosophy, it is the earthly implications of his work - his obstinate undertaking to point again and again at the *dialogical* and *analogical* nature of life as it is really lived - that underpins his presence in ecopoetics (Jardine, 1998, p. 26). Perhaps we could frame this Wittgensteinian evocation as a decomposition of the Western obsession with language from within; a remedial process of clearing away the analytical rubble and exposing ground in order to enable ecological processes of succession and reclamation to take place; an entry point where the wilderness of metaphor might re-invade? Indeed, much of the imagery that Wittgenstein

employs to discuss his ideas (spinning threads, complicated networks of similarities, relational kinships and family resemblances) share a striking resemblance to the interwoven ontology and mycelial threads that I have reached for in order to envisage ecopoiesis.⁵⁸ And while I doubt Wittgenstein was addressing conversation with the more-than-human world in precisely the same ways I am, his relational understanding of the tension between similarity and difference in analogical thinking - a tension that, according to Jardine, “cannot be cashed out discursively in just so many words” (p. 27) - has informed and inspired an ecopoetic understanding of language as more fluid, playful and imaginative than methodical rendering would have us believe.

Understanding an analogy, therefore, is not a matter of discovering some discursive, univocal term which makes both sides of the analogy *the same*, which collapses the tensive “kinship” it evokes into literal terms that can be applied *univoce* to both sides of the analogy. Analogies do not involve finding some identical “A” in both sides of the analogy and then securing and safeguarding understanding by being able to declare “A =A”. The essence of the truth of an analogy is not identity (but neither is it difference)... “Understanding” an analogy is not had through the application of an univocal method, but is had by becoming party to the conversation between different realms of discourse that the analogy opens up, “getting in on the conversation.” To “understand” an analogy is not to close it down through some univocal declaration, but to keep it going, to keep it alive, to dwell in the kinships, relations, and similarities it evokes. (Jardine, 1998, p. 27)

How then, do we keep the conversation alive as we move through the calcified ruins of the past that have all but muted the more-than-human in concrete and mechanized metaphors? How do we re-learn to dwell in kinship and interrelationality amongst the dull roots and stony rubbish of the modern wasteland? Recycling Wittgenstein may again be of some use here in making sense of the emergent multiplicities of meaning in our “language-games” and different “forms of life.” For if we do not first recognize the analogical kinships between realms of discourse that resolve into neither identity nor difference, as tense and temporary as they sometimes are, then how are we to recognize the kinship-like interrelatedness and multivocality of the world itself?

⁵⁸ Wittgenstein: “As in spinning a thread, we twist fibre on fibre. And the strength of the thread does not reside in the fact that some one fibre runs through its whole length, but in the overlapping of many fibres... We see a complicated network of similarities, overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail. I can think of no better expression to characterize these similarities than ‘family resemblances’” (as cited in Jardine, 1998, p. 25-26).

What makes a subject difficult to understand - if it is significant, important - is not that some special instruction about abstruse things is necessary to understand it. Rather it is the contrast between the understanding of the subject and what most people want to see. (Wittgenstein, 1993, p. 161)

This is the heart of ecopoiesis; an elicitation into an attentive understanding of what-is that happens over and above our wanting and doing (Jardine, 1998).

Pay attention.



I picture Wittgenstein walking the beach of some remote Irish shoreline, drawing duck-rabbits in the sand and watching the tides take them away. This is the late Wittgenstein, the failed school teacher, the Cambridge apostate, the forsaken hermit. Wittgenstein as a tortured and intolerable genius (Monk, 1991). Wittgenstein as an outsider, a stranger, an exile (Klagge, 2011). He picks up a pebble to examine it, then another, both *pebble*.

I picture Phoenix Park in Dublin in Autumn, Wittgenstein is walking beside his close friend M. O’C. Drury, a notebook tucked under his arm, talking about the history of philosophy (what else would they be talking about?). Drury asks Wittgenstein what he thinks about Hegel.

Wittgenstein: “No, I don’t think I would get on with Hegel. Hegel seems to me to be always wanting to say that things which look different are really the same. Whereas my interest is in showing that things which look the same are really different. I was thinking of using as a motto for my book a quotation from King Lear: ‘I’ll teach you differences.’ [Then laughing:] The remark ‘You’d be surprised’ wouldn’t be a bad motto either” (as cited in Rhees, 1984, p. xv).

Look, I will teach you differences, particularities, simultaneities. Lets go for a walk on the beach, in the forest, lets get outside and examine pebbles and pine cones and words. Look, don’t think.

You’d be surprised.



Our capacity for metaphoric thought is key to recognizing the interrelatedness of being and our interwoven relationality with the Earth; as such, developing metaphoric thinking, an ability to see-as, constitutes one of the primary educational objectives of critical

ecohermeneutics. Jardine has elaborated on the importance of Wittgenstein's notion of language for understanding the Earth in an ecologically sound way:

From Wittgenstein, we have a notion of language as involving analogical relationships, conversations between realms of discourse which resolve into neither identity nor difference. This has implicitly been used as a metaphor for an image of understanding the Earth and our place on the Earth - one, not of the methodical rendering of the Earth in light of Descartes' dream, but of becoming conversant with the Earth in a way that the delicate kinship and interrelationships of and with the Earth can be brought out. Understanding the Earth in an ecologically sound way requires something other than Descartes's narcissistic legacy of dominance and mastery; it requires something other than pristine clarity. Truly understanding the Earth requires a delicacy of discourse that has a kinship with the Earth. The Earth is not simply and straightforwardly our *object*. It is also our *home*. It *sustains* us, *surrounds* us; we are not worldless spectators who have the Earth as that which must simply answer questions of Reason's own determining. We are human, full of *humus*. Truly *human* understanding must have a certain humility, a certain aspect of not being the center of everything and the only voice worth heeding. It must orient to an ongoing conversation with the Earth, a conversation that *must be sustained if life is to go on*. (1998, p. 28)

It is the *normalcy*, the taken-for-grantedness of relating to the Earth as an object of straightforward scientific interrogation that both Jardine and Zwicky see Wittgenstein struggling against. Hence in Jardine's reading, coming to truly understand our place *within* and *of* Earth calls for a delicacy in sensibility, an attunement, an awareness of the variegated and ambiguous discourses that we are involved in. According to Wittgenstein, meaning is something we go up to in order to listen and converse with and co-create, not something we methodically predict or control or interrogate. The metaphor of interrogation, of questioning nature under duress is, of course, part of the legacy of the Cartesian-Baconian mechanistic paradigm - the methodological rendering of an epistemology that "has become part of the air we now breathe" (Berman, 1981, p. 29):

Descartes showed that mathematics was the epitome of pure reason, the most trustworthy knowledge available. Bacon pointed out that one had to question nature directly by putting it in a position in which it was forced to yield up its answers. *Natura vexata*, he called it, "nature annoyed": arrange a situation where yes or no must be given in response. (1981, p. 28)

...the knowledge of nature comes about under artificial conditions. Vex nature, disturb it, alter it, anything - but do not leave it alone. Then, only then, will you know it. The elevation of technology to the level of a philosophy had its concrete embodiment in the concept of the experiment, an artificial situation in which nature's secrets are extracted, as it were, under duress (p. 31).

Vex nature, disturb it, alter it, categorize it, sever it (*science* as etymologically related to *scindere*, “to cut”), speak *about* it, never *with* it.⁵⁹ I am not trying to make a statement on scientific methodologies or the difference between laboratory sciences and fieldwork sciences such as geology or botany. It is the privileged or normalized position of a univocal logic of reductionism that is problematic; the idea that given a particular whole, our best means of understanding it is to break it into simpler parts for separate study.⁶⁰ Nevertheless, it remains true that by understanding the parts we *may* come to ask better questions about the whole, which is why it is important to advance an inclusive ecohermeneutics that embraces, integrates and critiques reductionism as *one of the options science makes available*. As Jardine has alluded to, a hermeneutic interpretation of Cartesianism seeks to bring out its “full ludic character” in the play of our lives (1998, p. 23). With such a playful perspective we come to view the rigidity and immutable character of Cartesianism as a human *desire* for univocity and mechanism, an interpretive urge to *just know*.

Rather than dispelling Cartesian thought as categorically false and ecologically destructive, an ecohermeneutic inquiry allows it to reappear “out from under its sedimented objectifications” (1998, p. 23-24). Or as Berman puts it, “...real life operates dialectically, not critically. We love and hate the same thing simultaneously, we fear what we most need, we recognize ambivalence as a norm rather than an aberration” (1981, p. 36). Reductionist sciences are indicative of a desire for univocal certainty and control; a cultural tendency to render ambiguous and simultaneous understandings into one-dimensional explanations so that we might yield answers and gain dominion over the world. This is not to say that this kind of inquiry is not useful or effective, or even, at times, capable of beauty. After all, as Zwicky has aptly conveyed, “...doesn’t non-metaphorical language [typical of reductionism] tell the truth

⁵⁹ It is interesting to note how the interrogation metaphor might be similarly used to characterize much of modernist pedagogy. *Discipuli vexata*, “students annoyed”, arrange an artificial situation, say a standardized exam in rows, where you must choose the best answer among the multiple dots provided, no dialogue required nor desired.

⁶⁰ For two fascinating discussions on the limits of reductionism see Abram’s (1996, p. 51) “event of perception” involving a clay bowl and Polyani’s critique of “mechanical explanations of living functions”, in *The Tacit Dimension* (2009). One of the most interesting points to emerge from Polyani’s work is the observation that understanding operations at a “higher level” cannot be accounted for by the laws governing the particulars which form the “lower level”.

about the world, too? Aren't eyes *eyes* and windows *windows*? -Yes, that's one way of looking at it" (2003, p. 12).

Yet despite the insights of reductionism, its privileged cultural position within modernity as the unilateral authority on Scientific Truth necessitates deliquescent forms of resistance, a lyrical ecology of language that opens us to the imaginative, ludic and plural possibilities of being. Critical ecohermeneutic inquiry is not automatically critical of reductionist thinking per se; rather, it seeks to resume the recyclical process of thinking imaginatively and metaphorically when we need to (Zwicky, 2003, p. 116). This is especially important in education, as the school is a manifestation of modern Western culture, playing a vital role in inculcating a particular understanding of, and way of being in, the world. As the experimental writing collective, Creeping Snowberry, has observed, through school, students become immersed in our culture's ways of being and sense-making (2010, p. 57):

The artefacts, symbols, and touchstones of modernity that are the source of our ecological crisis are at play in the fabric of our educational institutions and practices; they are the water in which we swim, they form the fishbowl of our reality. They can be discovered, not just through detached theoretical analysis - whether it be sociological, philosophical, or critical cultural in nature - but through actual engaged awareness within the places where education happens. Further, fostering careful awareness of these messages which bombard our senses and which shape the ways in which we come to understand and act in the world is a vital consideration...(p. 53-54)

In other words, the fabric of our educational institutions is woven out of an experience of explicit and implicit signs ranging from the sensory structure and content of the environment where education happens, to the particular responses and metaphors employed by teachers (p. 57). An engaged awareness of the places where education happens (one might say of the way education *moves*, of the ontological cadence it enacts) and the messages and metaphors it employs is described by Creeping Snowberry as a study of the *ecosemiotics* of education. In pursuit of this engaged awareness it shares much with critical ecohermeneutic inquiry, although critical ecohermeneutics could be considered a *broader* or *deeper* project, in a sense, as it is concerned with what ecological understanding *is*, both as mediated via language and as we tacitly understand the world (Polyani, 2009). Obviously a part of what critical ecohermeneutics

needs to do in order to transform education is transform the metaphors; but how, and to what?⁶¹ How do we use metaphorical thinking to become conversant with the world in a way that the delicate kinships and interrelationships can be brought out from within the flux? How do we reorient from within the anthropocentric trajectory of European philosophy and science that seem so *normal*? And what does Wittgenstein have to do with all this again?



Zwicky has pointed to how the metaphorical thinking and writing techniques of both Herakleitos and Wittgenstein address the hypostatization of normal:

Both Herakleitos and Wittgenstein are preoccupied with ways in which the capacity for language affects our comprehension of the world. Both insist that some fundamental aspect of linguistic meaning defies straightforward linguistic expression. Herakleitos is explicit about the unity or connectedness of all things; Wittgenstein argues first that the logical form of the world is given in the internal relations among its objects, and later that the uses of words bear ‘family resemblances’ [kinship] to one another, arising out of ‘a form of life’. The rhetorical question addressed by their works is - as it is for any writer - how to use language in a way that presents their insights without distortion. Herakleitos used paradox and deliberate, punning ambiguity. Wittgenstein attacked, over and over, the hypostatization of ‘what is common’. Both strategies are basic to metaphorical thought (2003, p. 83).

Although the idea of using language in a way that presents “insights without distortion” strikes me as a curious way to describe how philosophers and writers might employ paradox and punning ambiguity, perhaps we can draw from the essential gist of the statement, which I read as an awareness of the way our capacity for language affects our knowing of the world. In this sense, just as Herakleitos and Wittgenstein practiced strategies basic to metaphoric thought, educators too must strive towards metaphoric awareness and mastery. The deliquescence of calcified knowledge systems may take many forms - paradox, punning ambiguity, aphoristic

⁶¹ As a place-based approach to education, a critical ecohermeneutic pedagogy also needs to consider “the sensory structure and content of the space where education happens”; i.e. it needs to consider how to get students outside and into direct, perceptual contact with the more-than-human world. For an example of how this might be accomplished see Blenkinsop & Fettes (2009), also Judson (2010) and Richard Louv’s *Last Child in the Woods* (2008) for a more general discussion on nature-deficit disorder and the need to get young people outside.

arguments, humour - but one must first come to the understanding that if we dig deep enough into any critical strategy we will eventually happen upon metaphor. Metaphor *is* the foundation. Or to take this one step deeper, metaphoric thought that resonates with the structure of the world is wisdom (Zwicky, 2003).

129. The aspects of things that are most important for us are hidden because of their simplicity and familiarity. (One is unable to notice something - because it is always before one's eyes.) The real foundations of his enquiry do not strike a man at all. Unless *that* fact has at some time struck him. - And this means: we fail to be struck by what, once seen, is most striking and most powerful. (Wittgenstein, 2009, p. 56)

Perhaps we might say then, that the role of a critical ecohermeneutic education is to increase the possibility that students will be *struck* by the multivocal aspect of things, while simultaneously aware of their embeddedness in particular cultural-historical and linguistic ways of knowing and being. Conscious metaphorical thinking (what Wittgenstein referred to as “aspect-seeing” or “seeing-as”) (2009) not only has the potential to draw attention to the cultural-linguistic historicity of understanding and expose ecologically destructive root metaphors, it also offers us the possibility of enriching our kinship with the more-than-human world. As Wittgenstein has implied, metaphoric thought, the ability to “see-as” and to use a faculty we have called *imagination*, is key to training the attention to the multidimensionality of what-is. And, perhaps more importantly, what could be.

To see-as, to hear with a ‘musical ear’, is to grasp meaning - it is to see the face in the chaos of lines. And the face is there, we aren’t making it up. But because a faculty we’ve called imagination is involved, and because in reductionist contexts imagining has come to mean making it up; and because for some time meaning has been thought to reside only in non-metaphorical language: we feel that in seeing-as we are confronted with a “queer” phenomenon. (Zwicky, 2003, p. 114)

What kinds of understandings arise in a world where imaginative encirclement is seen as “queer”? Where the imagination is seen as fantasy, the very essence of not-reality, instead of the mode of consciousness that is responsible for the crystallization of cultural reality from creative thought (Vygotsky, 2004)? Or as Wittgenstein has asked, “Could there be human beings lacking in the capacity to see something as something - and what would that be like? What sort of consequences would it have? Would this defect be comparable to colour-blindness or to not having absolute pitch?... For me I want to ask ‘What would you be missing if you did not *experience* the meaning of a word’” (2009, p. 205).

Poet Ted Hughes has asked a similar question and described people lacking in the capacity to see something as something as such:

They have to work on principles, on orders, or by precedent, and they will always be marked by extreme rigidity, because they are, after all, moving in the dark.

We all know such people, and we all recognize that they are dangerous since, if they have strong temperaments in other respects, they end up by destroying their environment and everybody near them. The terrible thing is that they are the planners, and ruthless slaves to the plan - which substitutes for the faculty they do not possess. And they have the will of desperation: Where others see alternative courses, they see only a gulf. (1988, p. 35-36)

We need people, especially young people who will have to deal with the brunt of the ecological crisis, who are imaginative, flexible and fluid in their thinking. Not the habitually principled, with their monochromatic visions and ironclad fundamentalisms. Which is to say, we need people who are able to *experience* the meaning of a word, but this experience is not *common*; it must dawn on one, or it must be taught and trained through a disciplined practice. But how, how do we teach an *uncommon* experience of language? Wittgenstein has said, "A poet's words can pierce us. And that is of course *causally* connected with the use that they have in our life. And it is also connected with the way in which, conformably to this use, we let our thoughts roam up and down in the familiar surroundings of the words" (2007, p. 28). Should a teacher's words pierce us? I think so, and I think this is causally connected with the use that they have in our lives. A critical ecohermeneutic educator aims to draw the student towards the resonant experience of a word, to elicit and to strike and to pierce the student with the multifarious possibilities of language for shaping our being in the world and relationship with the more-than-human.

There are, however, other ways to approach an ecological orientation to language, other ways to critique modernist presuppositions and point to the role of metaphor in understanding the world. I would like now to draw connections between ecopoetics and the relatively new field of ecolinguistics. Although ecolinguistics is typically offered in the parlance and style of what is more readily considered "scientific" inquiry, there are intriguing connections between its essential understandings and ecopoiesis. Indeed, I hope the thought-provoking similarities and differences between an ecopoetic understanding and an ecolinguistic understanding will help us to further define the intricacies of a critical ecohermeneutic approach to language.

2.3. ecolinguistics: a life science of language

Communication of energy and information is a fundamental category in a theory that connects linguistics, quantum physics, computer science, biology, psychology, medical treatment, business and cultures. When a liver cell communicates with a brain cell, a plant with the soil and a mother with her baby, the communication realizes forms of *sharing* and *exchange*. Hence, our dialectical ecology is an invitation to reconsider communication: rather than seeing it as a purely human phenomenon, we ought to consider linguistic communication in dialogues as merely a *specific* form of a general capacity for communication, formed in different ways in different spheres of the universe. Dialectical ecology and dialectical communication imply, involve and assume spiritual and subtle dimensions in their thinking, feeling and working. (Bang & Door, 2007, p. 183)

For thirty years, ecolinguistics has sought a more politically and ethically responsible approach to linguistics through viewing language as a multidimensional phenomenon, which both shapes and is shaped by mind, nature and society.⁶² Although it is a diverse field, I will focus primarily on the Dialectical Linguistics of Bang and Door of the Danish *Odense School* (2007). From a starting point in neo-Marxism, their work took an *ecological turn* in the late 1980s and 1990s at a time when a distinct field of ecolinguistics was just starting to emerge (Alwin & Muhlhausler Eds., 2001). Although I will largely focus on the Odense School, many other linguists and theorists have endeavoured to describe the complex relationships between language, society and ecology without describing themselves as *ecolinguists* per se.

For example, Ivan Illich (1980) has focused on the political power relations of language-use for Western colonialism and developmentalism (also see Prakash & Esteva, 1998; 2008) as well as the relationship between language and the authentic vernacular of life (i.e. a life lived close to others and the Earth). Illich sees modernity as a progressive loss of this closeness, to the point where inauthenticity is deeply built into all our institutions, including language as taught and used in schools (1971; 1980). Others such as Luisa Maffi (Ed., 2001) have written and gathered writings in defence of *biocultural diversity* and the loss of indigenous languages as an

⁶² Sune Steffensen provides a comprehensive overview and history of Dialectical Linguistics and the emergence of ecolinguistics in: *Language, ecology and society: An introduction to Dialectical Linguistics* (2007). Also see *The Ecolinguistics Reader* (Fill & Muhlhausler, Eds., 2001).

ecological concern.⁶³ Although this paper will refer primarily to those theorists who identify explicitly as ecolinguists, there is much shared ground between this critical work with language and ecology and ecolinguistic inquiry.

What is ecolinguistic inquiry then? Steffensen has written that the substratum of ecolinguistic inquiry is based upon a single axiom: *every aspect of existence is dialectically interrelated to every other aspect of existence* (2007, p. 3). Or put more simply in the principle of dialectical holism: *everything is dialectically interrelated* (p. 16). We might naturally ask then, what kind of approaches to language emerge from this core substratum? How do we maintain connection to this ecological principle as we wander through the wastelands of (post)modern presuppositions? I would like to consider some of the key features of ecolinguistics, some of the ways it approaches language while remaining grounded in its core ecological principles, in order to compare and contrast it to some of the key features of ecopoiesis. Some of the connections are obvious; for example, Bang and Door, like Jardine and Zwicky, acknowledge the importance of working through Wittgenstein to come to a more contextualized, multivocal and delicate view of language (2007, p. 198).⁶⁴ Yet there are other, less self-evident correlations between ecolinguistics and ecopoetic understanding that I would like to consider in order to germinate a critical ecohermeneutic approach to language that is both critical in a sociolinguistic sense, and lyrical in the sense that it opens an ecopoetic space for engendering an interwoven relationality with the more-than-human world.

Bang and Door (2007) have described ecolinguistics as an invitation to share “alternative and ecological conceptualizations of language, linguistics and dialogue”, suggesting that their variety is just “one of a family of critical and ecological theories” (p. 192). Critical ecohermeneutics, then, is another member of this family of ecocritical theories, it shares a family name as it were; and I would like to trace the roots of this kinship before we consider some of the important differences.

⁶³ See the *Language and Ecology* on-line journal for a full ecolinguistics bibliography at: <http://www.ecoling.net/bibliography.html>

⁶⁴ For a more detailed comparison between ecolinguistics and Wittgenstein see Bang & Door (2007, p. 122), also see Bang & Door’s text analysis: *The dialectics of deixis: Ludwig Wittgenstein’s Preface* (p. 148).



Defining language, or even approaches to language, is a problematic undertaking. But perhaps clarity is not the answer in such cases, perhaps any theory or philosophy of language inevitably falls subject to its own “curious limitation” of self referentiality, as Abram has written:

Every attempt to definitively say what language is subject to a curious limitation. For the only medium with which we can define language is language itself. We are therefore unable to circumscribe the whole of language within our definition. It may be best, then, to leave language undefined, and to thus acknowledge its open-endedness, its mysteriousness. Nevertheless, by paying attention to this mystery we may develop a conscious familiarity with it, a sense of its texture, its habits, its sources of sustenance. (1996, p. 73)

An ecopoetic approach to language acknowledges the creative open-endedness and great mystery of language. In this sense it aids us in developing a greater familiarity with its multidimensional textures and the earthen sources of its sustenance. It develops a sense of familiarity with the live, metaphorical relation between meaning and the polyphonic resonance of what lies before us. Ecopoiesis is a process of revealing the playful and imaginative dance between what-is and what could-be as calibrated against the “data” of an animate and multivocal world. But how do we remain grounded in these open-ended mysteries or, for that matter, in ecological principles such as dialectical holism and yet generate the critical distance required to analyze the ideological foundations of the ecological crisis? How do ecolinguists define their approach to language in order to discuss issues that are not the normal subject matter of linguistic inquiry?

As one might imagine, there is much debate and contention about how to define ecolinguistics. Alwin Fill, a leading voice in the field, has attempted to define the field as such:

...that branch of linguistics that takes into account the aspects of interaction, whether it is between languages, between speakers, between speech communities, or between language and world, and that in order to promote diversity of phenomena and their interrelations, works in favour of the protection of the small.

Ecolinguistics is in the widest sense the science of the interactions between language and world... it is also a branch of linguistics that in whole new ways engages in the study of linguistic anthropocentrism, linguistic expressions for growth ideology and the linguistic strategies for ecological thinking. (as cited in Bang & Door, 2007, p. 206)

Bang and Door have respectfully critiqued Fill and other ecolinguists who place ecolinguistics within the overall landscape of linguistics as just “another branch”. Fill’s definition threatens, they maintain, to reproduce the “socio-cultural order of modern capitalist science” which is embedded within the bureaucratic logic of an “*everything-is-of-equal-value* attitude,” marginalizing this participatory life science of language within a larger field dominated by reductionist and objectivist disciplines (2007, p. 11-12). Although Bang and Door concede that Fill was making a “strategic” concession to legitimize ecolinguistics in its nascency, Steffensen has perhaps defined ecolinguistics more accurately in terms of a Kuhnian paradigm shift:

Early twenty-first-century linguistics is on the threshold of a scientific revolution, in Thomas Kuhn’s sense. It is the faith of ‘revolutionary science’ to reformulate the key tenets and assumptions of the discipline in question, rather than just keep extrapolating their predecessor’s axiomatic foundations. This changes the scientific discourse, since it has to address questions which to Kuhn’s ‘normal scientist’ are not scientific questions, but rather philosophical or maybe even political. (2007, p. 14)

In a similar sense, the “normal educator” may not immediately recognize the pedagogical relevance of questions raised by critical ecohermeneutics; or the questions may seem “too philosophical” or “too political”. Although critical ecohermeneutics is still embryonic, my contention is that it is not simply “just another methodology” for educational research, nor is it “just another branch” of Western philosophy. Critical ecohermeneutics offers us a way of reinterpreting what understanding *is*, and what *calls* for understanding.⁶⁵ It is part of an emergent ecology of attentive practices characterized by their critical focus on interrelatedness and participation. A critical ecohermeneutic educator acknowledges the power of a question or a metaphor (especially those questions that are “too philosophical” and “too political”) when something is ecologically destructive is afoot:

⁶⁵According to Jardine, this shift was prefigured by Heidegger in *What is Called Thinking?*: “...Heidegger performs a telling reversal on the traditional philosophical question ‘What is called thinking?’ Rather than entering the already crowded fray and proposing new and improved characteristics of thinking, Heidegger asks “What *calls* for thinking?” In this sudden reversal, the whole legacy of Descartes’ nightmare is jeopardized. What Heidegger’s work does is ask a simple question that has been lost in the wake of Descartes: What is it that thoughtful inquiry needs? What is it that we are deeply responding to in education? What is it, in these times, that needs our response? What calls for thinking?” (1998, p. 29).

We stand, in education, at the moment of the generativity of the human race and education is, most essentially, our response to this moment. But it cannot be denied that, given the deeply consumptive desires of North American culture, given the ecological horrors left in the wake of Descartes' nightmare, we may be standing at the moment of the *degenerativity* of humanity. Something is afoot, something is called for in these times that goes beyond "one more damn thing," (Smith, 1988) one more theory to be dumped on the pile with others in our onrush to ecological self-consumption. (Jardine, 1996, p. 12)

Ecolinguistics is a promising attempt to be more than "one more theory to add to the pile;" it addresses questions that are of far reaching significance to Western culture as a whole and not just related to the field of linguistics as defined by its present autonomous orientation. Bang and Door offer these questions as examples of issues that should concern linguists: "How should we organize our material production? How should we organize the education of our children and adolescents? How do we avoid human life forms that systematically exploit and devastate our living and loving host, Gaia?" (2007, p. 14). Although I sympathize with the intention of posing such questions, surely in-depth consideration and appropriate responses to these questions take us beyond the study of linguistics, even *ecological* linguistics. Critical ecohermeneutics seeks to pose and engage with similar questions as a broader interpretational matrix or ecological-ontological orientation. This is to say that critical ecohermeneutics is also concerned with the linguistic dimension of the ecological crisis, while acknowledging that the development of potentially ecological ways of being in the world will take us into the interdisciplinary matrix of all human knowing and applied knowledges. My sense is that ecolinguistics is also trying to point at this kind of multivocal and heterogeneous understanding from within the linguistic field, that is, its primary concern is doing linguistics in order to provoke a broader interdisciplinary paradigm shift.

Although ecolinguistics has traditionally been associated with the kind of *ecocritical discourse analysis* one might expect from a sociolinguistic approach to language, as Steffensen writes, ecolinguistics is not the "straightforward application of a pre-established theoretical framework for analyzing discourse;" rather, its emergence "signals the development of a new linguistic paradigm" (2007, p. 7). In order to redefine linguistics in this manner, Bang and Door remind us that "Science and scientific praxis is nothing more or less than a particular historical, social praxis and part of a specific socio-cultural order" (2000, p. 53). This reminder, then, that neither science nor linguistics are politically nor morally neutral, due to their cultural-historical situationality, represents an "invitation" by ecolinguists to re-orient linguistics within the emergence of a new ecological consciousness, rather than continue to position linguistics in the

pre-existing objectivist and positivist paradigm (Steffensen, 2007, p. 13). Steffensen, drawing on the work of Bang and Door, offers the following articulation of how we might come to view this new linguistic paradigm as a life science:

- Linguistics is a life science. Like *biology*, linguistics is “oriented towards living systems and their relationships with, and in the environment” (Bang & Door, 2000, p. 54). Please notice that language is not a “living system” in its own right, only a *part* of and in living systems.
- Linguistics is a life science with an explicit axiological stance. Like medicine, which is “committed to try to enhance a healthy development of human beings and to restore the health of any human being” (Bang & Door, 2000, p. 54), linguistics is committed to enhance a healthy development of communicative and linguistic patterns and qualifications, so that “human beings are able to use language to create healthy cultures and life forms” (Bang & Door, 2000, p. 54).
- Linguistics contributes to the life sciences with the insight that a science based upon reductionism, dualism, positivism and non-participation distorts reality and our perceptions and conceptions of reality. Thus, the inclusion of linguistics within the life sciences is a radical transformation of the life sciences. (2007, p. 13)

This last point has been further expanded upon by German ecolinguist Peter Finke, who states that we have learned a great number of things from conventional scientific ecology, but this biological discipline has “up to now failed to free itself from the physicalist boundaries which obstruct an adequate understanding of the psychic dimension of ecosystems” (2001, p. 85). Indeed, one is left to wonder how far we can push the physicalist boundaries and physicalist metaphors of “scientific ecology” towards the generation of radical new kinds of ecological understanding and being in the world? Or does this approach leave us tenaciously attached to certain worldview presuppositions? Is it possible for ecology to free itself from the kinds of cultural understandings it emerged from? Steffensen has claimed, he prefers to understand ecolinguistics as, “one part of the overall scientific praxis that might become dominant in future cultural formations” (2007, p. 14). But one is left to wonder whether a redefinition of linguistic study as a life science, drawing upon the models and metaphors of ecology, biology and medicine, is enough to catalyze a shift to a truly alternative cultural formation or is it simply a future adaptation and superficial adjustment of our present state? I would like to take a look at some of the critical models and modes of linguistic analysis that are characteristic of ecolinguistic inquiry now in order to get a better sense of what a linguistics as a life science might look like.



Steffensen and Nash have claimed that the primary rationale for ecolinguistic investigation is drawing attention to the way the ecological crisis and the way we use language in this era of global capitalism, “enfold and are enfolded into each other” (2007, p. viii). Steffensen has also claimed, “The majority of ecolinguists are not in consonance with the dominant economic, political and scientific praxes,” (p. 13) and has described ecolinguistics as *trans-disciplinary, revolutionary* (in the Kuhnian sense) and *radical* (p. 16). But what does this mean in terms of *doing* ecolinguistics? What does ecolinguistics offer a critical ecohermeneutic approach to language that ecopoetics does not? My contention is that ecolinguistics offers a sophisticated, conceptual and systematic kind of critical awareness embodied in dynamic models, vocabulary, and text analysis techniques that have the potential to generate cogent and compelling insights, while remaining connected to its ecological principles. Despite these welcomed offerings, perhaps we could say that ecolinguistics, thus far, has remained limited and bound (to conventional scientific ideology) by its rationale to simply *draw attention* to the ways in which the ecological crisis and language are enfolded – and not to understand it more deeply or more metaphorically.

In terms of the mycorrhizal metaphor I have been using to describe critical ecohermeneutics, ecolinguistics has developed potent analytical models and terminology that can aid in the decomposition of calcified forms of thinking (i.e. dominant economic, political and scientific praxes), as well as discerning mycelial connections and pointing to the multidimensionality of understanding texts and utterances from within a cultural-historical matrix. In this sense, ecolinguistics offers us the capacity to generate a critical distance while staying grounded in the dialectic substratum of its ecological principles. So what are some of the key models that ecolinguists have developed and applied to perceiving and critiquing the linguistic dimension of the ecological crisis?

Bang and Door have developed a number of key models for carrying out ecocritical linguistic analysis. The first, as I have already mentioned, is a contribution to the theory of deixis, which essentially reasserts the dialectical relationship between language, text and context. A deixis analysis must form the starting point in ecolinguistic inquiry because “deictic phenomena in a text are semantically sensitive to the specific situational circumstances” (Steffensen, 2007, p. 20). Essentially this could be thought of as recontextualization, and perhaps, in ecological terms, a renaturation of a linguistic event. Traditionally, a deixis analysis comprised of reference to the speaker, addressee, time and place; a treatment which unfortunately has had a

tendency to reproduce reductionist logic by proceeding as if it is possible to isolate deictic relations between text and context. Bang and Door have attempted to avoid such reductionist tendencies by developing a notion of *reference* which they conceptualize as a *Triple Model of Reference* or a *Deixis Matrix* (Bang & Door, 2007, p. 112-120). Which essentially means that in dialectical theory, deixis is expanded to include reference to:

- Persons: Speaker, addressee, and third persons
- Objects: Things and media
- Topos: Place and time
- Logos: Logic, modality (status of the language-reality relation or worldview) and lexis

As I have mentioned an in-depth explanation of ecolinguistic deixis analysis is beyond the scope of this paper, but suffice to say that Bang and Door's contribution to the theory of deixis is a kind of expansion of the concept, an insistence that any linguistic phenomenon that is sensitive to situational position is a deictic phenomenon (Steffensen, 2007, p. 22). Or as Steffensen has explained, "To make a sensitive and sensible text analysis implies that one accepts the fact that a given text implies different referential dimensions, i.e. that it has more than one rational analysis. Furthermore, one must accept that a text configuration has several meanings at the same time" (2007, p. 21).

Beginning language study from a deixis analysis in this sense is a way of pushing back against the reductionist and decontextualizing tendencies of conventional autonomous or "scientific" linguistics (scientific in the sense of the dominant scientific paradigm of modernity characterized by objectivism, positivism, linear causality, etc.). It also represents an attempt to reinfuse linguistic inquiry with an ethical dimension and an awareness of the role of worldview and cultural norms (i.e. logic, modality and lexis) as deictic phenomenon that are semantically sensitive to specific speakers, objects, places, and cultural-historical logics. As Bang and Door have written:

The DC [decontextualization] view has serious depersonalizing implications, and to us seems unhealthy. Nevertheless, morality is considered to be an extra-scientific matter from a DC view which itself is a perfectly neutral point of view, the mark of neutrality in its user. What the DC concept hides is the fact that some contexts, some cultural forms and norms and some groups of people are hypostatized as universal and neutral norms for everybody. (2007, p. 90)

As we have discussed, this decontextualization point of view and the hypostatization of normal not only has implications for depersonalization, but also *denaturing*, of severing the living relationship between language and place. Or in other words, the decontextualization point of view has a tendency to calcify the live, metaphorical relation between things and the resonant structure of the world.

Clearly an ecolinguistic deixis matrix is a valuable tool for generating critical space and initiating a process of decomposition on our taken-for-granted EPOCHAXis presuppositions. What is not clear from these models of deixis analysis is whether or how ecolinguists acknowledge or endeavour to listen to the voice of the more-than-human world? It is one thing to critically analyze how the way we use language and the ecological crisis in this era of global capitalism enfold and are enfolded into each other, it is quite another to elicit ontological attunement with metaphor to the polyphony of what-is in order to provoke a phenomenological experience of interconnectivity. It seems to me that the development of a truly ecological conception of language and linguistics must be able to perform both functions or else we begin to embed our conception within the somewhat typically over-critical and over-analytic Western paradigm.

With that said, there are some interesting aspects to ecolinguistic deixis analysis that seem to be at least leaning towards a kind of neo-animistic logic, or what Steffensen refers to as a “deep ecological ontology” (2007, p. 9). Unfortunately, these references seem to remain embedded for the most part within Western anthropocentric assumptions. For example, Bang and Door have claimed that all aspects of their deixis analysis imply ontological matters and hermeneutical interpretation. For them, “A word, a text and a dictionary are members of the ontological reality just as speakers and hearers are” (2007, p. 113). But what of a mushroom, birdsong, or a mountain? Although ecolinguistic deixis analysis comprises reference to *objects*, Bang and Door claim that these kinds of objects “have a different ontological status” (2007, p. 117). Sometimes a non-personal (i.e. non-human) object can become personalized by means of a pronoun shift in a human language user (i.e. *the* butterfly may become *she*); thus people may integrate animals and objects, but this “personalization” of “objects” by human “persons” seems excessively human-centric. In their treatment of media deixis, Bang and Door claim that a piece of paper, a runic stone and a television are different examples of objects functioning as media for communication, but this too seems less a statement on the ecological interconnectivity *between* things and more a reaffirmation of human communication *through* things. Finally, in their acknowledgment of the topos deixis, which they use as a reference to specific configurations

in/of time and place, they seem to reduce the “topical relations” between participant and place to numerical coordinates in spacetime. “In our language and communication we refer to the *now* and *here* as the zero-time and zero-place and relate *before*, *later*, *there*, *ten years ago*, *a hundred miles away*, etc. to the zero-topos of communication” (2007, p. 118). This is, in a critical ecohermeneutic sense, an offensive or at least typically reductionist way of approaching human-place relationality. From a critical ecohermeneutic view there is no such thing as a “zero-place” and communication between place and human is not viewed as plotting prepositional spacetime coordinates, but as an embodied and participatory reciprocity and a live, metaphorical relationality.

In addition to their contributions to the theory of deixis, Bang and Door have also developed a model for dialogue, which, among other elements, features an omnipresent and anonymous “third party” that comprises sociocultural constituents (i.e. worldviews) the communicator has internalized through language acquisition (2007, p. 58-59). This dialogical model also includes three principles of democratic dialogue including: the principle of sharing, the principle of difference, and the principle of dialogue (as cited in Steffensen, 2007, p. 24-25). Although one imagines that these models are to be utilized for dialogues concerning ecological issues, and although the environment features in the dialogue model as a kind of background topos, the voice of the more-than-human world is again conspicuously absent from these models in a way that concerns a critical ecohermeneutic sensibility. As I mentioned in our discussion of an integrationalist redefinition of linguistics, ecolinguistics seems to embody the most radical qualities of a sociolinguistic orientation, but it is not exactly animistic in its analytical models. It does not endeavour to listen to the world in exactly the same kind of ways that ecopoetics does.

Perhaps the most explicitly critical model of analysis offered by ecolinguistics comes in the form of dialectical “fields of conflicts” or the *Core Contradictions of the Social Praxis* (2007, p. 49-58). There are nine core contradictions, and although a detailed account of the interrelations of each contradiction is too comprehensive to address in this paper, I will provide the following list in order to get a sense of their interlocking complexity: Race, Age, Sex, Class, Authority, Ideology, Town-Country, Private-Public and Culture-Nature. These core contradictions are networked within a three dimensional matrix of ideo-logics, socio-logics and bio-logics (also dialectically interrelated). As Bang and Door have maintained, “The logics and core attractors of a society or a culture create and nurture certain ways of communication as being ‘normal’” (2007, p. 52). Ecolinguists work to challenge the hypostatization of normal, and

thus, Steffensen has defined the field as both critical and revolutionary, because ecolinguists assume that society can be changed and that a new order can be developed (2007, p. 26).

The final model that I want to consider is the called the semantic matrix. In this model Bang and Door attempt to account for the difference between *social sense* and *individual meaning* in an actual dialogue. That is, the difference between the semantics shared by members of a speech community and individual meaning, “which differs from its social sense and establishes the individual as a person and not a machine/computer” (as cited in Steffensen, 2007, p. 28; Bang & Door, 2007). To this distinction they add variables such as: specific contexts, general contexts, particular semantics, general semantic, social import and personal significance. Again a critical ecohermeneutic approach to this model is forced to ask where or how the more-than-human world *fits* into this model? As we have discussed in the context of Bringham and eco-poetics, one of the key features of eco-poetic understanding is a re-positioning of meaning within the resonant ecology of what-is. It is not clear how Bang and Door might respond to this reorientation of meaning, despite their commitment to the principle of dialectical holism (this is not to say an animistic sensibility *necessarily* follows from this principle). Perhaps the animistic logic of critical ecohermeneutics might find more resonance with ecolinguist Alwin Fill and his Buddhist-Taoist tendencies (Steffensen, 2007), but the strong critical version of ecolinguistics proposed by Bang and Door does not seem to indicate what a remedial dialogue with the more-than-human world might look like or how this experience might fit into an ecolinguistic model.



Although ecolinguistics and eco-poetics both work towards an ecological orientation to language-world relationality, each approach works from different understandings and presuppositions. This is not to say that ecolinguistics is somehow incompatible with critical ecohermeneutics, both are grounded, in a sense, in hermeneutic interpretation and both aim to inspire a deep ecological ontology (though obviously there are different definitions as to what comprises a deep ecological ontology). I would now like to briefly consider what might be considered the hermeneutic qualities of ecolinguistics in order to stimulate more connection and dialogue between it and a critical ecohermeneutic approach, as well as continue to identify the aspects of an eco-poetic understanding that differ from ecolinguistic inquiry.

Although philosophical hermeneutics is multifaceted, and at times, an abstruse philosophy, I think we can speak of a fundamental hermeneutic insight. This might be described

as the cultural-linguistic historicity of understanding. The historical development of hermeneutics has been one of deepening ontological inquiry, from an essentially philological concern of how to read historical texts, to an existential concern of what understanding is and how we might interpret the world as we find ourselves already co-constituted within it. The ontological hermeneutics of Heidegger and Gadamer have been framed very much in response to the methodological certainties of Descartes and the inordinate privilege allocated to rationalist epistemologies.⁶⁶ Ecolinguistics, in a sense, is also a response to the reductionism, dualism and linear causality of the Cartesian paradigm (especially as manifested in the dominant objectivist scientific praxis and autonomous linguistic study), though obviously not originating from *exactly* the same philosophic lineage.⁶⁷ Be that as it may, ecolinguistics also endeavours to draw attention to the cultural, historical and linguistic dimensions implicit within any scientific praxis and their effects on social organization and ecological relationality. As Bang and Door have stated in no uncertain terms: “Science is a historical phenomenon like everything else” (2007, p. 48), and:

Science or scientific praxis is nothing more or less than a particular historical, social praxis and part of a specific socio-cultural order. Different cultures create different forms of science and every dominant scientific praxis organizes its people and problems in ways and by means that aim at the same ends as the culture as a whole. (as cited in Steffensen, 2007, p. 13)

Similarly, they have written, “Knowledge and understanding are always embedded in a particular culture and interdependently determined by its matrix of ideas and institutions” (Bang & Door, 2007, p. 74). Essentially, they are reasserting the hermeneutic insight that neither science, nor philosophy, nor education are really *ever* decontextualized or neutral, which is to say, their rendition as methodical objectivity, or instrumental rationality, or standardized curriculum is itself embedded in a cultural-historical matrix, like everything else.

⁶⁶ As Joldersma has written, on Ihde’s account in *Expanding Hermeneutics* (1999), “Although Gadamer premised his entire book *Truth and Method* on the distinction between the human sciences as hermeneutical and the natural sciences as explanatory, in the second [revised] edition Gadamer makes the (startling) admission that the methods of the two are not necessarily all that different and that Thomas Kuhn’s work has greatly complicated this question” (2009, p. 475).

⁶⁷ One might argue that both Marx and Husserl were greatly influenced by Hegel, pointing to a common lineage? Let us just say that the relationship is complex.

Keeping in mind that ecolinguistics is an inherently diverse and multidisciplinary field, we might say that the ecolinguistics of the Odense School at least, with its neo-Marxist roots, is less overtly concerned with ontological interpretation (i.e. Gadamerian hermeneutics), and more concerned with how contemporary disparities of power and language inform and maintain social praxes. As we have seen, critical ecohermeneutics attempts to deepen the ontological turn within the hermeneutic tradition and engender a participatory and interwoven ecological-ontological relationality with the more-than-human world. Addressing the linguistic dimension of the ecological crisis is obviously of central concern here, but the project extends beyond linguistic analysis in a narrow sense into the existential and ecological nature of interpretation itself. With that said, ecolinguistics has certainly pushed the boundaries of both traditional neo-Marxist scholarship and contemporary linguistics, and I wonder if at root, ecolinguistics and ecopoetics intersect more than it may initially appear? For example, we have seen that ecolinguistics works from the basic substratum of dialectical holism and acknowledges principles that have come from “Eastern roots”, such as: the principle that everything and everyone participates in each other’s mode of being, and the principle that human beings are participants in a participating universe and have a hologramic mode of being (Bang & Door, 2007, p. 40). In addition to these Eastern teachings, Bang and Door draw upon principles developed and derived from dialectical theory, including:

- The first principle maintains that we live in a conscious, self-organizing and Self-aware universe.
- The second principle states that living, complex systems are governed by a dialectical unity of natural *hierarchies* and *heterarchies* that ensures the system is functional and that it can repair or recreate itself within certain critical limits.
- The third principle says that the whole and every part are *multi-dimensional* and *multi-levelled*. A human being is such a complex system, a *holon*. (p. 40)

Bang and Door claim that these principles interpret reality as living and conscious and as a movement with meaning and intention in time and space; it is therefore natural to invoke the concept of ecology as a matrix for understanding, describing and explaining phenomena (p. 40-41). But *ecology* as it is presently understood in the dominant Western paradigm can hardly be said to represent an appropriate framework for understanding or speaking about holistic self-awareness.

It seems as if the philosophical presuppositions of ecolinguistics, its essential substratum if you will, point to a kind of animate and self-aware conception of reality, even if some of this neo-animistic logic is lost in its dialectical linguistic models of analysis. One wonders if the

primary difference between ecolinguistics and critical ecohermeneutics arises from the former's utilization of Western ideas of ecology and quantum mechanics (Steffensen's use of David Bohm for example, 2007, p. 16-17) and Eastern philosophy, whereas my conception of critical ecohermeneutics draws more upon what might be called Indigenous worldviews and eco-poetic conceptions with an animistic logic (or at least acknowledging the world as an active co-teacher)? In order to consider this in greater detail I will draw upon three examples provided by Steffensen (2007) as to how our use of language has implications on facets of human understanding that are traditionally beyond the scope of study for linguists.



The first example that Steffensen provides us is the widely cited “butterfly effect” of chaos theory (the idea that a butterfly flapping its wings in Brazil might eventually catalyze the formation of a snow storm in Alaska, for example). Scientifically speaking, chaos theory implies that even very small, local activity can have dramatic effects globally, and for Steffensen, the power of a person uttering a syllable is many times stronger than a butterfly flapping its wings.⁶⁸ “When we talk we create physical and psychical vibrations in our environments, although we have no means of knowing beforehand how these vibrations will propagate in the universe. These are non-linear, complex and chaotic processes” (2007, p. 9). Although Steffensen seems to be speaking of the “physical” vibrations in space that we generate through speech, I find these statements at least related to Abram's observations regarding the gestural significance of spoken sounds in interesting ways.

We appropriate new words and phrases first through their expressive tonality and texture, through the way they feel in the mouth or roll off the tongue, and it is this direct, felt significance - the *taste* of a word or phrase, the way it influences or modulates the body - that provides the fertile, polyvalent source for all the more refined and rarefied meanings which that term may come to have for us. (1996, p. 75)

Steffensen seems to be pointing to the indeterminate possibilities of how a physical speech vibration might chaotically propagate in the universe, whereas Abram is trying to point to the

⁶⁸ Though if we really think about it this is perhaps already a typically anthropocentric assumption.

embodied experience of a word's expressive tonality as a source of the vibration's indeterminate meaning. For me, both of these observations again bespeak the need for awareness of the indeterminate manifestations and meanings of our words in the world. They also emphasize the latent power and transformational potential of language.

Perhaps the following example might help us to get at the sometimes subtle differences between an ecolinguistic and ecopoetic approach. Although ecolinguistics attempts to position itself as a paradigmatic shift away from the objectivist scientific paradigm that dominates modern linguistics (and in many ways it succeeds in this endeavour), it sometimes seems to remain overly focused upon physicalist phenomena as the most interesting or important aspects of inquiry. Many of the "scientific" fields that ecolinguistics draws upon for principles and philosophy - chaos theory, quantum mechanics, indeed even ecology itself, although postmodern in a sense, are ultimately expressions of a modernist trajectory. Or perhaps we might say there is a tendency at least to tenaciously cling to modernist presuppositions as representative of what science is and should be, and what a science of language is and should be. Again, this is not to say that ecolinguistics does not represent an intentional departure from this paradigm, but only that this is an immense undertaking and, as we have seen with the advent of structuralism in the 1950s, there is a kind of validation that comes with defining oneself as a "scientific" field. Ecopoetics, on the other hand, approaching as it does from more of a philosophic perspective, with roots in phenomenology, is less concerned and less insecure about sounding "scientific" in a conventional sense.

With that said, Abram's emphasis on the obvious bodily qualities of language - mouth shape, tongue movement, the *taste* of the word, etc. - distracts from perhaps a more significant embodiment. That is, the fractal configuration of neurons firing in distinctive patterns and the subsequent phenomenology and experience of thought. This is perhaps where ecopoetics converges more with Wittgenstein, where metaphor as a form of understanding is experienced as a living and resonant presence. If we take the "inner" cosmos to be as complex and interrelated as the "outer" cosmos the butterfly effect takes on a whole new meaning.

By way of illustration, perhaps we could say that a teacher flapping her lips in a Grade 10 English class in a particular way might contribute to a hurricane of political resistance against a pipeline megaproject years later? In this sense the physical vibration of speech that she released into the world was a non-linear, complex and chaotic process that catalyzed a significant physical change, but more interestingly perhaps, is that these vibrations were embodied and spoken in a way that was meaningful, affective and resonant. This is by no means a guaranteed propagation

in the universe, but rather an acknowledgment of the potential power of effecting “inner worlds” and, subsequently, the “outer world” with our words. Or as Hughes has written, “The inner struggle of worlds, which is not necessarily a violent and terrible affair, though at bottom it often is, is suddenly given the perfect formula for the terms of a truce. A simple tale, told at the right moment, transforms a person’s life with the order its pattern brings to incoherent energies” (1988, p. 44). This is perhaps the most fundamental insight of critical ecohermeneutics regarding pedagogy and the role of the educator, a simple reminder that our words and the metaphors that we live by have the power to heal and to transform lives.

Remember,
words can provoke
hurricanes or healing
choose *wisely*.

Perhaps this can also serve as a reminder of what language *is*, both from an eco-poetic perspective and an ecolinguistic perspective. If we recall Bringhurst, “...if you really want to understand the wood, the water, the minerals, and the rocks, you have to visit them at home, in the living trees, the rivers, the earth. And if you really want to understand the language, you have to encounter it in stories by which it was made” (2006, p. 169). Eco-poetically speaking then, language is the literature of what-is and is most genuinely encountered in the context of the stories and places from which it arises. Ecolinguistically speaking, language is a “physical” force of nature, a psychic dimension of ecosystems, not some disembodied, worldless abstraction traveling mechanically and placidly from one head to the other. Or as Bang and Door have stated, “The point is that language and communication are ecological processes of living beings rather than the mechanical process of machines” (2007, p. 197). One should never lose sight of the fact that language has a public side and a private one, and the relation between the two is never self-evident or shaped by linguistic factors alone. Language is what happens in our brains and our bodies, as well as what happens in vibrations through air, and in the ways we attend to the world. Or rather, poetry *exists*. The question is only: are you going to take part, and if so, how?



Steffensen's second example of the implications of language use upon our social, ideological and biological environment further explores the physical tonality of language and its expression as a kind of music, drawing upon an Indigenous context interestingly enough:

Certain shamans are known to be able to arouse, by talk alone, different feelings of anxiety and ecstasy, etc. in their interlocutor. We may try to find some 'rational explanation' for this in terms of individual psychology, hypnosis, etc. But we often forget that (spoken) language is not only strings of hierarchically ordered concepts but also tones and rhythms, i.e. music or vibrations. We have all experienced how music can strike a rich palette of emotional chords in us. In this example outer vibrations resonate with inner vibrations which we detect as emotions. Music and speech do not just resonate on a socio-ideological level, but indeed also on a bio-logical level. (2007, p. 9)

Steffensen's example again reminds us of the bio-physical resonance of language as an aural vibration in space with affective potentialities on our "inner vibrations," which *is* fascinating, and yet, I wonder if this again distracts somewhat from the more interesting and deeper ecological implications. Which is to say, the tonal and rhythmic dimensions of language have important ecoethical significance as illustrated by Abram in his comparison of the Western conception of language with an Indigenous perspective:

Enacted primarily in song, prayer, and story, among oral peoples language functions not simply to dialogue with other humans but also to converse with the more-than-human cosmos, to renew reciprocity with the surrounding powers of earth and sky, to invoke kinship even with those entities which, to the civilized mind, are utterly insentient and inert... Here words do not speak *about* the world; rather they speak *to* the world, and to the expressive presences that, with us, inhabit the world. (1996, p. 70-71)

Although many ecolinguists are engaged in Indigenous language studies and revitalization (Fill & Muhlhausler Eds., 2001; Muhlhausler, 1996; Maffi, Ed., 2001) this seems to be an area that calls for deeper consideration. What is it exactly about language enacted as song, prayer, or poetics that lends itself to conversation with the more-than-human cosmos? How is it that the shaman pierces us with her words, often the same words as we might use in day-to-day conversation, in a way that is phenomenologically more reverberant and able to invoke kinship with supposedly inert entities? What might we learn from an Indigenous perspective on language-world relationality in order to engender a truly ecological education? Though ecolinguistic inquiry

seems related to some of these issues, they are not questions that typically feature in ecolinguistic analyses and might more readily be recognized and fruitfully considered via ecopoetic inquiry.



Steffensen's last example also addresses the ability to speak *to* and *with* the world. "In certain Aboriginal cultures in Australia it is, or sadly was, a widespread belief that the language *belonged* to that very place in the biosphere, that language was directly related to the habitat" (2007, p. 9). This idea of language as embedded in the landscape is clearly reminiscent of similar orientations espoused by Bringhurst (2006), Abram (1996) and Basso (1996) amongst others, all of which have been profoundly influenced by Indigenous worldviews, not to mention the groundbreaking work of modern Indigenous scholars who have addressed the role place in Indigenous education such as Gregory Cajete (1994), Taiaiake Alfred (1999, 2005), Winona LaDuke (2005) and Eber Hampton (1995) – just to name a few. Steffensen's comment here reaffirms the sentiment that many of the philosophical principles and interests informing ecolinguistics are at least approaching what might be thought of as a neo-animistic worldview. For example, in the following passage, Bang and Door even go so far as to refer to the holistic *divinity* of the universe:

Dialectical philosophy does not consider the universe as based on "dead matter" or elementary particles without history. This is a kind of reductionism. It does not work from a dualism between mind and matter (mind and brain) or organic and inorganic. On the contrary, our dialectical theory views the universe as an inter-connected, communicating whole and a complex system with emergent properties. Like deep ecology and other holistic approaches, dialectical theory views the universe as inherently and innately divine. An implication of such a paradigm shift is that the relational concept *communication* and *energy* takes the position formerly held by *elementary particle* and *mass*. Communication always resonates at every level and dimension of reality: if a person eats some food and a metabolic process takes place, then the food - and the metabolic communication between the food and the body - vibrates in the body, in the social relationships and in the mental dimension. (2007, p. 55)

One of the most interesting features of this shared ecological substratum of interrelationality, and the kind of thinking it inspires, is the fact that it seems to have developed independently in ecolinguistics and ecopoetics. Personally, I am wary of making the leap from quantum principles, which again might be viewed as the ultimate expression of modernist thinking, to an innately divine universe as conceived by deep ecologists. Furthermore, we must remember that despite their focus on interrelatedness, ecolinguistic models seem to be lacking a space for the voice of

the more-than-human world. This is one of the most important aspects of an eco-poetic practice; an ability to elicit ontological attention by listening to the world. Nevertheless, my conjecture is that ecolinguistics and eco-poetics represent two essentially complementary approaches to addressing the linguistic dimension of human-world relationality. Perhaps the best way to describe the difference between them might be to say that the stance of the ecolinguist is still that of an “outside” observer, albeit a highly reflexive one, whereas the stance of the ecohermeneut is that of participant “within” the flux, albeit one who is able to critically distance themselves from this interweaving relationality momentarily in order to recognize the ideological fabrics.



In this final comparison I would like to briefly consider the role of metaphor in ecolinguistics versus that of eco-poetics. Ecolinguistics does offer a positive discussion of metaphor and recognizes its fundamental role in both individual human cognition⁶⁹ and how metaphorical thinking shapes our relationality within the broader ecological-social community.⁷⁰ Bang and Door have claimed that from different forms of life emerge, “the appropriate strategic analogies and metaphors to live by” (2007, p. 45). There is a difference, however, in how this recognition of metaphor is expressed and enacted in ecolinguistics as compared to eco-poiesis. Which is to say, it is one thing to recognize the role of metaphor in human cognition or in the strategic language and imagery of the ruling elite as it filters down the social hierarchy, and quite another to recognize metaphor as a form of domestic wisdom required to attune to the resonance of being.

For example, Bang and Door have offered an ecolinguistic analysis of the relationship between Judeo-Christian metaphors and the instrumental value attributed to “Gaia” in the Western mind:

⁶⁹ Bang and Door: “We understand analogy and metaphor as projections or transferences from one segment of reality, symbolic system and/or discourse to another. The phenomenon of analogy and metaphor is a constitutive condition of our cognitive capacities and primal understanding.” (2007, p. 45)

⁷⁰ Bang and Door: “For instance, the way in which people are organized and socialized under global capitalism determines a specific system of abstractions and concepts, and the system is linked by means of analogies and metaphors.” (2007, p. 51)

From a dialectical and an ecological point of view it is vitally important to try and understand other cultures and other species and one method of doing so is to identify which kind of images and relations the respective ideologies entail.

Judeo-Christian ideologies have legitimized and even encouraged human beings to dominate, subdue and exploit Gaia. Hence, people treat Gaia and her inhabitants merely as resources and as having at best instrumental value. This topic is the main concern of ecolinguistics, because it is alarmed by the ecological crisis. Ecolinguistics tries to unveil the fact that language rests on strategic Judeo-Christian metaphors which rationalize that 'man' exploits and controls nature ruthlessly. (2007, p. 72)

This is true, or rather this is one way of looking at it. We might describe an ecolinguistic critique using words like: systematic, meticulous, cogent, perspicacious and rigorous - as it should be. There are, of course, other ways of looking at the relationships between Judeo-Christian metaphors and the ecological crisis. Consider the following verse from Zwicky's *Wittgenstein Elegies*:

Signs by themselves are dead.
What gives them life? Who teaches
Them to dance? In use they come alive
But where there is no courage,
There can be no use, no speaking truth
Our mouths must move like fishes'
Blank weakling gapes
Unfavoured by the breath of God.⁷¹

This is *also* true, or rather this is another way of looking at it. We might reach for these words to describe an ecopoetic inquiry: ambiguous, imaginative, piercing, intuitive, rigorous - as it should be. I think the difference between these two kinds of understanding, between an ecolinguistic conceptual analysis and an ecopoetic affective interpretation, helps us to get a sense of why ecohermeneutics is most appropriately described as ecopoiesis.

⁷¹ As cited in 1980, p. 60

Another illustration, perhaps more pertinent to our discussion of education. Compare the following comment by Neil Evernden to a poem I wrote inspired by a student:

The revelation of 'the way the world is' is part of the hidden curriculum of the educational systems of the industrialized West. But it involves not so much the imparting of information as the insinuation of an article of faith...

However, our transformation from beings with an interest in mysteries and animate nature to beings with an interest in mechanical order did not come easily or quickly, and still does not. Children are prone to assume that the world is, like themselves, alive and sensate. Only age and education can 'correct' their view. (1993, p. 14)

Destiny brought in her collection of stones
for show & tell.

I love them all so much.

Teacher did not have to ask many questions
every stone told a story.

Years later, she found the stones in a little jar
hidden in her childhood dresser

with six sea shells & a ragged crow feather.

Before she threw them away, she hesitated
for a moment

she held the jar to her ear & listened.

Nothing.

They were just dumb rocks.



The writings of poet, anthropologist and linguist Paul Friedrich (1986) on what he deems *poetic indeterminacy* may be of some use here to help us bridge classical linguistics to ecopoetics and get a better sense of the importance of metaphor.⁷² Friedrich claims that the differences between languages lies not so much in practical or rational aspects, as in the complexity and richness of more poetic dimensions—in the nuances of words, or the style and voice of an author. This poetic reformulation of what has been called *linguistic relativism* is grounded in Friedrich's theory of the imagination as a main source of poetic indeterminacy and, ultimately, disorder and chaos (1986). By way of example, consider this Aldous Huxley quote in the introduction to Harris' book *The Language Myth*:

Until some great artist comes along and tells us what to do, we shall not know how the muddled words of the tribe and the too precise words of the textbooks should be poetically purified, so as to make them capable of harmonizing our private and unsharable experiences with the scientific hypotheses in terms of which they are explained. (1981)

This is not to say that Friedrich is this so-called “great artist,” but rather his project might be seen as an attempt to poetically purify and harmonize the determinate systems of scientific knowing with the imaginative chaos of poetic indeterminacy. In other words, Friedrich aptly describes the reciprocal and symbiotic interplay between the determinate structures of systematic knowledge and the importance of the participant imagination of the individual in particular moments in time that occur beyond the scope of exhaustive description.

... much of the vital process of language involves phenomena beyond the (relatively) minimal features of grammar, logical syntax, or similar things. The present argument presupposes this variable, unpredictable, and dynamic zone, and assumes, in part, that the emotions and motives and even the cognitive

⁷² Although it must be noted that Friedrich views one of the special problems within the initial argument for poetic indeterminacy being the “millennial status of metaphor”. For Friedrich, metaphor is not the “master trope” nor is it the most essential or diagnostic feature of poetry itself. Friedrich counts metaphor as one subcategory among several classes or figures of speech, or *poiesemes*, that make speech and language poetic. “The metaphor is only one kind of analogy and part of a much larger context of analogical devices and associational thinking; poetic metaphor should not be confused with analogy in general, or, if one term is needed for both phenomena, then two more should be coined for the more specific domains” (1986, p. 3-4).

world of a human being are significantly beyond the scope of exhaustive description and accurate prediction. I have called this indeterminacy “poetic” because so much of it includes phenomena that are usually labelled in this way. (p. 2)

The medium of poetry can enable one to simultaneously constellate personal and general, subjective and objective statements in order to handle situations or realities that are simply too subtle or complicated or multidimensional to be dealt with succinctly in any other way; in brief, one job that a poem often can do better than a discursive statement is to distil gist. (p. 5)

With respect to the power of poetic indeterminacy in ecological education, Constance Russell (2005), writing from a feminist poststructuralist perspective, has called for a “multivocal” approach to environmental education research and has pointed to the increasing interest in literary, poetic and other artistic representations in education. For example, she recalls “being struck” by Margaret Atwood’s ability to “express in a few lines in her poem, ‘Marsh languages’, an idea that environmental philosophers have needed reams of paper to articulate” (2005, p. 437).

Translation was never possible
Instead there was only
conquest and influx
of the language of hard nouns,
the language of metal,
the language of either/or,
the one language that has eaten all the others.⁷³



Ecohermeneutic inquiry always resists either-or thinking and I want to be clear that that I am not proposing that ecopoetic understanding is in some way superior to ecolinguistic analysis, or that poetic thinking is somehow superior to systematic thinking (or indeed that the two are somehow separable). Just as Friedrich has acknowledged, critical ecohermeneutics seeks

⁷³ Atwood, 2005, p. 55.

to recognize “the beauty and reality of structure, rule, and other shapes knowable through science,” just as it recognizes the need for these structures to deliquesce, poetically or otherwise (p. 2). The reality is that a remedial ecology will not be sustained through either ecopoetics or ecolinguistics alone, a healthy and vibrant ecosystem necessitates diversity.

Perhaps we could say that part of what ecolinguistics offers critical ecohermeneutics are analytical models, frameworks and key definitions with “an explicit axiological stance” (Bang & Door, 2007, p. 13). In turn, critical ecohermeneutics offers ecolinguistics a source of poetic generativity and performs a deliquescent function in that it decomposes the potentially hypostatic tendencies of all systematic ways of knowing. Although mycelium flourishes in the wild, pythogenic soils of the forest floor, this is not to say that frameworks and alder wood structures cannot be stacked and inoculated from time to time. This could be thought of as a mutually beneficial act as it both provides a place for fungi to bloom and aids in the mycoremedial deliquescence of the wood itself, preventing any persistent calcifications. Perhaps ecolinguistics could provide the kinds of structured linguistic frameworks upon which the sometimes dendritic and enigmatic forms of ecohermeneutics could flourish? Or perhaps it is better to think of them as complementary species, as a genuine process of mycoremediation requires more than just spores and mycelium, but symbiotic relationships between a vast array of species. In any case, the interplay between ecopoetics and ecolinguistics offers us a potentially rich way to understand the complex multidimensionality of language as an ecological phenomenon.

From all that has been said, however, it is clear that critical ecohermeneutics, while encompassing these other ecological life-language sciences, must extend beyond strictly “linguistic” concerns and delve deeper into the interpretational matrix of ecological-ontological understanding itself. With this in mind, I shall now turn to the Western hermeneutic tradition itself and provide a kind of preliminary ecoexegesis in order to get a sense of how critical ecohermeneutics differs, or rather how it recycles its hermeneutic heritage and endeavours to extend the horizon of understanding into the more-than-human world.

3. inoculating philosophical hermeneutics

A hermeneutic interest in tradition and ancestry (an interest in what Gary Snyder called “the old ways”) requires not simply the protective repetition of such traditions. Hermeneutics incites the particularities and intimacies of our lives to call these traditions to account, compelling them to bear witness to the lives we are living. Hermeneutics demands of such disciplines and traditions that they tell us what they know about keeping the world open and enticing and alive and inviting. And, to the extent that such disciplines and traditions can no longer serve this deeply pedagogical purpose, to that extent they are no longer telling, no longer helpful in our living, no longer true. (Jardine, 1998, p. 2)

Before we consider the specific features of an ecohermeneutic curriculum, I would like to discuss the modern hermeneutic tradition and some of its foundational thinkers, primarily Martin Heidegger and Hans-Georg Gadamer (via his debates with Emilio Betti, Jurgen Habermas and Jacques Derrida). This will entail a regrettably condensed sketch of some of their major contributions to philosophical hermeneutics and identify what I will be calling potential *sites of inoculation* for critical ecohermeneutic recycling. This recyclical process, in Jardine’s terms, is a “hermeneutic demand” that the tradition of hermeneutics itself reveal what it knows (and perhaps what it has yet to consider) about keeping the world open and enticing and alive and inviting. I imagine this process as a kind of helical or coiled serpent, an Ouroboros of continuous reinterpretation whereby the head swallows and digests its own tail (its own tales)? Or, in keeping with the mycelial metaphor, we could say that an ecohermeneutic rendering of philosophical hermeneutics works to interpret the tradition’s accounts as embedded in a Western EPOCHAXis and to deliquesce the calcified aspects of the tradition by getting at the deep metaphorical roots of its thinking. Philosophical hermeneutics has long positioned itself as a kind of vocal opposition to the Enlightenment projects of objectivity, rationality and instrumentality. Yet having developed within the modernist milieu itself, and in a world of proto-ecological crisis, the hermeneutic tradition carries with it certain persistent toxins that require ecohermeneutic mycoremediation in order to open a space for new possibilities for life as it is now lived.



Admittedly, I am envious (and somewhat suspicious) of the way some academics are able to define and employ hermeneutics with such ease; not to mention, draw connections to complex new fields such as environmental ethics, ecophilosophy and ecological education (van Buren, 1995; Utsler, 2009; Sammel, 2003; Jardine, 1998). As van Buren has stated in a seemingly pragmatic manner, “hermeneutics can be defined as the philosophical study of the most common aspects of interpretation - of what people do when they interpret something. The more practical task that hermeneutics addresses can be summed up as that of finding ways to deal with ‘the conflict of interpretations’ in the world” (p. 259-260). Seems straightforward enough, but then what is all this about being in the world, ontological twists and turns, circles and fusions of horizons, and helical serpents and gods? It seems to me there is something more sonorous and recondite about philosophical hermeneutics than a practical task to deal with “the conflict of interpretations in the world”. Or perhaps we could say the way critical ecohermeneutics approaches the conflict of interpretations in the world rings deeper?

In all honesty, the hermeneutic tradition is more vorticular than I had originally imagined and I am feeling somewhat dubious about delving into its whirling depths at all (as if it were a methodological choice and not an existential task I am already engaged in). I have lost days between the pages of the Gadamer-Derrida debate (Michelfelder & Palmer Eds., 1989), trapped like a young child between two parents’ enigmatic bickering, not always understanding what *exactly* they are arguing about or why, wishing I could go outside to play. But left to wonder, now, against all *sensibility*, if there was still a *real* world outside to play in? Perhaps the world is indeed just some linguistic construct, an incomprehensible projection from my bulging, well-lettered head? No, I intuit not, at least not exactly like that; the sensuous world *is*, the mind *is of* this world, not the other way around. As Zwicky has insightfully claimed: “One can no more hope to understand metaphor if one is not sure the ‘real world’ exists, than one can hope to understand music if one does not have a body” (2003, p. 43). But are postmodernists not the masters of metaphor in a sense, do they not delight in the dance of language upon the page and play in the fields of self-referentiality? It seems as if many postmodernist projects and theorists such as Derrida (Michelfelder & Palmer Eds., 1989) are not using language and metaphor in a way that listens to the polyphony of the world. To me they seem to float somewhere above the world without bodies, chasing and playing with pieces of some of history’s greatest thinkers and thoughts, yet utterly abstracted from the earthen sources of this thinking.

A critical ecohermeneutic inoculation of Derrida and key postmodernist thinkers is well beyond the scope of this paper, not to mention my intellectual prowess. Suffice to say, however, that if critical ecohermeneutics is to have any place in the emergence of healthy ways of being in the world, it will have to ground itself in the face of these long winded and sometimes disorienting exchanges from its Western heritage. This is not to say that it is explicitly against Derridean deconstructionism or more radical hermeneutic understandings (Caputo, 2000), nor is it to say that it aligns itself injudiciously with the humanist lineage of Gadamerian hermeneutics (Gadamer, 2004, Gallagher, 1992, Grun, 2005). Only that it is concerned with the health and flourishing of the living Earth, with the interconnectivity of being, and with the fact-value that *sometimes* you can learn more (or at least *differently*) by going outside to play than you can by playing with text in a Parisian academy.

My initial intention was to ground critical ecohermeneutics in a philosophic critique of Scientism by focusing on the ontological significance of interpretation versus epistemological explanation. In short, to bring Science *down* - to de-capitalize its ideological "S" and bring it home to a small worldly "s" - the science of surprise and sensuality, of stargazing, science that strikes our primordial sense of wonder; *what science really is*. An ambitious undertaking no doubt but, as mentioned, not entirely without precedent. Hermeneutics has a long anti-Cartesian lineage that stretches back to the beginnings of modernity with the writings of Baruch Spinoza and Giambattista Vico, and continues through to Romantic hermeneuts such as Friedrich Schleiermacher and Wilhelm Dilthey (Ramberg & Gjesdal, 2009, Gadamer, 2004). But twentieth century hermeneutics, or hermeneutic phenomenology, offers us something much deeper than a critique of Scientism. The ontological and linguistic turns beginning with Heidegger and Gadamer will thus serve as the initial sites for ecohermeneutic inquiry as we begin to recycle the idea of an interconnectivity of being that runs beneath and between all things.

3.1. Heidegger after-philosophy: substrates for inoculation

We are too late for the gods and too
early for Being. Being's poem,
just begun, is man. (Heidegger, 2001, p. 4)

The literature written by and about Heidegger is superabundant. There is no doubt that he is one of the most eminent (and troublesome) philosophers of the twentieth century. As such, he serves as the entry point for many philosophical dialogues - particularly dialogues concerning environmental ethics - as he was one of the only “first rank” figures to address the devastation of the Earth (Cooper, 2005). It is interesting to note that, while clearly involved in teaching for most of his life, he rarely refers directly to teaching or pedagogy. Still, much of his writing either explicitly addresses topics of educational significance or presents views on the nature of language and the relationship of human beings to the cosmos that have profound implications for ecological education (Bonnett, 2002, p. 229). Despite his prolific and dense musings on a wide tract of topics, I will focus primarily on the educational significance of his ideas concerning person-world relations. Although an ecohermeneutic process of deliquescence can seem excessively hypercritical at times, the intention of this ecoexegetic rendering of Heidegger's ideas is to revitalize their potential generative humus. That is, the nascent mycelia of this ecohermeneutic inquiry seeks to remediate the Western landscape of possibility “after-Philosophy” (the totalizing ontology of Heidegger, for example) as well as “after-Science” (instrumental rationality and reductionism, for example). The materials upon which mycelia are grown or inoculated are called substrates by mushroom growers (Stamets, 2005, p. 126). In this sense, Heidegger provides the substrate for ecohermeneutic inoculation, a recycling of Heideggerian hermeneutics for an age beset by ecological crisis.

For what it is worth, I wholeheartedly share in Heidegger's attempt to disrupt the Cartesian trajectory of modern philosophical Reason and the privileging of its epistemic certainty. In a certain sense, critical ecohermeneutics is indebted to Heidegger's ontological turn and delights in the playful tumble and surge of language throughout the House-of-Being that Martin built (or was it he that was built by the House?). The difference is that an ecohermeneutic approach *senses* that the world resonates within the house itself, or put otherwise, that the house itself is made from clay and wood and light and verbs. When critical ecohermeneutics goes out onto the porch at night to listen to the chorus frogs and crickets, it does not think about being “pervaded” by Being or confined between insulated walls of language; it peers out into the

invisible symphony and knows the Earth is home to all, including language itself (Elson, 2010, p. 88). How do we reach to this perspective? First, a brief review of Heidegger's hermeneutic insights.



Tina Koch (1995) has produced a condensed summary of some of the essential notions of Heideggerian hermeneutics (in comparison to Husserlian phenomenology) that may be useful in providing a basic overview of some of his key insights. The two essential Heideggerian notions she points to are a) *the historicity of understanding* and b) *the hermeneutic circle*.

The historicity of understanding is related to three additional concepts:

- *Background*: handed down to a person at birth from their culture and presents a way of understanding the world. This understanding determines what is 'real' for the person and as such, Heidegger assumes that background meanings, skills and practices cannot be made *completely* explicit (in response to Husserlian "bracketing"). Much of the hermeneutical task can be thought of as bringing these presuppositions to the foreground.
- *Pre-understanding*: refers to the meanings and organizations of a culture (including language and practices) which are already in the world before we understand. Human beings always come to a situation with a story or a pre-understanding. These stories are already within our common background understanding and, again, are hermeneutically brought into focus in order to be interpreted and critiqued.
- *Co-constitution*: a way of understanding the process of person-world co-creation. Co-constitutionality refers to the philosophical assumption of indissoluble unity between person and world. This means being constructed by the 'world' in which we live and at the same time constructing this world from our own experience and background. A person participates in this a priori world in cultural, historical, and social contexts. (p. 831)

Obviously these concepts are more philosophical dense and profound than can be captured here. Broadly-speaking, a critical ecohermeneutic approach shares Heidegger's notion of the historicity of understanding, or what I have referred to previously as the cultural-linguistic historicity of understanding. Historical consciousness is indeed a kind of medicine for quotidian cultural ignorance and when faced with a proselytizing and narcissistic modernity, a substantial dose is in order. For the purposes of this paper, however, I would like to briefly touch upon each of these concepts and offer a critique in order to draw out the potential for alienation from the more-than-human world. In a sense then, this ecohermeneutic rendering will attempt to disclose some of the *background* understanding and cultural presuppositions of Heideggerian

hermeneutics itself and demand that the tradition reveal what it knows about keeping the world open, enticing and inviting.

The concept of *background* in the present day - for more humans now than ever before - implies a high probability of being born into an urban, electronic media saturated, and largely synthetic, or at least man-made, environment. The effects of being in this kind of environment on our ecological-ontological relationality, on what we consider *real*, are significant to say the least and I doubt whether they could ever be made fully explicit or bracketed. The very architecture of the urban world emanates a cacophony of anthropocentric presuppositions so vociferous it literally drowns out much of the more-than-human. Think light pollution from neon advertisements concealing the glitter of stars; or think urban youth who assume that milk comes from a carton, not a cow. The work of ecofeminist Plumwood (1993) may provide a useful way to think about this postmodern background using similar, albeit redefined, concepts. Plumwood has described how one of the most common forms of denial of nature and women comes in the form of “backgrounding.” What Plumwood is referring to here is that women and the more-than-human world provide the background for a dominant foreground sphere of recognizable (i.e. European, patriarchal, consumer, etc.) culture and reason (p. 21). She explains:

This backgrounding of women and nature is deeply embedded in the rationality of the economic system and in the structures of contemporary society. What is involved in the backgrounding of nature is the denial of dependence on biospheric processes, and a view of humans as apart, outside of nature, which is treated as a limitless provider without needs of its own. (p. 21)

Plumwood’s comments, although more critically motivated, seem reminiscent of those made by Suzuki when he claimed that although trees are remarkable beings, “they stand like extras in life’s drama, always there as backdrops to the ever-changing action around them, so familiar and omnipresent that we barely take notice of them” (2004, p. 1-2). Indeed, this lack of awareness seems to be one of the most pressing issues of ecological education, for how are we to learn from and listen with the more-than-human world if we do not even take notice of it? If much of the task of Heideggerian hermeneutics was devoted to bringing cultural presuppositions to the foreground, perhaps we could say that much of the task of critical ecohermeneutics is bringing the more-than-human world to the foreground in order to calibrate our cultural presuppositions with its living ecology? Or perhaps we could say that it is important to hermeneutically draw attention to the cultural background of how we understand the world, and equally as important to ecohermeneutically draw attention to the deeper ecological-ontological or place-based background that enables and sustains our understanding?

With respect to the concept of *pre-understanding*, a critical ecohermeneutic approach essentially shares in Heidegger's notion that cultural stories, language use and social practices must be brought into some kind of focus in order to be interpreted and critiqued. What is not necessarily clear from Heidegger is to what depth and to what end per se? Or rather, to what end might this hermeneutic work be done in the present day? What calls for hermeneutic questioning and reinterpretation in a postmodern world of ecological crisis? How might we move from using language strictly to hermeneutically reveal and critique cultural pre-understandings and use it to listen to the more-than-human world in the hopes of transforming those pre-understandings? As we have seen, the ecohermeneutic response to cultural pre-understanding is to dig deep to the root metaphors of our EPOCHAx is presuppositions and attempt to effect cultural transformation via education on the level of metaphoric understanding. To this end, as we have seen in Chapter 2, an ecohermeneutic approach draws upon ecopoetics and ecolinguistics in order to germinate an ecological orientation to language grounded in an animistic logic. In addition, an ecohermeneutic conception of what comprises language in the broadest sense and the relationship between the animate landscape and language does not feature in Heidegger's cultural stories or the ontological imagery that informs his understanding of the world. Essentially we could say that a critical ecohermeneutic inquiry critiques pre-understandings in order to provoke an ecological reinterpretation of language and meaning. This obviously entails employing language hermeneutically as Heidegger suggests, as a way of critically questioning presuppositions, but also using language to remediate toxic pre-understandings and weave an interwoven ecological-ontology.

Co-constitutionality is perhaps the most interesting Heideggerian notion from an ecological perspective. Although the concept draws from the philosophical assumption of indissoluble unity between person and world (i.e. person-world co-creation) and acknowledges that a person participates in this a priori world in cultural, historical and social contexts – the ecological context is conspicuously absent. This is, of course, once again a product of Heideggerian hermeneutics arising from a particular cultural background itself in which ecological concerns were for the most part nonexistent or at least nascent. Which is to say, when Heidegger uses the word world, he ostensibly means, for the most part, human cultural world. It does not seem to be an unintelligible leap, however, to move from an understanding of person-world co-constitutionality in Heidegger's sense to an ecohermeneutic understanding of person-Earth co-constitutionality. This is not to take an excessively anthropocentric approach and suggest that humans somehow equally co-construct biophysical existence (though the global impact we are exerting as expressed in the concept of the Anthropocene offers an interesting

response to this), but more a recognition of our co-creation, reciprocity and participation in the resonant and interconnected ecology of being. Ecological co-constitutionality seems close to what Merleau-Ponty referred to as “flesh.” In his later work he writes less about “the body” and begins to write instead about the collective “flesh,” which signifies both *our flesh* and *the flesh of the world*. As Abram has explained, Merleau-Ponty was attempting to describe an elemental power that has no name in Western philosophy:

The Flesh is the mysterious tissue or matrix that underlies and gives rise to both the perceiver and the perceived as interdependent aspects of its own spontaneous activity. It is the reciprocal presence of the sentient in the sensible and of the sensible in the sentient, a mystery of which we have always, at least tacitly, been aware, since we have never been able to affirm one of these phenomena, the perceivable world or the perceiving self, without implicitly affirming the existence of the other... the perceiving being and the perceived being are of the same *stuff*, the perceiver and the perceived are interdependent and in some sense even reversible aspects of a common animate element, or Flesh, that is *at once both sensible and sensitive*. (1996, p. 66-67)

An ecohermeneutic inquiry, it seems to me, approaches co-constitutionality from the kind of animistic logic suggested by this idea of matter as flesh. In this sense, an understanding of person-Earth co-constitutionality forms the elementary basis for all other cultural pre-understandings. A person is still seen to participate a priori in a world of cultural, historical, and social contexts, but beneath these dimensions we are always connected to a planetary ecology that sustains and comprises all things.



As for the hermeneutic circle, it is a topic of much deliberation in hermeneutic writing and I will only make some cursory remarks as to an ecohermeneutic rendering. Although the hermeneutic circle was used in previous eras to describe the process of understanding a text as a cyclical movement between the “whole” and the “parts” and back to the “whole,” it took on a new reformulation in the hands of Heidegger and his ontological turn.

This Heideggerian reformulation of the problem of truth gives rise to a new conception of the hermeneutic circle. In Spinoza, Ast, and Schleiermacher, the hermeneutic circle was conceived in terms of the mutual relationship between the text as a whole and its individual parts, or in terms of the relation between text and tradition. With Heidegger, however, the hermeneutic circle refers to something completely different: the interplay between our self-understanding and our understanding the world. The hermeneutic circle is no longer perceived

as a helpful philological tool, but entails an existential task with which each of us is confronted. (Ramberg & Gjesdal, 2009)

For me, the most interesting aspect of the historical development of the hermeneutic circle has been its evolving form and features as a metaphor, first for philological, and then, existential understanding. For example, the Romantic hermeneuts who used the circle as a “philological tool” spoke of the completion of the process and coming to an undistorted understanding with the historical author of a text. I imagine this circle as geometrically perfect, abstract, rotating slowly and observable from the “outside.” With the advent of Heidegger’s ontological turn came a conception of the circle as a perpetual existential task; to talk of the completion of being was nonsensical, for were the circle to “finish” existential understanding and being itself would collapse (Gallagher, 1992, p. 61, 65). This ontological circle might be imagined as “revolving” faster, phenomenological, and non-observable or co-constituted with the world as one already exists within it. Again, Heidegger’s ontological insights seem consonant with that of ecohermeneutics but in need of elaboration and recycling in the context of the more-than-human world and the current ecological crisis.

Since Heidegger and Gadamer, the spiral has gained prominence in describing the process of hermeneutic understanding (Schokel, 1998, p. 74, Abraham, 1994). The circle is also reimagined as double gyres in William Butler Yeats’ *The Vision*, the *grokking* circle in Robert Heinlein’s science-fiction classic, *Stranger in a Strange Land* (as cited in Abraham, 1994, p. 13), concentric circles (Grun, 2005), a caduceus, the “double helix intertwining of a question and an instance” (Doll as cited in Jardine, 2003, p. ix), and “a kind of commodious vicus of recirculation” (Abraham, 1994, p. 27). Many of these reformations complement ecohermeneutic thinking about this process as fluctuating, reciprocal, and participatory.

I imagine the ecohermeneutic process as a *hermeneutic vortex*, a naturally occurring ecological event that embodies the dynamism and variability of understanding - sometimes streamlined, but more often turbulent and unpredictable. A vortex retains the inexorable momentum of the spiral and incorporates a sort of drawing downwards. This raises an interesting question as to whether we can speak of (for lack of a better word) *evolution* or *depth* in ecohermeneutic understanding. The process of existential interpretation may be perpetual, but can it yield a deeper understanding of our ecological relationality? Furthermore, under what conditions is it possible to increase the possibility of ontological elicitation? Much remains concealed within the depths and turbulence of an ecohermeneutic vortex once we are caught up in it; there is a desperate urge to swim upwards and away, to reach the calm waters of certainty

once again. Alas, we must remain open; first to being drawn into the surge of its dynamism, and then, letting go of our conditioned instincts in order to be drawn down towards the uncertain existential understandings of its turbulent depths.



I am suddenly feeling a foreboding sense of platitude in my decision to start yet another ecological discussion with Heidegger. Deluca suggests that Heidegger is most commonly cited in environmental literature not to develop a more robust theory, but to lend borrowed legitimacy to the whole “fledgling enterprise” (2005, p. 68). This is not to say that Heidegger, or environmental theory for that matter, should be abandoned wholesale. Heidegger’s thinking on subject-object nonduality and the phenomenological structure of reality, for example, are potentially fecund sources of thinking with respect to ecological understanding. Ecological educators would be wise to meditate upon Heidegger’s critique of Descartes’ “ontologically defective” cosmology:

Descartes’ ontology presumes the dynamic of an isolated subject grasping mathematically world as object. Arguably, it is this perspective that is at the root of the environmental crisis, for the world is reduced to an object laid out before me and I am reduced to a detached subject that has only a use-relation to a dead world. (Deluca, 2005, p. 73)

Heidegger offers a hermeneutic alternative: “The interpretation of the world begins, in the first instance, with some entity within-the-world, so that the phenomenon of world in general no longer comes into view” (1962, p. 122). The problem with drawing attention to the world from an ecological perspective becomes all the more complicated as the more-than-human world is backgrounded behind or beneath the cultural-historical background, which is itself already familiar and invisible in the first instance of our lives. As such, foregrounding the more-than-human world and our ecological co-constitutionality with it comprises one of the key pedagogical tasks of critical ecohermeneutics. Whereas a Cartesian ontology emerges from a reductionist approach to person-world relationality implying that people are detached subjects that have only a use-relation with a world of dead matter, an ecohermeneutic understanding of person-Earth relationality is grounded in a deep ecological ontology and attempts to elicit an experience of resonance with the world.

Or to put this differently, perhaps we could say that, whereas Heidegger aspired to hermeneutically focus on understanding as embedded within the cultural-historical co-

constitutionality of the world, ecohermeneutics seeks to draw attention to understanding as embedded within the ecological co-constitutionality of interconnected being. Attunement to this ecological co-constitutionality is a form of wisdom, of *thinking ecologically* (Zwicky, 2003). If we were to construe the person-world relationship as prepositions, the Cartesian perspective might be described as a *to-relation* (subject *to* object, as in *using*), Heideggerian hermeneutics might be described as a *within-relation* (being-*in*-the-world, as in *dwelling*), and a critical ecohermeneutics a move towards an *of-relation* (we are *of* the world).⁷⁴



I picture Heidegger as ruminative & penitent Taoist sage, going into exile in the Black Forest to contemplate the impetuous decisions & self-aggrandizement of his early years. The betrayal of Husserl, the black uniforms, the rectorate, all those hours spent locked up inside a university pouring over the historical essence of the ancient Greeks.

Heidegger as aged hermit, elicited by the forest itself to *dwell* on place, to revitalize the ancient Way of experiencing the Earth as “self-blossoming emergence.”

I want Heidegger to find his Way,

home.

To love wisdom is to find your way home
in the protean *phusis*⁷⁵ of what-is...
the emptiness and fullness of things.
(Zwicky, 2003, p. 118)

⁷⁴ We might also think about using clusters of prepositions. Descartes (to-at-on-against-over-beyond-versus), Heidegger (in-with-among-along-amidst-during), Ecohermeneutics (of-as-from-between).

⁷⁵ *Phusis* is an ancient Greek term that is often translated simply as “Nature.” The first usage can be traced back to Herakleitos who used it in his aphorism: “Nature loves to hide” (see Zwicky, 2003, p. 79). In Herakleitos’s time *phusis* had two meanings: 1) the essential constitution of things and 2) growth, change, genesis.



Let us now address Heidegger's metaphysical impropriety and the much cited technology debate as compared with an ecohermeneutic approach. Cooper (2005) has provided an analysis of three of Heidegger's enquiries as they relate to environmental values: his ontological approach to nature, his critique of the methods and status of the natural sciences, and his musings on the character of technology. I think we have sufficiently positioned critical ecohermeneutics as an ontological approach (this not to say that it shares the same ontology of nature that Heidegger espouses, only that it is concerned with the ontological dimension of ecological relationality). Likewise, it is obvious at this point that critical ecohermeneutics shares in his critique of the methods and privileged status of the natural sciences. In lieu of further pursuing this rather self-evident line of argument, I would like to continue to re-imagine Heidegger after-Philosophy and after-Science and use his ideas as substrates for ecohermeneutic inoculation as it pertains to ecological pedagogy and practice. Then, I will turn to his musings on the issue of technology as a way to dig to the ontological roots of questioning in education as a Way.

Although Deluca (2005) does not describe his reading of Heidegger as an ecoexegesis, he does speak of reading Heidegger for "equipment for living in the world on earth" (p. 70).⁷⁶ This strikes me as essentially an ecoexegetical process, a recycling of a Heideggerian substrate after-Philosophy and after-Science; an ecohermeneutic assessment of Heidegger's ideas to ensure that they are still telling, still helpful in our lives now. Deluca suggests that Heidegger should not be read *philosophically*; rather, he should be read "after-Philosophy," as the last of the great metaphysicians whose totalizing ontology constitutes a postmodern faux pas. As an alternative, Deluca suggests we should read Heidegger for social theory and politics and recycle his incessant questioning as a *way of thinking*.

What is crucial here is that Heidegger is offering us the gift of distress if we have the courage to embark on the path of questioning, of mindfulness, that casts into doubt all of our taken-for-granted. Heidegger is not offering us answers or programs or utopian projections. Traveling the path is our task of thinking...
(2005, p. 71)

⁷⁶ Though I am not sure if I welcome the metaphor "equipment".

Indeed, having the courage to embark down the path of questioning and mindfulness is necessary; as we have discussed, the quotidian normalcy of our shallow and instrumental relationality with the more-than-human world requires critical delinquency. With that said, casting all things into doubt makes me a little apprehensive. Walking the path in this manner (something about it strikes me as a *turning away* from the past, marching forward, adamantly forward) seems potentially reminiscent of the methodical doubt of Descartes, and one wonders if it leads to the same, or at least a similar, position within the Western trajectory?

Critical ecohermeneutics is a conscious attempt to disrupt this universalizing trajectory, all unidirectional trajectories, really. The manner in which one walks the path, with ontological attention drawn down towards the subtlest of shifts, responding to the world with abundant questions instead of facile answers; this manner of walking is of vital concern to the ecohermeneutic pathfinder. The multi-paths of eco-poetic thinking and understanding might be envisioned as a kind of hodological nexus - an interlinked network of possibilities that reflects the larger fluctuating reticulum of planetary life. This image corresponds nicely with the interlaced mosaics of mycelium that infuse ecologies with nutrient and information sharing membranes (Stamets, 2005). As Bringhurst has written, "There are no new worlds. Paradise will not be our asylum, and hell will not be anywhere other than here. The world is one, at the same time that it is plural, inherently plural, like the mind" (2006, p. 45). Inevitably we walk many paths at once, but may never know them all, nor all the other choices we might have made. The path to wisdom does not consist in either intensifying or absolving this doubt, but in deepening our engagement with a way of thinking that seek to calibrate our questions with the resonant ecology of what-is. Ecohermeneutic inquiry does not simply work to cast into critical doubt all that is taken-for-granted; or in other words, it does not *only* offer the gift of distress. There is another gift; the gift of ontological insight, the gift of coming to feel more directly those multitudinous paths within which we walk and how they connect us to all other beings and with Being itself. Bringing out the living interweaving of this hodological nexus of being and possibility is, as Snyder deem it, the *real work* (1980).



Then again, DeLuca is *definitely* onto something. We could certainly use more courageous questioning and mindfulness in ecological education these days. Indeed, the tension, the unremitting oscillation between the critical aspects and the eco-poetic, relational aspects of ecohermeneutics forms the source of its power as an interpretive ontological matrix of inquiry.

We need to develop both critical and relational capacities as educators. Let us consider what this gift of distress, this incessant questioning as a way of thinking, might mean in an educational practice. In order to do this I will draw upon the work of Blenkinsop (2010) in considering what he deems *four slogans for cultural change* that might guide thinking and practice in an evolving place-based, imaginative and ecological learning experience. Blenkinsop's four slogans are as follows:

- Everything is up for grabs;
- Maintain “hyperactive pessimism;”
- This is gonna hurt;
- When in doubt remember the ecosystem.

I will touch upon the first three, in no particular order, to illustrate what a gift of distress might look like in practice. As for the final slogan, we might similarly use it as a slogan for critical ecohermeneutics, maybe even drop the doubt and simply say,

remember the ecosystem.

The description of Heidegger's gift of distress offered by Deluca seems reminiscent of an understanding of the role of the (ecological) teacher as a kind of existential dissonator (Denton, 1972); the one who presents the gift of distress and models the courage required to walk the often turbulent and painful path of ontological insight. This corresponds most closely with Blenkinsop's third slogan: *This is gonna hurt*.

Pain occurs at moments of fundamental change because, as we apprehend a new awareness, former deeply held beliefs and behaviours are thrown into question. The ground upon which we have built our lives appears to be less stable and in conflict with this new consciousness. Things we have done in the past are no longer acceptable to us, but not only are our personal histories becoming troublesome, so too is the ecological record of our culture. (2010, p. 21)

It seems unlikely, and realistically undesirable, that any kind of genuine eco-poetic understanding could occur without experiencing the pain of these “moments of fundamental change.” Indeed, much of the eco-poetics of writers such as Zwicky (as is apparent by some of her titles:

Wittgenstein Elegies (1986) and *Songs for Relinquishing the Earth* (1998), for example) deal first and foremost with the theme of loss and of the “role of penthos in everyday life” (Glenn, 2010, p. 5).⁷⁷ Ecohermeneutic inquiry invariably means letting go and, in a sense, drowning in the ecohermeneutic vortex of new kinds of understandings. Or put differently, it means opening oneself to the deliquescence and putrefaction of the world and our habitual (read: comfortable and painless) ways of being in it. This existential work is all the more important for educators, particularly ecological educators, who will likely encounter other people’s (especially the young) pain at moments of fundamental change and the sometimes startling realization of modernity’s troublesome ecological record.

The gift of distress has two implications here for educative practice. The first is that educators need to develop the courage to walk this path as a part of their practice, as a way of embodying their true vocation, which is *learning* and *being* ecological (Bringhurst, 2006). Allow me to repeat, this is gonna hurt. The second, and perhaps more important, is that they recognize and co-create moments of potentially painful awareness for their students and be present for them. Elsewhere, in his compelling reading of the work of Martin Buber for educational theory, Blenkinsop (2005) has claimed that it is up to the educator to both sanction the inherent instinct for communion and provide opportunities for it to flourish.

The teacher must always be present, be available and reaching towards the student, proffering relationship, even if the student is uninterested, unwilling or unable to consciously accept it. This is equally as important before the moment of insight as it is thereafter, when the student may begin certain tentative conscious responses. (p. 292)

Blenkinsop continues by outlining how, for the educator engaged in the challenge of her own journey and supporting that of others, there is a profound need for humility (p. 293). Distress, loss, pain, humility, humanity - Heidegger is not offering us answers or programs or utopian projections, traveling the path is our task of thinking and it is gonna hurt. And yet, let us not forget Jardine’s meditations upon humility,

We are human, full of *humus*. Truly *human* understanding must have a certain *humility*, a certain aspect of not being the center of everything and the only

⁷⁷ Penthos was the ancient Greek spirit of grief, mourning and lamentation.

voice worth heeding. It must reorient to an ongoing conversation with the Earth, a conversation that *must be sustained if life is to go on*. (1998, p. 28)

In this sense, incessant questioning as a way of thinking and the potential pain and loss of its distress is truly a *gift* (recall the notion of data as gift, of that which is granted). The humility required for a true kind of human understanding is a way of coming home.

Humility is also a kind of wisdom.



I hear much talk in educational circles these days about avoiding the olde doom and gloom tactics of some early environmentalists and scaring students into passivity and depression with statistics about deforestation or population projections for future megacities. Although I share in the eschewal of fear-based scare tactics (ecological education as an anti-smoking campaign), especially when working with younger children, I have found this resolute optimism and steadfast determination to look at the sunny side of things steeped in troublesome denial and aversion to humility and pain. In order to speak to this more clearly and continue our exploration of the role of Heideggerian questioning as a way of thinking, I offer the second of Blenkinsop's four slogans, a term he borrows from Michel Foucault's (1984) description of himself as an ongoing and suspicious cultural questioner, *Maintain "hyperactive pessimism"* (2010, p. 10).

Even from this side of the page, I can feel the gaggles of sunshine-lollipop educators and liberal eco do-gooders cringe at the sound of *hyperactive pessimism*. They start fumbling through their re-usable shopping bags in a half panic, desperate for their little book of Dalai Lama quotes or the Native medicine pouch they picked up at Roots Canada on Robson street. They get philosophically defensive and put up what Jensen, in reference to mainstream environmentalists and peace activists, has started calling a "Ghandi shield" (2006, p. 79). *Stay positive, stay positive*. But perhaps a dose of hyperactive pessimism is exactly what is needed to uproot this persistently invasive Cartesian EPOCHAXis?

To put it plainly, in environmental circles it is still a Cartesian world, wherein the founding act is human thinking (cogito ergo sum) and the earth is object to humanity's subject. This position is clear in mainstream environmentalism, where humans act to save the object earth and, fundamentally, this action is motivated by the subject's self interest. So, we must save the rain forests because

they contain potential medical resources and because they alleviate global warming. (Deluca, 2005, p. 71-72)

Ecological educational circles too seem to be, plainly speaking, predominantly Cartesian; certainly the business oriented “Education for Sustainability” initiatives that the State sanctions are enmeshed in Western presuppositions. This clearly comprises a critical site of inoculation for any ecohermeneutically construed pedagogy. But is *hyperactive pessimism* really the right description for ecohermeneutic inquiry? What about the multiform pathways of the hodological nexus or the oscillation between a critical distance and an interwoven proximity? What of eco-poetic relationality and using language to listen to the more-than-human?

Hyperactive pessimism is essentially a Nietzschean concept (with origins in Greek Scepticism), not original with Heidegger nor Foucault, and seems characteristically postmodern and Western in character. One might cautiously wonder whether *hyperactive pessimism* is actually a relatively well-traveled path these days (at least *academically*, if not by practicing educators), and not the courageous road less taken that it is being made out to be? There is something vitally important in Foucault’s tenacity as a hyperactive cultural critic and his sobering realization that seismic change is not so easily achieved; that a vigilant suspicion is required to fundamentally shake the deep superstructure of our worldview (Blenkinsop, 2010, p. 13). This vigilant hermeneutics of suspicion is all the more appropriate in education, where “We begin to see how this metaphor of ‘school’ carries with it the epistemology, ontology, and axiology of the culture. How lurking in every locker, from the number and lock on the front to the textbooks and gym shoes inside, are confirmations of a particular worldview” (Blenkinsop, 2010, p. 12). But, education is where a hermeneutics of vigilant suspicion also reveals its potentially alienating aspects, its *unbecomingness*. For example, despite the fact that I have been insistent upon a spirited critical consciousness somewhat akin to *hyperactive pessimism* with respect to (post)modernity, I am less convinced about the appropriateness of this approach with respect to an Indigenous EPOCHAXis.⁷⁸ Although educators need to be vigilant cultural critics, I think what we are looking for in educators is more of a sophisticated “ironic understanding” of the kind articulated by educational philosopher Kieran Egan (1997).

⁷⁸ This is essentially the argument that Bowers (2003) makes against the Western presuppositions and univocity that he sees as inherent within critical pedagogy versus confronting colonialism via other cultural ways of knowing.



The collective body of theories and practices known as Imaginative Education (Egan, 1997; 2005; Egan & Madej, 2010; Judson, 2010; Gajdamaschko, 2005; Blenkinsop, Ed., 2009; Fettes, 2010; Waddington & Johnson, 2010) represent a unique approach to learning that centralizes students' emotional and imaginative engagement in the learning process and differs significantly from the kind of pedagogy practiced in most conventional classrooms in two principle ways. The first being that imagination constitutes the heart of all learning, and the second that learning is a culturally mediated activity (Judson, 2010, p. 35). Although the first principle is a fascinating pedagogical topic (see Egan, 1997; Egan & Nadaner, 1988; Greene, 1995; Jardine, 1998) and, in a sense, also lies at the heart of an ecohermeneutic approach to pedagogy, I would like to focus on the second principle as a way to continue our discussion of how a Heidegger-inspired Way of questioning and thinking might inform educational practice.

According to Egan (1997) an *educated mind* is one that is fully equipped with the cultural-based strategies or “tools” with which humans make sense of the world. An Imaginative Education aims to develop these “cognitive tools,” and hence develop as fully as possible the different “kinds of understanding” of the world these tools enable. The premise of cultural mediation is drawn from the work of Russian psychologist Lev Vygotsky (1978, 1986, 2004) who proposed the development of higher psychological processes, different features of one's cultural environment (especially different aspects of language use), are internalized. These cultural-linguistic aspects of our learning are “mediating tools” that, in turn, profoundly influence the kind of sense one makes of the world (Judson, 2010, p. 36). Judson has pointed to metaphor as an example,

This cognitive tool has already helped both you and me to make sense of the notion of the cognitive tool. The notion of “tool” leads us to think, perhaps, of a gardening tool or some other kind of implement that helps us to do something. A gardening tool helps us to garden; a building tool helps us to build. A “cognitive” tool, by metaphoric extension, helps us to think. Metaphor is a cognitive tool that, by representing something (a feature of language) as something else (a tool), offers insights and meanings that can deepen understanding. (p. 36-37)

As we internalize these cognitive tools, the nature of our emotional and intellectual engagement with the world reorients dramatically. Egan (1997) describes five kinds of understanding that represent the way the mind works when employing particular cognitive tools: Somatic, Mythic,

Romantic, Philosophic, and Ironic. These kinds of understandings should not be thought of as naturally occurring developmental or hierarchical “stages” of learning (i.e. they are distinct from a Piagetian developmental model); rather, the development of these different kinds of understanding emerge out of contexts that employ, enable and enrich their associated cognitive tools. So while we acquire basic cognitive tools by virtue of using language, we may further sophisticate these tools or deepen our understanding through educative endeavours (Judson, 2010, p. 38).

One of the key points in Imaginative Education - of significant importance to an ecohermeneutic approach that endeavours to elicit openness to the multivocality of the world - is acknowledging that the development of each new kind of understanding always involves both gains and losses. Kinds of understanding do not represent a simple progression towards superior thinking, mastering each new kind of understanding has a cost in terms of the loss of ways of understanding the world characterized by the “previous” engagement (Judson, 2010, p. 38). It is one’s socio-cultural context that determines the appropriateness or axiological significance of each kind of understanding of the world. Although the reorientation to and from each kind of understanding is fascinating (see Egan, 1997), I would like to focus primarily on the problem posed by a Philosophic understanding that gets entangled, or rather calcified, in its own systematic concepts and models and works to dampen the polyphony of the world into univocal constructs. Egan’s solution is to conceive of Philosophic understanding as enfolded into Ironic understanding, a kind of understanding that results from “the breakdown or decay of general schemes” (Egan, 1997, p. 138). It is the oscillation between Philosophic and Ironic understanding, the fruitful blossoming of general epistemic schemes and their ironic decay (dare I say, their deliquescence) that I would like to focus on as a way to think about an ecohermeneutic practice.

Although Egan does draw explicitly upon hermeneutics, his project is clearly hermeneutic in nature. Likewise, although he does not explicitly address ecological issues, his ideas have attracted the attention and consideration of many ecological educators (Judson, 2010; Fettes & Judson, 2011; Blenkinsop, Ed., 2009; Blenkinsop & Fettes, 2009; Fettes, 2011, 2012). As such, I would like to consider the potential symbiosis between critical ecohermeneutics and Ironic understanding in particular. Although irony is notoriously multifaceted and difficult to characterize, Egan has aptly identified irony, and the form of consciousness associated with it, as “the master trope of our age” at the heart of postmodernity, although its inception was contemporaneous with the birth of Western civilization itself (1997, p. 140). Egan has defined an Ironic kind of understanding as the “culmination” of an *educated mind*; characterized by the

development of cognitive tools such as radical epistemic doubt, particularity, reflexivity, and a coalescence of all preceding kinds of understandings (1997, p 137-162).

Egan's historical analysis of Ironic understanding invokes its Socratic beginnings and traces its maturation and development by eminent modern thinkers of the West, such as Hegel, Kierkegaard and Nietzsche. He is insistent upon the idea of Ironic understanding as a sophisticated ability to negate all systems of knowing, not, as it is sometimes made out to be, a shallow manifestation of sarcasm or skill with the ironic features of language (p. 142). The power of this so-called *negative irony* cannot be understated, for although it is associated with a Socratic kind of questioning (the gift of distress?) and pervasive epistemic scepticism, it is equally associated with a psychological freedom that few ironists would sacrifice for the illusory securities of conventional thinking. As Egan has maintained, "If nothing else, it signals knowledge of the unreliability of words and declares a kind of freedom. This freedom may not make one as cheerful as Socrates, but it is not insignificant" (p. 144).

A familiarity and ability to employ negative irony is important for ecohermeneutic educators who seek to deliquesce the calcified aspects or certainties of modernist epistemologies. Interestingly, with respect to poetic ways of engaging with the world, Egan points to one of the fundamental insights of uber-ironist, Nietzsche, writing, "Nietzsche resolves the ancient quarrel between philosophy and poetry by pointing out that philosophy is no less fictive than is poetry. We are to discard the old distinctions between fiction and truth and recognize rather that there are two kinds of fiction: one that masquerades as truth and one that recognizes itself as fiction" (p. 150).⁷⁹ The ironic surge of much postmodern thinking has embarked courageously and far down the path of questioning, casting all into doubt and offering no answers or programs or utopian projections (Deluca, 2005, p. 71). To repeat, this kind of negative ironic engagement, this pointed and trenchant gift of distress, is certainly not without merit, but perhaps we could say it lacks a certain sophistication? Or, put differently, a more sophisticated ironic understanding is to

⁷⁹ Egan, citing Nietzsche, continues that the thing that facilitates the masquerade, or what I have been calling the calcification of thought, for so many people "...is the way language has developed, taking up and carrying along even in its very structure a vast mythology of assumptions" (p. 151). Again we see the fundamental insight of cultural-linguistic historicity in the generation of presuppositions about the world embedded in our language and carried through time (including, of course, our anthropocentric relationality with the more-than-human world).

be found in the oscillation between Philosophic understanding and Ironic understanding, in the recyclical and life affirming process of blossoming, perhaps knowing for a time, and then decaying as all things must. The most significant danger posed by Philosophic understanding is that it gets entangled and fossilized in its own conceptualizations, and negative irony simply reifies this, the Philosophic mind critically reflecting on itself and all things, endlessly.

A *sophisticated irony* differs from its negative counterpart in that it succeeds in achieving reflexiveness without suppressing other kinds of understanding; or in other words, rather than doubting *every* perspective, it seeks to recognize the limited validity in all perspectives, “to believe all metanarratives, to accept all epistemological schemes, to give assent to every belief” (Egan, 1997, p. 161-162). A sophisticated Ironic understanding avoids the calcified potential of a totalizing negative irony, which is to say, collapsing everything is itself a static kind of engagement with the world. The fluent ecohermeneutic ironist would be able to slip from perspective to perspective, recognizing the merits and limits of each and, more importantly, instilling doubt about the security of what is seen from any one kind of understanding in isolation from others. For example, a sophisticated kind of ironic understanding maintains that although radical epistemic doubt is a crucial cognitive tool to develop, we must remain open to the possibility that the Enlightenment project may not be hopelessly exhausted, that science may yet serve as a source for a deep ecological-ontology, that everything is recyclable (though not necessarily fruitful for every occasion).

Egan has written, “What I want to retain in Ironic understanding is the corrosion not only of the belief that general schemes reflect the truth about reality but also of the belief that they cannot. That is, Ironic understanding avoids commitment to the incredulity common in postmodernism... Ironic understanding embraces the irony of postmodernism but not its dismissive certainties...” (1997, p. 156). Indeed, this seems closer to an ecohermeneutic vision of an educative practice; we need teachers who are able to draw students into the theoretical generalizing capacity of systematic thinking and categorization, while provoking them to resist the belief that truth resides somehow in general schemes and not within the world itself. Or to extend my mycoremediation metaphor, an ecohermeneutic understanding remediates the landscape of possibility vis-à-vis the deliquescent decomposition of univocal epistemic certainties and stimulates a mycelial process of interweaving multiple perspectives and voices (including the more-than human). Or as Egan has beautifully articulated,

This openness to possibility is not credulity or simple-mindedness but, rather, the result of a flexible, buoyant recognition of a multivocal world, within and

without...the sophisticated ironist enjoys an abundant consciousness of varied ways of understanding, and can appreciate a varied spectrum of perspectives while concluding that some are better or more valid or more helpful or more beautiful than others in particular circumstances and for particular purposes. (1997, p. 162)



Egan's interests lie primarily with what language and imagination can do for us in education and are primarily questions of epistemology, which is to say, they are less explicitly concerned with ontological questions of Being. In Heidegger's hands, however, epistemic questioning as a way of thinking denotes our very ontological relationality with the world. It is this ontological capacity of epistemic questioning as a kind of hermeneutic inquiry that may help us to re-think the issue of technology in deliquescent and flourishing ways. Not just thinking *about* the world but thinking *with* the world and *with* the things of the world. Due to Heidegger's sometimes enigmatic writing style and vocabulary, one might easily misinterpret his critique as anti-technology in a straightforward sense, rather than a nuanced ontological exploration of its "monstrous" revelatory capacity in shaping our relationality with things. It is this mechanistic hypostatization of the resonant relation between things (not to mention between people, between teachers and students, between our inner worlds and the more-than-human world that sustains us) that most concerns a critical ecohermeneutic approach to education and technology.

In his later writings, Heidegger referred to the threat of "machination," which he described as a logic of unconditional control - the domination of all beings and the Earth via calculation, acceleration, technicity, gigantism (i.e. bigger is better) and progress (DeLuca, 2005, p. 75). The question of technology as a force of machination is obviously a crucial site of inoculation for critical ecohermeneutics in an age characterized, in many ways, by its obsessive utilization of ecologically exploitative technology. Yet to state in any certain terms that critical ecohermeneutics is *anti-technology* would be an oversimplification, a non-interpretive approach that is much too one-dimensional and universalizing. Instead of churning out prescriptive and essentializing statements to add to the much ignored neo-luddite faction, ecohermeneutic interpretation attempts to critically question our ontological presuppositions about technology and to dig to its metaphoric roots in the hopes that new ecological-ontological insight may offer possibilities for remediation. In order that we may begin to think about ways of healing the damage inflicted on the Earth by a totalizing technocratic ontology.

Once again, it is hoped that a critical ecohermeneutic recycling of the substrates of Heidegger may prove fecund in this endeavour. He insists that the *real* problem with technology is that it expresses a fundamental lack of respect for things themselves in their *many-sidedness*. The *real* problem with the instrumental worldview is that we become alienated from the *thisness* of things, from both their strange particular-ness and the emergent interpretive multidimensionality of their being in the here and now. As environmental education philosopher Michael Bonnett has written:

A consequence of this totalitarianism over things (which of course includes ourselves, for we too are challenged forth and must assume the position and value allocated to us in the instrumental world picture) is that we are insulated from inspiration in the sense of the enrichment and refreshment afforded by encountering things afresh and in their inherent strangeness. Our view of the world becomes pre-formed, one track, closed off and thinking becomes “constipated”. Thus, as the technological way of relating to the world gains ascendancy - which of course is central to its masterful nature - so we move along a road whose ultimate destination is nihilism in the sense of an empty meaningfulness resulting from an inability to receive meaning from outside ourselves, our “self”-centered plans, calculations and definitions. It is under the influence of such thinking that the shining of a colour can be transformed into a wavelength, and the quiet, highly nuanced, presence of a wild flower in the grass can be transmuted into a crude (if highly precise) set of objective properties as it is slid into a scientific database. In each case the potential richness of the original experience is left behind as we move from participatory celebration to rational explanation, from receptiveness of emergent things to manipulating defined objects of thought. (2002, p. 235)

Point being, the unquestioned habit and practice of relying on technology and technologically produced images, common to many environmental groups and ecological education programs, has profound ontological consequences on our ecological relationality (Deluca, 2005). We would be foolhardy not to recognize the self-serving way in which technical instrumentality manufactures a (sometimes very subtle) use-relation with the more-than-human world.⁸⁰

For example, although many environmental and educational organizations rely on high-definition photography and spectacular imagery as tools for inspiring empathy and ethical care for the natural world, grasping the wilderness as picture-images can reinforce a kind of sensual

⁸⁰ With respect to education and technology, Bowers (2008a, 2009) has offered some insightful critiques of technology in the classroom.

alienation from nature; an objectification of the world that perpetuates an essentially Cartesian ontology (DeLuca, 2005, p. 83). The insidiousness of these ontological presuppositions - of a human-subject projecting meaning (even eco-ethical meaning) onto a world-object - runs deep; so deep we rarely notice it lurking in the “Save *Our* Earth” club at school, or at protests to protect *our* forests, or in the seemingly self-evident idea that more technology and further machination, green or otherwise, is the only cure to *our* ecological woes. What then is to be done then? How do we learn to reconnect to the potential richness of a participatory experience without (always and automatically) confining and compressing it with rational explanation? How do we remain receptive to the emergent meaning and resonant ecology of things? How do we think *with* the world from *within* the world, instead of manipulating defined objects of thought? How do we escape the ontology of the objective lens?



Poet Ted Hughes (1988) has written on the “morality of the camera” (as a manifestation of scientific objectivity) describing the paralyzing and hollowing effect it can have on our ethical considerations. He describes an American magazine he encountered one day, which depicted a tiger in the process of killing a woman. The tiger was “tame” and “belonged” to the woman and a professional photographer wanted to take some shots of them together, but something (perhaps the camera itself?) irritated the tiger and it began to attack and kill its “owner.” As if that is not disturbing enough,

Whatever his thoughts were, he went on taking photographs of the whole procedure while the tiger killed the woman. The pictures were there in the magazine, but the story was told as if the photographer were absent, as if the camera had simply gone on doing what any camera would be expected to do, being a mere mechanical device for registering outward appearance. (1988, p. 39-40)

What, one might ask, does this have to do with Heidegger and ecological education? Hughes is trying to reiterate the importance of the “inner world” and developing our imaginative faculty in order to know both inner and outer worlds (which are really one “all-inclusive system”). He claims this kind of knowing has been limited recently in education by technical and scientific objectivity, “The exclusiveness of our objective eye, the very strength and brilliance of our objective intelligence, suddenly turn into stupidity – of the most rigid and suicidal kind” (p. 38-39). According to him, we have become disconnected from our bodies’ inner experiences and cut off from our imaginative faculties because we have come to regard the inner experience and

workings of the body as that of a “somewhat stupid vehicle” (p. 38). This is the threat of machination as manifest in modern humanity, as produced and reproduced and maintained by modern Cartesian-inspired education systems. A loss of respect and trust in our own phenomenology and an alienation from our very being that, despite our objective intelligence, turns into a stupidity of the most rigid and ecocidal kind.

Ecohermeneutic educators need to ask themselves a similar question as the one posed by Heidegger: *how is what we are doing contributing to the process of machination* (as cited in Deluca, 2005)? How is what we are doing in teaching, what we are as teachers, how we teach, what we teach with, where we teach, perpetuating an ecologically destructive ontology? For this ontological use-relation endgame seems all the more grotesque when projected onto children.

A recent *Business Week* headline announced, “Productivity Assured - or We’ll Fix Them Free”. It seems at first like the usual story about a warranty covering some new product. But not quite. A further glance reveals the article’s subtitle: “Starting in 1994, L.A. high school grads will come with warranties”... Upon graduation, they will each “come with” a written warranty guaranteeing employers they possess the “basic skills needed to enter the work force”. If they cannot perform these “basic skills” as advertised, they will be sent back for remediation at the District’s expense. (Blackner, 1993, p. 1)

Transmogrifying students into vocational units that come with productivity warranties essentially confirms Heidegger’s worst fears; that technocratic enframing begins with revealing “things” as resources for exploitation and ends with humans as a “standing-reserve” (Deluca, 2005). I am not trying to say that using photography as an educative tool invariably leads to this dehumanizing nightmare - only to reiterate the importance of Heidegger’s question in an educational context. *How is what we are doing in education contributing to the process of machination?*

I doubt whether there is any technical information, in a narrow epistemic sense, that one could have provided the photographer in order to provoke him into action, to recognize the woman as a living subject and not an object for him-as-his-camera to mechanically capture. It was not an issue of knowing more information, nor even an ethical problem of knowing that something was wrong, but a kind of ontological sickness. I am *not* claiming that the human woman who, as far as I can tell, irresponsibly tried to domesticate and commodify a wild creature (for all I know she got what was coming to her), is somehow more valuable than the tiger or that the tiger deserved to die for attacking its supposed master. Only that the photographer’s paralyzed and mechanistic response is indicative of an objectified and

troublesome ontology that mirrors in many ways the widespread paralysis that has gripped people in response to the degradation and industrial pillage of the Earth. My contention is that new technical information, ecological or otherwise, will not provoke us to relinquish this objective moral paralysis. Nor do I think the problem is necessarily ethical per se, in the sense that *most* people, outside of the relatively few hypercapitalist financiers and industrialists who adhere to the logic of cancer, recognize that *something is wrong*. My contention is that we are suffering from the calcification of an anachronistic ontology that renders all things and beings instrumental mechanisms instead of a living and resonant ecology worth fighting for.



I would like to include one more short passage from Heidegger due to its interesting summary of his fundamental critique of technology. I include this passage not because it speaks to the monstrous world a technocratic ontology manufactures, but because it speaks to the world technology denies, the manifold possibilities it conceals.

Where this ordering [technology] holds sway, it drives out every other possibility of revealing. Above all, enframing conceals that revealing which, in the sense of *poiesis*, lets what presences come forth into appearance. As compared with that other revealing, the setting-upon that challenges forth thrusts man into relation to whatever is that is at once antithetical and rigorously ordered. Where [instrumental] enframing holds sway, regulating and securing of the standing-reserve mark all revealing. (as cited in Deluca, 2005, p. 79-80)

What exactly does Heidegger mean when he refers to the possibility of revealing the world through *poiesis*? Is this the same kind of encounter with the more-than-human world that an *ecopoiesis* seeks? Are these *presences* that he speaks of perhaps the same kind of panelemental presences that emerge from an animistic logic? I think not. Heidegger's work is itself embedded in a particular worldview and particular ontology that, although critical of technology in a sense and favourable to poetic encounters with the world, remains steeped in the heavy handed and totalizing metaphysics of Western modernity.

Although a philosopher and poet herself, Zwicky expresses a deep distrust of Heidegger's logocentric privileging and posturing (Sanger, 2010, p. 14), as well as his misled exaltation of the role of poets. As Zwicky warns, Heidegger's valorization of *poiesis* does not save us from the "brutal counter-finalities of technocratic approaches" (Elson, 2010, p. 88). Or to put it another way, in the end, it matters very little whether you are a lucid and eloquently spoken poet or a

“nasty imperialistic techno-patriarchal sonnuva bitch” (Zwicky, 2002, p. 196), if your relationality with the world is constrained by logocentric or anthropocentric prejudice. Does a poetic encounter, as Heidegger conceived of poiesis, necessarily inspire the courage to walk (the often painful – *this is gonna hurt*) ecoethical path to fundamental transformation? Does it provoke one to relate to and act in the name of the Earth as if it were a shared flesh?

I am unsure, however, modernism seems rife with evidence of poetic encounters that attempt to reveal a natural or transcendental “bringing-forth” outside of instrumental enframing, and yet, so much writing seems to fundamentally adhere to modernist presuppositions about person-world relationality. I am thinking here, for example, of the much cited, though fundamentally logocentric nature poetics of Ralph Waldo Emerson,⁸¹ or the difference between the early, nature-loving, proletarian William Wordsworth, and his late bourgeois sensibilities and concerns with respect to the English Lake District (Moldenhauer, 1990). Although these poets are often cited as proto-environmentalists and seem to strive for at least some kind of ecological understanding, a modernist logic persists in their work and infuses their ontological presuppositions. This is not to say that they did not say something distinctive, something special and even beautiful, but that the totalizing claims and disembedding effects of modernity are invidious and we must be courageous in our questioning and mindfulness if new ontological insights are to flourish in this wasteland.

It is for this reason that critical ecohermeneutics strives for a kind of *ecopoiesis*, of a poetic encounter that reveals a multivocal and polyphonic ecological-ontology resonating *beneath*, or rather, *within* all things. One is drawn to the understanding that one is a word spoken *by* the world, and simultaneously a holographic constituent of the vast polyphonic narrative that *is* the world. As Bringhurst has written, “The proof of this plurality is the persistence of poetry in our time. It is extraordinary but true, in the present day, that poetry survives in the voices of humans, just as it does in the voices of all the other species in the world”

⁸¹ For example, in his journal Emerson wrote: “Language clothes Nature, as the air clothes the earth, taking the exact form and pressure of every object” (1910, p. 146). The concept of language being offered here would obviously reverse this anthropocentric rendering, instead language is a fabric of the Earth itself, a resonant topography that echoes the shapes, forms and patterns of the ecologies from which it arises.

(2006, p. 45). Indeed, our use of language does not, as Heidegger claimed, endow us with a superior ontological status over the more-than-human world.

Using language is as natural to humans as walking and running and picking things up. It is well to remember, however, that one species' nature is another species' artifice. Flying, not walking, is what comes naturally to bats. This does not make bats superior or inferior, nor closer to or farther away from the angels, nor does it mean that they possess immortal souls. It only means that they are bats. Martin Heidegger claimed that our abilities with language give members of the species *Homo sapiens* privileged metaphysical status, but this merely repeats at a grander level the error Heidegger made when he claimed that the two languages most inherently disposed to speak the truth were by coincidence two of the three or four languages he read, namely German and classical Greek. (Bringhurst, 2006, p. 128)

At this point I would like to return to the work of poet-philosopher (and, as we shall see, metaphorical gun-slinger) Zwicky and similar-minded eco-poets to continue to inoculate and recycle through the substrates of Heidegger. To illustrate how Heidegger's fatalistic critiques of technology lack the ecoethical sensibilities and metaphoric resonance of a critical ecohermeneutic approach, springing more from the narcissistic logocentrism of modernity than a desire to transform our ontological relationality with the world through poetic thinking and metaphor.



Zwicky (2002a) has surely crafted the most ingenious and rollicking re-imagination of Heidegger in the style and drawl of a country-western soliloquy enacted in some metaphysical saloon once upon a time in the wild West. Here, our eco-poetic gunslinger takes shots at “Marty’s” (Heidegger’s) way of thinking about what language *is* and how that might affect one’s “ability to pay attention to things, to really listen to an look at the world, see’r for who she is instead of what culture thinks she oughta be” (p. 187). According to Zwicky, the “disease” of Heidegger’s philosophy (and, for that matter, much of modern Western philosophy in general) has been logocentric thinking that claims human language, in a sense, creates the world, or that without human language there is no being in the world. Or as Zwicky aptly puts it “thinking the brand makes the cow” (p. 197). In accordance with this logocentric logic, the late Heidegger naturally begins to valorize the role of the poet, because if language and thought are all that there is, “better a poet than a technocrat” (Zwicky, 2002a, p.192). Zwicky cleverly critiques Heidegger in her hayseed drawl:

Yeah, yeah, you say, but sayin' thought is bein' an language is thought, that don't mean the mushrooms an the railway tracks are *make believe*. You say they're real, alright, they're as real as it gets. It's just that their reality is, well, like the reality of everythin' else - it *comes* from bein' Thought. An of course it's us as is doing the Thinkin' even while we're bein' Thought (by Thought) ourselves. But I say all that sounds like some kinda politics to me - either the kind where it don't matter what anyone does or says cause the Thinkin's just gonna roll on over 'em whether they keep runnin or not, or the kind where the Pawnee depends on us whites to Realize his or her True Potential. You think we really pay attention to the world or the things in it either way? ... I know there's no way I can prove with some argument that that's not the way it is; an yeah, I even know that if I try, whatever argument I come up with's gonna Always Already be set on self-deconstruct. But that seems to me to be a problem with arguments, not a problem with the world. (p. 194-195)

While I share in Deluca's (2005) keen insight that Heidegger be read after-Philosophy for social theory and politics, to draw upon his penetrating hermeneutics of incessant questioning as a critical way of thinking; I delight in Zwicky's playful and utterly imaginative recycling. She is able to dig to the metaphoric roots of a rather complicated philosophical problem in a sophisticated way that remains rigorous and retains its ecocritical ethos, but also dances wildly and imaginatively in the mind that allows one's understanding to go deep. This seems to me to be an exceptional example of an eco-poetic understanding or an eco-exegesis of Heidegger after-Philosophy; of inoculating the substrates of Heidegger with imaginative spores and words that glitter like stars. This too is a (critical) way of thinking.



Mexican poet and Nobel Prize winner for literature Octavio Paz has written this of metaphysics after-Science :

God and philosophy could not live together peacefully; can philosophy survive without God? Once its adversary has disappeared, metaphysics ceases to be the science of sciences and becomes logic, psychology, anthropology, history, economics, linguistics. What was once the great realm of philosophy has today become the ever-shrinking territory not yet explored by the experimental sciences. If we are to believe the logicians, all that remains of metaphysics is no more than the non-scientific residuum of thought - a few errors of language. Perhaps tomorrow's metaphysics, should man feel a need to think metaphysically, will begin as a critique of science, just as in classical antiquity it began as a critique of the gods. This metaphysics would ask itself the same questions as in classical philosophy, but the starting point of the interrogation would not be the traditional one *before* all science but one *after* the sciences. (as cited in Berman, 1981, p. 6)

Perhaps tomorrow's metaphysics (or after-metaphysics) will not be *interrogational* at all, critical no doubt, but interpretive; aimed at bringing out the living interweavings and the ecology of meaning in ways that are imaginatively (and hence emotionally) engaging. Instead of starting with fundamental severances between the multidimensional experiences of life (or academic disciplines for that matter), this ecological hermeneutics would seek to reconnect our experience to the resonant structure of what-is; to restore to our relationship with life its original mystery and multivocality; to embrace its enchantments and entanglements that occupy the same space? This is not to say that language can put back into the world what language originally took away (recall the losses and gains of reorienting to new kinds of understandings – Egan, 1997), but perhaps we can use metaphorical language to re-discover a certain multivocal or ecological wisdom? Or as Zwicky has claimed, the real discovery is the one that will let philosophy resume thinking metaphorically when it needs to.

The real discovery is not the one that will let us stop doing philosophy when we want to. Philosophy is thinking in love with clarity; and such thinking, in itself, is not a source of problems. What will not let us rest is the thought that what is clear must also be single; we are addicted to the elimination of ambiguity. If a thing is truly the path down, we think, it cannot also truly be the path up; at least one of these, we say, must be merely an appearance.

But this is not to think clearly. It is to fail to attend to what experience shows. It is to stop short of wisdom, which recognizes clarities that non-metaphorical language cannot render. Different wholes occupy the same space. (2003, p. 116)

I doubt whether Heidegger conceived of a poetic encounter in the same way as I am (though he did spend a lot of time in the Black Forest), but perhaps what is called for in a time of ecological crisis is an educational experience that will allow philosophy and science to resume thinking metaphorically when needed? Critical ecohermeneutics may be one of the ways we can recognize both the insights and the limitations of non-metaphorical language (or, less philosophically put, of thinking with clarity and employing general schemes and analysis, which are crucial, but *can* hypostatize as the only direction, the true path *up*), while attuning to the phenomenology of what-is in order to calibrate the plurality of our minds with the ecology of being (the path also goes *down*). This is not to say that Heidegger was not poetic in his thinking, only that, as Jardine has reminded us, “Hermeneutics incites the particularities and intimacies of our lives to call these traditions to account, compelling them to bear witness to the lives we are living” (1998, p. 2). An eco poetic inoculation of Heidegger endeavours to allow philosophy to resume thinking metaphorically, it recycles Heidegger, decomposing and putrefying and remediating his philosophical substrates in order to keep his thinking enticing and alive and inviting.

3.2. Gadamerian hermeneutics & the aporias of education

That which has been sanctioned by tradition and custom has an authority that is nameless, and our finite historical being is marked by the fact that the authority of what has been handed down to us – and not just what is clearly grounded – always has power over our attitudes and behaviour. All education depends on this... becoming mature does not mean that a person becomes his own master in the sense that he is freed from all tradition. They are freely taken over but by no means created by a free insight or grounded on reasons. This is precisely what we call tradition: the ground of their validity... What makes classical ethics superior to modern moral philosophy is that it grounds the transition from ethics to “politics”... on the indispensability of tradition. By comparison, the modern Enlightenment is abstract and revolutionary. (Gadamer, 2004, p. 281-282)

After the publication of *Being and Time*, Heidegger ended his *explicit* engagement with philosophical hermeneutics, but these aspects of his thinking were much elaborated and enriched by his student Hans-Georg Gadamer (2004). Gadamer spent thirty years thinking through hermeneutic ideas and composing his magnum opus, *Truth and Method* (2004), which was published in 1960. In essence, Gadamer accepted Heidegger’s ontological turn but worked to revitalize the humanist roots of hermeneutics (via Vico and the neo-Aristotelians) by abandoning *some* of the Romanticism that had circulated into the field via previous hermeneutic thinkers, such as Schleiermacher and Dilthey (Ramberg & Gjesdal, 2005).

In particular, he was drawn to fusing Heidegger’s historicity of understanding with the German humanist tradition of *Bildung*; the concept of *self-formation, education, or cultivation*. Or as Johann Herder has defined it, “rising up to humanity through culture” (Gadamer, 2004, p. 8-9). This cultivation of oneself into the “cult of Bildung,” into culture as such, however, should not be thought of as non-dialectical indoctrination or a teleological process with a culminating endpoint. Interestingly, Gadamer points out the sense in which the continuous process of *Bildung* and the Greek concept of nature as *physis* are similar - “like nature, *Bildung* has no goals outside itself” (Gadamer, 2004, p. 10). Unfortunately this is where the similarities between nature and culture end for Gadamer, as immediately following this he states, “Man is characterized by the break with the immediate and the natural that the intellectual, rational side of his nature demands of him” (p.11). The hermeneutic insights of Gadamer seem, tentatively speaking, equally or even more fecund than those of the substrates of Heidegger for the germination of a critical ecohermeneutics, but again, not without some fundamental EPOCHAXis presuppositions in need of inoculation. Ecohermeneutic inoculation is called for in order to recycle Gadamerian hermeneutics, to deliquesce the calcified aspects of his ontological

assumptions and remove any ecologically malignant contaminants. But before we consider how Gadamerian hermeneutics might contribute to a new kind of encounter with the more-than-human world, I would like to briefly explore some of his work with respect to the intimate relationship between education and hermeneutics, and perhaps more importantly, to consider some of the deeper pedagogical implications of an ecohermeneutic approach to pedagogy.

Many educational philosophers have drawn from Gadamer and see his philosophical hermeneutics as playing an important role in education, particularly education aimed at enriching the “ecological imagination” (Gallagher, 1992; Sammel, 2003; Smith, 2001; Grun, 2005; Blacker, 1993; Jardine, 1998, 2006). In order to further consider this special relationship between hermeneutic theory and educational theory, I will first draw upon the work of Gallagher (1992) and his examination of some of the difficult aporias they both address. Then, I will review some of the reasons why Gadamer has appealed to so many ecologically-minded educators and how we might incorporate some of these ideas into an ecohermeneutic curriculum.



Gallagher (1992) has outlined three major aporias in contemporary hermeneutics and how each corresponds to a philosophical debate sparked by Gadamer’s publishing of *Truth and Method*. Although this map of contemporary hermeneutic theory is oversimplified in a sense, it provides a useful framework for understanding these sometimes difficult impasses by means of Gadamer’s debates with Emilio Betti, Jurgen Habermas and Jacques Derrida. In turn, Gallagher relates the issues raised in each of these debates to similar aporias in educational theory and how a hermeneutic approach to education may work to yield deeper understandings of these fundamental presuppositions about what education is for. Although I will only be providing brief sketches of the hermeneutical-educational aporias raised in these encounters, I hope to establish a more intimate connection between hermeneutics and education, *and* to identify some of the marginalization of deeper ecological issues inherent within these debates. In this sense, the aporias will also serve as ecohermeneutic sites of inoculation to re-think a place-based and ecological approach to education.



Aporia I: *Emilio Betti and Reproduction*

Aligning himself with earlier Romantic and philological hermeneuts, Emilio Betti approached hermeneutics from a non-ontological perspective, asserting that hermeneutics ought to concern itself with the epistemological problems of interpretation, rather than the existential conditions of being. For Betti, the constitutive differences between the individuality of the author and the individuality of the interpreter are not insurmountable, because speech and text are objectified human intentions. The hermeneutic circle, in this sense, exists in order for the interpreter to *overcome* his or her point of view and grasp the meaning of these symbolically mediated intentions. The attempt to re-create the original creative act of the author is not a generative process to reach some kind of shared psychological state, but an interpretational method to reproduce the *true* and *original* meaning of the text or speech (Ramberg & Gjesdal, 2005).

Betti's critique of the ontological turn in Gadamerian hermeneutics was shared by educational theorist E.D. Hirsch. Like Betti, Hirsch was concerned that an ontological rendering of hermeneutics invoked a problematic epistemic relativism, and that without validation, objective knowing would be impossible. Of note here is Betti's claim that reproduction is not a productive or creative process enacted by the interpreter, rather "productivity is identified only in the original author who invests the text with meaning" (as cited in Gallagher, 1992, p. 208). Or in the words of Betti himself, interpretation "is an inversion of the creative process: in the hermeneutical process the interpreter retraces the steps from the opposite direction by rethinking them in his inner self" (1980, p. 57). In order to account for different, productive or creative interpretations of the same text, Betti and Hirsch attempt to differentiate between *meaning*, which is un-changing and embedded in the text by the author within his or her historical context, and *significance*, which is the present day interpretation of the text by the interpreter according to present cultural understandings. What changes between interpretations is not the meaning of the work but the significance of the work, which is indicative of a dynamic relationship between the text and the living interpreter in the present day (Gallagher, 1992, p. 207). Betti and Hirsch maintain that Gadamer places too much emphasis on significance and not enough on meaning. This raises an interesting variance between the epistemological hermeneutics of Betti and Hirsch, the ontological hermeneutics of Gadamer, and ecohermeneutics, which attempts to approach meaning as an interrelational resonance immanent

in all things. I would like to explore these different conceptions of meaning briefly before we return to our discussion on the possibility or impossibility of hermeneutic reproduction.

In their assertion that meaning is embedded in the text by the original author, Betti and Hirsch position themselves within the philosophical trajectory of modernity. Conceiving of a text as something to be read and re-read in order to *discover* its true meaning is not dissimilar, in a sense, to the dominant scientific stance of reading and re-reading the world in the service of objective discovery or analysis. This is one of the fundamental thrusts of modernist thinking. The problem is not the inscribing of meaning per se, but a one-sidedness to the relationship – the free epistemic subject probing and extracting meaning from the objective world, instead of dialoguing with it as a situated participant from within the living flux of things. Ecohermeneutics attempts to elicit attunement to the interrelational matrix of being’s resonant structure in order to discern (or rather, to play with, to be struck by, to be caught breathless by) the emergent multidimensionality of meaning. Which is to say, there are many hermeneutic stances and forms of relationality (some of which are human and some more-than-human); my contention, however, is that human beings are naturally polyphonic to an extraordinary degree. An ecohermeneutic approach to meaning might be thought of as a way of tuning into the polyphonic potential of our minds in order to harmonize or calibrate with the polyphony that emanates around and within us in this vast, unfolding holography. To recognize that things “inter-are” with each other, and that this *means something*.

I share in Betti and Hirsch’s claim that *significance* is a dynamic relationship in the present moment, but as we have seen, from an ecohermeneutic perspective, there is a less hard and fast distinction between *significance* and *meaning*; or rather, this epistemological distinction is not what calls for ecohermeneutic inquiry. Or perhaps we could say that a hermeneutic interpretation of a text’s *significance* may lead to a close approximation of the original *meaning* (as one way of understanding its multidimensional ecology of meaning), but that this does not concern a critical ecohermeneutic inquiry as much as what calls for such attunement? How do these traditions help to keep the world open and enticing and alive? How can we use traditions and language to listen to the world, to understand what the world *means*? This is not to say that ontological depths or multivocal interweavings are immediately discernable (especially from within the obfuscating, univocal confines of modernity), but become potentially comprehensible via disciplined and, in a sense, learned openness to ontological elicitation. Critical ecohermeneutics follows Gadamer’s ontological turn but continues the momentum, turning and

turning until a vortex forms and draws understanding down to the depths of an ecological-ontology.⁸² Perhaps the real question is: what should guide the hermeneutic act?

In order to think about that question let us return to the Gadamer-Betti debate over the possibility of reproduction. Much of the complexity of the Betti-Gadamer debate has to do with the fact that Gadamer's project is philosophical and has little to do with the hermeneutic methodologies of the human sciences that concern Betti and Hirsch per se. Betti's ideal of objective reproduction is accomplished with the aid of "controllable, consciously-employed historiographical-methodological guidelines" (Gallagher, 1992, p. 14). Gadamer (2004), on the other hand, is asking questions like: How is understanding possible? And what is common to all modes of understanding? Not what do we do or what ought we do, but what happens to us over and above our wanting and doing? As such, Gadamer claims that Betti is posing him methodological questions that he never intended to answer. Gadamer insists, "I have retained the term 'hermeneutics'...not in the sense of a methodology but as a theory of the real experience that thinking is" (2004, p. xxxiii). Betti is after a kind of methodological objectivity, and although he is the first to admit this is not the same kind of objectivity that one finds in the natural sciences, he does claim that a form of objective correspondence between interpretation and historical evidence is required. He views this as a kind of dialectical process between the two seemingly contradictory requirements of objectivity (or nonarbitrariness) and the hermeneutic subjectivity of the interpreter (Gallagher, 1992, p. 14).

⁸² As political theorist Jane Bennett (2010), renowned for her work on nature, ethics and affect, has written in the preface of her book on the active participation of nonhuman forces in events, "The philosophical project is to think slowly an idea that runs fast through modern heads: the idea of matter as passive stuff, as raw, brute, or inert... I will turn the figures of 'life' and 'matter' around and around, worrying them until they start to seem strange, in something like the way a common word when repeated can become a foreign, nonsense sound" (p. vii). Although Bennett does not position herself within a hermeneutic tradition, this process of thinking slowly and turning ontological presuppositions around and around until they seem strange and new strikes me as essentially the same process as ecohermeneutic recycling. The only difference being, perhaps, an ecohermeneutic inquiry does not strive solely to worry the relationship until things seem strange or nonsensical, but rather to remediate the relationship until things seem interconnected or resonant.



From the perspective of educational theory this debate illustrates the “conservative” claim that the point of education is to reproduce the original meaning of texts and strive towards objective understanding. In response to this claim, Gallagher draws upon the more “moderate” hermeneutics of Gadamer and claims that “every attempt at reproduction involves a production of new meaning, and thus, strict reproduction is not possible” (1992, p. 15). Again, the question of the possibility of reproduction seems to be a kind of red herring from an ecohermeneutic perspective; rather, the more important question to ask is, what guides the hermeneutic act? What calls for ecohermeneutic understanding? What cultural meanings are even worth “reproducing,” or reinterpreting, now, in order to keep the world open, enticing, alive and inviting? The objectivist approach that characterizes so much modern thinking has, in many ways, aided the burgeoning of the ecological crisis. Perhaps instead of debating whether the reproduction of objective meanings are possible through hermeneutic methodologies, the debate needs to shift to whether these meanings can be ecohermeneutically recycled in ways that are still important and healthy to those living today? Educationally speaking, Jardine has claimed that Gadamerian hermeneutics “articulates how the world is a *living* world of *living* ancestry that perennially has to take up the task presented by the arrival of the new and young into that living world” (2006, p. 269).

Both Gallagher and Jardine tend to side with a Gadamerian approach and maintain that there is a generative and creative aspect to all interpretation; still, the question of reproduction may not be so hard and fast, for surely the *striving* for original meaning and ancestral understanding can be fruitful to some extent? Gadamer would likely oppose any kind of prescriptive methodology for this process, but it seems as if his focus on tradition indicates that he may accept this process as one kind of thinking.

For example, an interesting way to think about the positive potential for ecohermeneutic reproduction might be considering the tension in Indigenous and oral cultures between precise reproduction of a traditional narrative and the individual voice of the storyteller. Learning to tell stories properly is given great weight in many Indigenous cultures, as Bringhurst has illustrated in his translations of Haida myhtellers in *A Story as Sharp as a Knife* (1999, p. III). On the one hand it seems as if the creative production of new meaning and metaphors to live by is a vital task of ecohermeneutic inquiry. After all, why would we want to reproduce ecologically destructive narratives and root metaphors? On the other hand, it is important that

ecohermeneutics not perpetuate the Western philosophic trajectory of always *turning away* from the past; of the totalizing methodical doubt typical of Cartesian thought and of disregarding the traditions of our ancestors and the kinds of understanding that emerge from oral traditions.



Aporia II: Jurgen Habermas and Authority / Emancipation

Betti and Hirsch were not alone in directing criticism towards Gadamer and the potential relativism of an ontologically informed hermeneutics. Jurgen Habermas (as well as Karl-Otto Apel) worked to draw attention to what they perceived as a problematic political naivete insufficiently resolved by either Gadamer or Betti. Essentially Betti and Hirsch wished to ground interpretation in text, whereas Habermas and Apel worked to ground it in social relationality. The issue of validity was also of great significance to Habermas; not the valid methodical reproduction of meaning that concerned Betti (he sided with Gadamer on this point), but the need for an adequate standard of validity to critically assess interpretations via “quasi-transcendental principles of communicative reason” (as cited in Ramberg & Gjesdal, 2005). For Habermas, hermeneutics needs to move beyond an analysis of the ways we are unconsciously conditioned by historical situatedness and the authority of traditions, towards a critical theory of ideologies and society aimed at liberatory politics. Emancipation and social liberation, according to Habermas, are only possible by means of a “depth hermeneutics” guided by the critical theories of the social sciences. In this sense, Habermas also moves beyond the philological “shallowness” of Betti and the Romantic hermeneutics (i.e. the surface analysis of text on a page) towards the depths of a critical reflective process inspired by Freudian psychoanalysis and radical politics. The objective of this process is an uncovering (and eventually a transcendence) of deceptive and ideologically distorted communication.

Likewise Apel, also a student of Heidegger, has charged Gadamer with misreading their teacher’s later writings on world-disclosure. He holds that Heidegger’s ontological understanding must be accompanied by an appeal to a “trans-historical dimension of validity” not unlike the one offered by Habermas (Ramberg & Gjesdal, 2005). Gallagher summarizes their critical perspectives:

Critique calls for a special and suspicious interpretation of those ideologies and institutions which support and maintain ruling power structures. It requires a type of understanding that dispels and transcends an ideologically prejudiced understanding. In its most idealistic form, critical theory requires a

hermeneutical ability to escape from the domination of repressive traditions and to attain an ideologically neutral, tradition-free, prejudice-free communication. Critical hermeneutics thus attempts to get to the objective truth behind the false consciousness of ideology. (1992, p. 240)

These compelling criticisms launched against Gadamer have not gone undisputed; he has retorted in turn that both the criticisms of Betti and Habermas represent a misreading of *his* work, that his intention was never to expunge every appeal to validity, objectivity and method in understanding. Rather his philosophical hermeneutics was an inquiry into the conditions of possibility for understanding (critical or otherwise) or for what thinking is over and above our wanting and doing. These conditions cannot be stagnated, removed, transcended or bracketed through hermeneutic methodology (i.e. the hermeneutic circle cannot be terminated nor paused) as Betti claimed, nor do our historical conditions condemn us to passive acceptance of an ideology or social order as Habermas feared.⁸³

Obviously critical ecohermeneutics does not see an insurmountable divide between ontological and critical hermeneutics.⁸⁴ Which is to say, the differences are genuine but not beyond remediation; in a sense, each is a keystone species in a vital mutualism or a symbiosis that co-evolves and intertwines within the broader ecology of understanding of what it means to *be* healthy in an ideology-laden time of ecological crisis. It is important to remember too that in his later work, Gadamer becomes more explicit in his belief that being open to traditional horizons also means being amenable to a critique of these traditions (Sammel, 2003, p. 160).



Perhaps we might try and summarize some of the educational implications of critical or depth hermeneutics by posing the following questions: To what extent are traditions and established power structures reproduced in education? To what extent can they be transformed by critical work? Does a depth hermeneutics actually move us beyond constrained communication to a reflective emancipation (i.e. Habermas) or is such critical reflection itself

⁸³ For more on the Gadamer-Habermas debate see the work of Alan How in, *The Habermas-Gadamer Debate and the Nature of the Social : Back to Bedrock* (1995).

⁸⁴ A position it shares with French hermeneutic philosopher Paul Ricoeur (see Piercey, 2004).

bound by hermeneutical constraints (i.e. Gadamer) (Gallagher, 1992, p. 240)? A critical ecohermeneutic approach might add these questions as aspects of ecocritical hermeneutic inquiry: To what extent are anti-ecological ways of being and relating to the more-than-human world reproduced in education? To what extent can education precipitate ontological elicitation and catalyze cultural transformation? Can an ecohermeneutics actually draw us deeper into the multidimensionality of the world, towards an ecological immanence that offers us new ways of being critical of the fragmented relationality inculcated by the dominant culture?

Critical ecohermeneutics shares with critical hermeneutics the desire to dispel false consciousness and reveal the ideology-laden nature of our taken-for-granted belief systems. As the “critical” prefix indicates, ecohermeneutics *also* insists that any hermeneutic act must be accompanied by an ideological critique. Generating the critical distance to critique ideological power relations is, broadly speaking, one of the objectives or deliquescent functions of ecohermeneutic inquiry. That being said, a critical ecohermeneutic inquiry may differ from a conventional critical hermeneutic inquiry in that it takes an ecopoetic approach in its thinking in order to get to the root metaphors of the ideological presuppositions in question.

The assertion by many critical theorists that *most* modern schooling tends to be culturally reproductive is one that is shared I think, broadly speaking, by critical ecohermeneutics. Critical hermeneutics speaks of reproduction in terms of the regeneration of the dominant culture as manifest in relations of class, race, gender, and other such power structures. Ideology, worldview, the entire intertwined net of social-relational dynamics and the hidden authority of presuppositional meanings are present and maintained in the day-to-day school experience. Perhaps more invidious is the fact that in reproducing this dominant form of society, the education system reproduces the perfect conditions for its own reproduction. Or, to put this in other words, perhaps we might reassert the observation made by Deluca (2005) and other ecologically-minded educators (Bowers, 1993; Grun, 2005) that, to put in plainly, the education system is in the business of reproducing a fundamentally Cartesian world wherein the founding act is human thinking and the Earth is rendered an object. Although critical hermeneutics works to dispel the false consciousness of our taken-for-granted social relations, we might ask, what ontological assumptions does it make with respect to the more-than-human world? For example, Gallagher has commented on critical theorist and pedagogue Paulo Freire’s (2006) work, writing:

In Freire’s Sartrean ontology, critical pedagogy grants to human subjectivity a transcendental control over the situation. A transformation of human

consciousness implies a transformation of the world, a constitution of the world that allows for humanizing action and emancipation. Genuine dialogue, communication that leads to emancipation, is based upon a transcendental word: a word free from real distortion and under the control of critical speakers who use it to dominate, not other speakers, but the world. (Gallagher, 1992, p. 259)

Wait a minute - what? An ecohermeneutic approach shares in viewing reality and the world as a process in continuous transformation in a sense; an ecological flux in the aspect of time from which our consciousness emerges. But the *transcendental* word? The perfectly controlled mentality exerted by the righteous critical thinker in order to purify distortions and free the word (not to mention dominating the world in the process)? This strikes me as the critical consciousness of our wanting, not what happens over and above our wanting and doing (or ecohermeneutically speaking, *beneath* our wanting and doing). The ecological-ontology of critical ecohermeneutics, on the other hand, implies a kind of situated letting go in order to allow for immanent and chaotic encounters with others, both human and more-than-human, to emerge. Transformations of human consciousness can obviously work to transform the world, but we are *also* read by the world to the extent that transformation of our relationality with the more-than-human – an ontological insight into the interconnectedness of being – also implies a transformation of human consciousness. Genuine dialogue, from an ecohermeneutic perspective, is one in which one side (in this case the human side) listens as well as speaks, affects and remains open to being affected. This is not seen as the pursuit of distortion-free communication based upon the transcendental word, but highly-reflexive and lyrical communication based on words and kinds of thinking that have been putrefied and recycled through the soils of a living culture.

In other words, an ecohermeneutic understanding does not seek to bestow the human subjectivity with transcendental control over the situation; it seeks to open the possibility for drawing connections between multiple and panelemental perspectives, for a fluent and sophisticated ironic understanding of the possibilities and limitations of all ways of knowing. Although ecohermeneutics remains uncompromisingly critical, it is cautiously suspicious of Habermas's "quasi-transcendental principles of communicative reason". In a sense it remains suspicious of anything *transcendental*, anything that tries to draw the attention upwards and away from the sensuous Earth.



The Gadamer-Habermas debate has enriched hermeneutic inquiry by raising a number of important issues regarding language, scientific knowledge, reflection, authority, tradition and the operation of political and economic power. These issues are all of vital importance to ecohermeneutics, but the total implications of the Gadamer-Habermas debate are too far-reaching and multifaceted to be dealt with here in detail. The final two aspects of this debate that I would like to touch upon are the everyday understanding of scientific discourse with respect to “environmental problems” and the concept of “extralinguistic experience.”

The translation of important scientific information into the language of the “social life-world” was an area of great concern for Habermas, and it ought to equally concern ecological educators, as it informs much of the environmental discourse in the public sphere. Many technocrats (and hence a number of “everyday” people under the influence of their widely broadcast ideologies) view the ecological crisis as essentially an instrumental and technical problem to be solved by an ever-efficient technocratic elite of scientists and resource managers. Habermas has long been a critic of this perspective, pointing to its implications for the role of non-experts in democratic decision-making. He suggests that it is impossible to separate an “environmental problem”⁸⁵ framed in scientific terms from its wider personal, social, or political dimensions (Jenkins, 2003). I share in the sentiment that “environmental problems” cannot be severed from their personal, social and political dimensions, and that any attempt to do so by the power elite is an attempt to sustain their technocratic dominance. With this in mind, a critical ecohermeneutic approach attempts to go beyond or *beneath* Habermas, in that it insists his implicit person-world duality is *also* problematic, is also an ideology-laden ontological presupposition.

Although I share in the desire to democratize the decision-making process on key social and ecological issues and inspire a kind of multivocal or multidimensional approach to scientific

⁸⁵ Even the term “environmental problem” is problematic; it seems to suggest that there exists some innate malfunction in the ecosystem to be solved by human ingenuity. “Person-world fragmentation” is perhaps a more accurate term, although this term too reinforces a kind of false dualism between human and world. This is why I use the term “ecological crisis” to describe the modernist situation, this is to say, a crisis of relationality in its deepest or most ontological sense.

inquiry, there are two important critiques of Habermas we must first consider. These two critiques might be thought of as going different directions, one *upwards* and one *downwards*. Looking *upwards* we might say that the problem with Habermas' critical proposal, emerging as it does from his ontological presuppositions, is that it could easily lapse into a kind of instrumental, or at least anthropocentric, relationality with the more-than-human world. In other words, even if certain ground is gained in terms of "solving" an "environmental problem" democratically, or perhaps via the development of a multidimensional science that acknowledges social and political dimensions, the exclusion of a deeper animistic logic might work to exploit the more-than-human in a more egalitarian manner. It is not clear how democratizing the technocracy *necessarily* leads to a healthy relationality with the more-than-human, and the historical adaptability of modernist ways of thinking in order to maintain its dominance should give us all pause. It matters little to mountains and streams whether they are being exploited wholesale by green capitalism or redistributed more equitably by green socialism. The heart of the matter is relational (i.e. ontological).

Looking *downwards*, we might say that "environment" belies the specificity of place and community, and Habermas' quasi-transcendental principles do not adequately root communication in localized particulars. Or, more broadly, may simply lead us towards an increasing sameness of emancipatory thought and practice in alignment with the universal and cosmopolitan vision of modernity.



The final issue of the Gadamer-Habermas debate that I would like to touch upon is "extralinguistic experience." Gadamer argues that being is always a linguistic enterprise:

Human being, Gadamer argues, is a being in language. It is through language that the world is opened up for us. We learn to know the world by learning to master a language and we cannot really understand ourselves unless we understand ourselves as situated in a linguistically mediated, historical culture. (Ramberg & Gjesdal, 2005)

There are two different conceptions of language operating within this debate: for Habermas language is always limited by "extralinguistic experience", and for Gadamer, even extralinguistic experience must be mediated by language if it is to have any significance (Gallagher, 1992, p. 17). The critical ecohermeneutics I am trying to germinate offers us an additional conception of language, one informed by ecolinguistics and ecopoetics, in which language is part of the co-

evolved psychic dimension of ecosystems (Finke, 2001, p. 85), or as Bringhurst (2006) has claimed, language is part of the prosodies of meaning indigenous to the natural flora and fauna where communities (including human communities) occur. In other words, language goes all the way down. In this sense the categories of linguistic and extralinguistic are false, or at least irrelevant, ecohermeneutically speaking. Again, there is a kind of difference in *depth* or ontological order between the extralinguistic experience that Habermas describes in order to point to the factors that shape ideology (social processes of domination, organized force, modes of production, etc.) and the tacit understanding of the world that ecohermeneutics refers to (the poetry of being, the perceptual reciprocity of meaning and place, resonant interconnectivity, etc.). When Habermas proposes a “depth hermeneutics” to promote emancipation through deep self-reflection, in a sense ecohermeneutics agrees. Like really *deep*, like all the way down.

In a way, the difference between critical hermeneutics and critical ecohermeneutics parallels the differences raised with respect to an ecolinguistic and an ecopoetic orientation to language. I sense the difference when, for example, I read critical pedagogue Joe Kincheloe’s (2010) call to *pay attention* to the debilitating crisis of knowledge that perpetuates a neo-colonial and oppressive socio-cultural, political and economic condition in our educational system. And when I read Jardine’s (1998) call to envisage education as a deep Earthly task and to *pay attention* so that we might dwell with a boundless heart. It is not that there is something fundamentally reprehensible in Habermasian language, indeed critical theory and critical ecohermeneutics are intimately related, but my contention is that there is something *else* in the ecopoetic rendering that is absent in critical hermeneutics. I have suggested that this *something* is an ecopoetic understanding of the world that can potentially provoke us to imaginatively reorient our relationship to knowing the plenitude of being. This remains a *critical* task, an overtly *political* task, as Zwicky has written:

The phenomenology of experience is particularly relevant in situations where there is evidence that certain experiences are shared *but also* ignored by ideological emphases in the culture. Attending to their phenomenology is one way to begin to take them seriously; and to begin to reflect on the politics of their marginalization. (Zwicky, 2003, p. 109)

In this sense, critical ecohermeneutics offers us a phenomenological politics that reaches down towards the very existential particularities of things and the marginalization of their immanent *thisness*. Again, my intention is not to charge critical theory with a kind of ontological shallowness or negate the importance of critical reflection upon the extralinguistic dimensions of ideology, but to suggest that critical ecohermeneutics offers us a way to attend to the

phenomenology of experience, and the politics of its marginalization, in a different way. It opens a different path to emancipation that is not necessarily one of uplifting transcendental enlightenment, but an immanent surrender to the moist and darkened Earth. If we are to *communicate* with the more-than-human world in a way that has been aggressively marginalized (or openly eradicated)⁸⁶ in the Western tradition after-Philosophy, after-Science, after-Modernity - it will require reorienting to and with language in order to attend to our living phenomenology.



Aporia III: *Jacques Derrida and Conversation*

The final aporia is extremely dense and illustrates the myriad differences between Gadamer's philosophical hermeneutics and Derrida's deconstructionism. Both are a reaction to the metaphysics of modernity (Heidegger and Nietzsche in particular) and both offer radically different interpretations of language that extend far beyond the scope of this paper. For my purposes, I would like to focus only on the *possibility* of conversation and transformation, as it was the central theme of the Derrida-Gadamer encounter and the aspect that is of the most importance to education.

The essential nature of language for Gadamer is to be found in the event of conversation, whereas Derrida understands language as a play of signifiers with indeterminate meanings that undermines the very concept of a conversation. This can be further distilled to an issue of trust (or good-will), which Gadamer sees as a prerequisite for conversation and which Derrida sees as obnoxious metaphysical residue leftover from Kant. In describing this encounter Gallagher makes good use of Ricoeur's distinction between a *hermeneutics of trust* and a *hermeneutics of suspicion* (1992, p. 21).

⁸⁶ I am thinking here of the animistic belief systems of so-called European "witches" and their violent persecution at the hands of monotheistic States right up to the 1700s. Ward Churchill (referencing Carolyn Merchant, 1980) has referred to these women as leaders of the "indigenous cultures" of Europe. "These women who were being burned alive, were thus murdered precisely because they served as primary repositories of the European subcontinent's indigenous codes of knowledge and corresponding 'pagan' rituals" (1994, p. 263).

- *Hermeneutics of Trust*: recollection or restoration of meaning requires a trust placed in language (including text), keeping in mind that the meaning to be retrieved is not objective or static and that the goal of dialogue for Gadamer is to reach an understanding that centers less on asserting one's point of view and more on individual transformation or a reciprocal hermeneutic circle of progressive understanding (Sammel, 2003, p. 158).
- *Hermeneutics of Suspicion*: involves a profound suspicion of the obvious, of what purports to be the truth; and expresses a deconstructive doubt and a radical distrust of consciousness and language. Its task is to decipher, decode, or unmask the "reality" or "truth" of such things as consciousness, capitalism, and Western metaphysics in order to show the contingency and relativity of these systems (Gallagher, 1992, p. 21).

Rather than choosing sides, critical ecohermeneutics offers what might be thought of as a *hermeneutics of possibility*. On the one hand, it performs a critical hermeneutic function vis-à-vis ecocritical analysis aimed at the deliquescence of calcified structures of knowing. Concurrently, it seeks to nurture a sense of relation by means of interweaving and connecting diverse ways of knowing and being in the world and reconnecting these to the world itself. Although a hermeneutics of possibility tends to share in Gadamer's openness to conversation, it also has a putrefying effect on ideology-laden structures and all rigid systems of knowing, particularly those that espouse a shallow relationality with the more-than-human world (including Gadamerian hermeneutics itself). In this sense, it cannot be accurately labelled a hermeneutics of trust; conversely, a Derridean hermeneutics of suspicion seems to drift too far away from understanding life as it is lived within the flux of the everyday.

Gadamer has argued that in following a Nietzschean model of inescapable false consciousness and interpretation, Derrida has been led astray from the primary aspect of language, which is conversation.

Indeed, in Gadamer's view, the concept of deconstruction was originally meant to defrost the frozen language of metaphysics - technical words emptied of living conversational sense and thus alienated from their original experience of being. Deconstruction was originally designed by Heidegger to enter into conversation with these alienated words, to make the words speak again and to rediscover the experience of being. Gadamer understands his own philosophical hermeneutics as an attempt to follow this kind of deconstruction. Derrida's path, from Gadamer's point of view, involves a "shattering of metaphysics", a destruction of conversation. (Gallagher, 1992, p. 23)

On the surface, it may seem as if ecohermeneutics shares in the joy of a playful dance of language on the page or the transformation of meaning espoused by radical deconstructive hermeneutics. It too wishes as Derrida has claimed to "stretch the limits of language to break upon fresh

insight” (as cited in Gallagher, 1992, p. 10). It too is suspicious of humanism and metaphysical Truth; of distortion-free communication and quasi-transcendental validity. But what kind of education is possible without at least some trust in the process of conversation? After a radical deconstructive doubt has been instilled in students (one wonders how exactly sans conversation?), that the only truth is untruth, how are they to relate with and act in the world? What comes after deconstruction?

Derrida has claimed that radical deconstructive hermeneutics “is no longer turned towards the origin, affirms play and tries to get beyond man and humanism” (as cited in Gallagher, 1992, p. 20). But beyond man and humanism to what? Towards the technological fetishes and fantasies that transhumanists dream of? The posthuman hybrids of Donna Haraway; who predicts that the learning contexts of the future will be situated at the human/machine interface, producing identities of transgendered ‘cyborgs’ (Bleakly, 2004)? There is a danger in turning away completely from origins, a danger of forgetting the wisdom of *where you are from*. In this sense, Derrida’s methodical doubt does not seem such a radical departure from a Cartesian cosmology. This is not to say that there are methodological similarities between the metaphysically loaded, rationalist-oriented Cartesianism and Derrida’s anti-metaphysical, literature-oriented deconstructionism - only that the urge to turn away, to recede into the mind or the text, seems part of the same urge, or at least to ensure the same result.⁸⁷ Technocracy as usual.

An ecohermeneutic curriculum seeks to engage students in communication with the more-than-human world; with the living landscape and places that they inhabit and are of. This

⁸⁷ There is an interesting metaphorical relation between what appears to be utterly disparate intellectual traditions in the Western trajectory (Cartesianism, postmodernism, critical theory) with respect to the idea of a radical “turning away” from tradition - particularly when juxtaposed to land-based or Indigenous traditions of an intergenerational cultural commons. Bowers has levelled a critique against critical theorists such as Freire, Giroux, McLaren and Gruenewald (and John Dewey) for their misunderstanding of the nature and complexity of Indigenous traditions and what he sees as a universalizing call to “transformation” (i.e. change as progressive). Bowers maintains that in their call to transform the world they rely “upon an abstract Western epistemology that carries forward a number of misconceptions and prejudices that can be traced back to Plato’s *Republic*” (2008c, p. 327). I am not suggesting that the realization of critical theory would manifest as “business as usual” or that I necessarily agree with Bower’s critique (for example, transformation for me seems iterative, not linear), only that there seems to be a common image of *turning away* from tradition that I think it is important to note.

too is a process of deconstructing (or rather, decomposition) and moving beyond humanism, but not towards the mechanistic fetishes of cyberneticism or an ethically paralyzed academic relativism. Ecohermeneutics looks to traditions in order to converse and recycle, to observe, to listen, and to learn from what has thrived (and what has not). Gadamer has reflected on how Derrida's "aesthetic" attempt to break apart and disrupt conversation has contributed to the Enlightenment project of fragmentation and why hermeneutics necessitates a political dimension.

Gadamer, on the other hand, argues that Derrida's position—his rejection of every continuum of meaning, of an orientation towards truth, and of a genuine communication—potentially harbours indifference and that the focus on discontinuity and fragmentation resembles the kind of thinking that he criticized, in the first part of *Truth and Method*, as aesthetic consciousness. Precisely by emphasizing how the subject may reach beyond herself in dialogical encounters with others does the term *Bildung*, in Gadamer's view, allow for an ethical aspect of hermeneutics, for a hermeneutics that may contribute to a political, rather than an aesthetic humanism. (Ramberg & Gjesdal, 2005)

For Gadamer, participating with the other and being a part of the other is the most and the best that we can strive for and accomplish (Grun, 2005, p. 157). The question is, what if the other is more-than-human?

3.3. Gadamer & the more-than-human world

Precisely because in nature we find no *ends in themselves* and yet find beauty – i.e., a suitedness to the end of our pleasure, nature gives us a “hint” that we are in fact the ultimate end, the final goal of creation. The dissolution of the ancient cosmological thought that assigned man his place in the total structure of being and assigned each entity its goal of perfection gives the world, which ceases to be beautiful as a structure of absolute ends, the new *beauty* of being purposive for us. It becomes “nature,” whose innocence consists in the fact that it knows nothing of man or his social vices. Nevertheless, it has something to say to us. As beautiful, nature finds a *language* that brings to *us* an intelligible idea of what mankind is to be. (Gadamer, 2004, p. 44-45)

A genuinely ecological approach does not work to attain a mentally envisioned future, but strives to enter, ever more deeply, into the sensorial present. It strives to become ever more awake to the other lives, the other forms of sentience and sensibility that surround us in the open field of the present moment. For the other animals and the gathering clouds do not exist in linear time. We meet them only when the thrust of historical time begins to open itself outward, when we walk out of our heads into the cycling life of the land around us. This wild expanse has its own timing, its rhythms of dawning and dusk, its seasons of gestation and bud and blossom. It is here, and not in linear history, that ravens reside. (Abram, 1996, p. 272-273)

Many hermeneutically inspired educators, particularly ecological educators, have been attracted to Gadamer’s ideas. This makes sense for teachers on the one hand due to Gadamer’s “optimistic” view of interpretation and creative conversation with texts and students, as opposed to the anti-conversations of deconstructionism. It is difficult to imagine a truly deconstructionist elementary teacher... crumpling up anything the students produce as metaphysical reproductions of a contingent truth, scribbling incoherent wordplay on the chalkboard, smoking cigarettes in class deep in thought, while kids sob and wallow in the meaninglessness of it all. No, it makes sense that many educators would be drawn to the possibility of creative conversation.

For many ecologically-minded educators, Gadamer offers the possibility of contributing to an after-Cartesian conception of education vis-à-vis a new kind of encounter with the “otherness of nature.” For example, Mauro Grun (2005), drawing on the work of Bowers (1993), argues that the deeply embedded Cartesian ideal at the center of the modernist educational project has an obfuscating effect on any attempt to understand the complexities of the ecological crisis.

One of the elements that prevents an understanding of the environment in its intricate complexity structure is autonomy, a key characteristic of Cartesian

thought. In Cartesian epistemology the observer sees nature as if looking at a photograph. There is an “I” who thinks, and the thing that is thought of; this thing is the world turned object. The autonomous subject is someone outside of nature... The autonomy of the thinking subject, free of cultural values and through its independence from the environment, is constituted as the very basis of education, rather than being seen as a possible deficiency. The Cartesian cogito is thus the basis of education. (Grun, 2005, p. 158)

It is not that education does not address “environmental issues,” even ethical debates such as climate change, deforestation and overfishing can be found in the Science and Social Studies curriculum (BC Ministry of Education, 2007; 2008; 2010); but these issues tend to be addressed from a fundamentally instrumental perspective and all too often end up ensnared “within the fine mesh of Cartesian discourse” (Grun, 2005, also see Bowers, 1993).



An example from my own education, a simple question from my Grade 6 teacher: “how do we differentiate human from the rest of the animal kingdom?” If I were to think back and offer the “textbook answer” to this perennial question, I may reach for the common definition: *humans use tools* (read: technology, the definition has been forced to shift as many other animals have now been shown to use tools). Human as technology user, human as different, human as special; the Cartesian assumptions are already embedded within the premise of the question itself. The invidiousness of this cosmology is further illustrated in another common question, *are we alone in the universe?* Of course we are not alone, we inhabit a planet of unimaginable diversity and manifold creatures, only the most extremophilic life forms can exist in the absence of the complex interrelatedness of being, but this is to miss the *real* question. The *real* question being asked is, are we the lone technology users in the universe, the lone “intelligent” civilization (as if animals and plants exhibit no intelligence), or in other words, are we the only species in the universe that has developed a subject-object duality in order to exploit its *oikos* and construct an exclusive house-of-being with thick walls (or in Gadamerian terms, horizons) in order to insulate itself from the polyphonic song of the world? Perhaps the underlying motivation for scientific projects such as the SETI Institute (Search for Extraterrestrial Intelligence) is less *scientific* and more *psychological*, which is to say, misery loves company.



The “I” in education is almost always identified as user of technology and “natural resources,” instead of the interdependent and interrelational “I-World” that it actually *is*. As Indigenous scholar and educator Cajete (1994) has charged:

Contemporary educational systems, ways of living, ways of relating to other people and other cultures have evolved from a paradigm that does not serve life, but modern technology. In many ways, we are bound to those technological tools that create our environment. These tools do not allow us to establish a sustainable and direct relation to the earth or realize our primal relationship to it because they have largely been created with reference to the old Newtonian-Cartesian paradigm. (p. 80)

Grun has added:

The need to examine how Cartesian cultural tenets influence teaching as a whole, and consequently, how they determine our process of understanding, is a task of great urgency that can no longer be postponed. Disruption, fragmentation and the individual separate from his/her ecosystems are important anchoring points within the Cartesian orientation of the curriculum. However, Cartesianism is manifested also in much that is not expressed or articulated. For there is much that Cartesianism does not allow by dint of its projection of itself as the only possible mode of comprehending reality. (2005, p. 162)

As Heidegger has pointed to, the real tragedy is not so much in the instrumental mechanization of person-world relationships per se, but the prosaic disclosure of an “as-structure” that silences all other ways of revealing and comprehending the world. These “areas of silence in modern education” are *enframed* (Heidegger) or *enclosed* (Bowers) by a Cartesian ontology that conceals “that revealing which, in the sense of *poiesis*, lets what presences come forth into appearance” (Heidegger as cited in Deluca, 2005, p. 79-80).

How do we develop the linguistic ability to remediate the fundamental severances of a Cartesian ontology? First, we need to recognize that there is an other - namely the more-than-human world - to communicate with. Addressing the silencing or backgrounding of nature (Plumwood, 1993) is a key aspect of ecohermeneutic mycoremediation. In the chemistry class, in history and math, even woodworking, nature is simply absent, unacknowledged, deadened. This is less the premeditated syllabus of an ecocidal Cartesian elite of technocrats, principals and shop teachers, and more a cultural blind spot, an everyday ontological ignorance. For Gadamer, too

much familiarity hampers understanding and open communication only become possible when we explicitly address the otherness of what we seek to understand.

Nature is an Other that addresses us. The voice of this other constitutes then an area of hermeneutic understanding. The living language of a dialogue makes possible an understanding of the Other. Hermeneutic experience is based not only on a consensus with the Other. Gadamer is not seeking an ontological sameness, but an understanding of what is not the same, of being that is Other... Any attempt to understand nature through the will to control it, is thus not an interpretational paradigm, for interpretation is possible only when the Other can stand as self-presenting. To grasp the meaning of nature as a form of forecasting about it and control over it is not an act of understanding. (Grun, 2005, p. 164)

There is a subtlety here that is of paramount importance. While healing the severance between Cartesian dualities is a fundamental task of ecohermeneutics, ontological sameness is not. This may appear to be a kind of philosophic problem and not immediately applicable to pedagogy or ecological ethics, but it lies at the heart of each.



Three apples sit before you, all signified by the word “apple,” but closer attention reveals the differences between them and discloses their “as-structures:” apple as tasteless commodity, apple as organic heirloom variety, apple as mythopoetic archetype; apple as knowledge, apple as teacher, apple as self; *this* apple. Three trees stand before you: tree as board feet of lumber, tree as taxonomic classification, tree as node in a forest of relationships; tree as knowledge, tree as teacher, tree as self; *this* tree. Three students stand before you: student as student number, student as productive citizen, student as individual learning style; student as knowledge, student as teacher, student as self; *this* student.



Zwicky: “Reductionism says connectedness is sameness; the contemporary academic version says further that sameness is revealed through analysis. Metaphor understands connectedness as resonance... (2003, p. 105)

Ontological attention is a response to particularity: *this* porch, *this* laundry basket, *this* day. Its object cannot be substituted for, even when it is an object of considerable generality (‘the country’, ‘cheese’, ‘garage sales’). It is the antithesis of the attitude that regards things as ‘resources’, mere means to human ends. In

perceiving *thisness*, we respond to having been addressed. (In fact we are addressed all the time, but we don't always notice this.) (p. 52)

An interpretational paradigm is not possible when the other remains concealed as standardized, instrumentalized, a resource for development. The other must stand as self-presenting in its unique being, *this* being that addresses you if only you recognize it as such.

Indeed, we can only understand text or nature when we understand the questions to which they constitute the answers. We consider ourselves addressed by nature. Gadamer defines this as the truth of historical consciousness. Only historical consciousness renounces the chimera of a perfect ultimate enlightenment, and instead opens itself to history. The same may be said of our relation with nature, especially if we let go of the modern knowledge that emphasizes control over things, and instead recognize the structure of open-endedness that exists in our dialectic of hearing of nature. (Grun, 2005, p. 167)

This all sounds fantastic; clearly Gadamerian hermeneutics provides a way of addressing the otherness of nature and moving towards a dialectic of hearing the more-than-human world - except Gadamer claimed he heard

nothing.



Mick Smith (2001) has explored some of the fruitful possibilities of using Gadamerian hermeneutics (and the work of Walter Benjamin) for environmental theory. Both, he argues, understood language as an expression of being and might be used to broaden the “anthropic conception of language and address the possibility of interpreting non-human expressions in determinate ways” (Smith, 2001, p. 60). As we have seen, Heidegger and Gadamer are mired within the Western tradition and rarely realize the water they breathe; they *naturally* privilege culture over nature, *logos* over *physis*. To those who would argue that science, particularly the relatively new field of ecology, gives voice to the natural world, Smith reminds us that even when these projects are “well intentioned” (i.e. research into climate change, etc.) the foundational scientific claim to objectivity all too often “serves to gag any attempt to speak *for*

nature” (Smith, 2001, p. 60).⁸⁸ This is Science as Truth, vociferating in every classroom, on every channel, and in every mechanistic metaphor - a single, unanimous proclamation that drowns out all other voices.

We are special.



According to Smith, Gadamer’s work has directly challenged some of the excessive vanity of the Enlightenment’s idolization of *Kultur*. The concept of being *cultured*, at that time, meant “that one could be lifted up above the rawness of the state of nature and progress along this path to become a perfect ‘policy maker,’ toward complete humanity - this was the arrogant confidence of modernity at its beginnings” (Gadamer as cited in Smith, 2001, p. 61). The beauty and presence of nature has always posed somewhat of a problem for this “Enlightened” arrogance and was addressed specifically in Kant’s more Romantic writings on the aesthetic and moral profundity of nature as it affects humanity. But even the Kantian conception of an aesthetic *language* of nature is skewed in such a way that it exists solely for our own moral edification; its radiant beauty speaks *only to us* as a reminder of just how special we are (Smith, 2001, p. 61). For Gadamer, even this overtly anthropocentric concession of an aesthetic voice for nature is problematic. In his work, Nature consistently figures as “dumb contrast to culture’s volubility” and delineates the limit where language ends. As he puts it, the conversation always takes place in the word, in the human (“the learnable ones”).⁸⁹ At the horizon of nature all things fall silent.

⁸⁸ Smith references the Heideggerian conception of science as revealing nature for its own purposes and silencing poiesis and other forms of expression. “If, as Heidegger argues, science forces nature (the earth) to manifest itself in a manner that accords with its own technological requirements, thereby denying it all other forms of expression, then science may prove a doubtful ally for those trying to conserve and explore other aspects of nature’s being” (p. 60). This position has been further explored by Joldersma (2009), who agrees that an instrumental conception of Science is anti-ecological but a hermeneutic reinterpretation of science could disclose the earth as something fragile and something for which we owe gratitude and responsibility. “To reinterpret science, including particularly its instrumentation, hermeneutically, we must understand science primarily as a set of embodied social *practices* rather than as an abstract process of developing and justifying theories” (p. 475).

⁸⁹ Again we are confronted with the abominably anthropocentric question: what differentiates humans from animals? “Man ‘has’ the word...and that is precisely what distinguishes him from all other natural creatures” (Gadamer in Smith, 2001, p. 63)

Gadamer uncritically accepts that becoming cultured entails distancing oneself from nature and that this distancing is facilitated by our particular ability to share in human language, in the communality of the word. But the danger in making conversation a purely human affair is that we become deaf to nature's entreaties, that becoming cultured means paying more attention to the language of *haute cuisine* than the cries from the slaughterhouse. There is no need for this to be so, indeed to even believe that it is so is a sign of the hegemony of humanism and anthropocentrism in modern Western linguistic traditions. Somewhere along the line other aspects of nature must enter human discourse. It is only our modern form of life that stops us recognizing that nature too can impart something of itself just as immediately and just as magically as the human word. (Smith, 2001, p. 72)

The implications of being "lifted up above the rawness of the state of nature" are clear in Smith's account. Exploitation of the "standing reserves" of the Earth - the industrial scale slaughterhouses of agribusiness, the continental clear-cutting of ancient forests, the severing of a "childish" animistic relationality with the world via education - is contingent upon the anthropocentric and logocentric hegemony in Western traditions. It is contingent upon gagging (i.e. schooling) any attempt to speak *for* (or in ecohermeneutic terms, to be *of*) the Earth.

In spite of Gadamer's lingering anthropocentrism, Smith believes that his conception of language as an expression of being could be broadened to include the language of nature and its expression in the word (p. 68). Unlike Gadamer, we do not want to circumscribe language so that language and being end where nature begins; rather, we want to employ language to draw attention to the interconnectivity of being and the significance of reading *and* being read by the world. The ontological aspect of this reorientation is that the things that we express are not signs of something else within, some soul or essential self, or, as Gadamer critiques, some pre-linguistic mental state that mediates thought and meaning. That which is expressed by being in a manner that can be communicated *is* language (Smith, 2001, p. 67). Meaning is not a human mental construct; something is meaningful when it communicates something of itself, of its being, be it a person, a bushtit, a chanterelle, a rain cloud or a pen. Gadamer admits we can "speak not only of a language of art but also of a language of nature - in short, of any language that things have" (Gadamer as cited in Smith, 2001, p. 68).

The recognition of the importance of the cultural mediation of nature slides into anthropocentrism as we elide the difference between arguing that nature expresses itself meaningfully in playing a role in human social practices, farming, eating, traveling, etc., and saying that nature's meaning is limited to and determined by those practices. This effectively makes human social practices the sole producers of meaning. But, the monsoon does not become meaningful simply because certain social practices ascribe meaning to it. It is meaningful

because it too is party to a particular 'form of life'. It is because the effects it produces make an impression on that mode of being in the world that they are carried over into its linguistic tradition. This impression is the *monsoon's* message. (Smith, 2001, p. 69)

American Catholic writer and mystic Thomas Merton has also written of the language of rain in a similar vein:

The rain surrounded the cabin... with a whole world of meaning, of secrecy, of rumour. Think of it: all that speech pouring down, selling nothing, judging nobody, drenching the thick mulch of dead leaves, soaking the trees, filling the gullies and crannies of the wood with water, washing out the places where men have stripped the hillside... Nobody started it, nobody is going to stop it. It will talk as long as it wants, the rain. As long as it talks I am going to listen. (as cited in Abram, 1996, p. 73)



Gadamer has written “the best definition for hermeneutics is: to let what is alienated by the character of the written word or by the character of being distanced by cultural or historical distances speak again. This is hermeneutics: to let what seems to be far and alienated speak again” (as cited in Gallagher, 1992, p. 4). The more-than-human world has been traditionally construed as the antithesis of culture, even within the hermeneutic tradition, our experience of it has been alienated by the character of the written word. This is the essential task of an ecohermeneutic approach to education, to let the more-than-human speak again.

Mindfulness of our rootedness in Earthly experiences is a breakthrough to the belonging-together of things that goes on without us, without our doing. It is a realization of the deep Earthly collectivity of things that is not of our own making, wanting, or doing. In one formulation, hermeneutics seems to verge near this: the hermeneutic project is concerned with, “not what we do or what we ought to do, but what happens to us over and above our wanting and doing” (Gadamer, 2004). But this hermeneutic project still remains a matter of Eurocentric enculturation, lacking the scent and the fragrance of and the fleshy intersections of an Earth that “happens” (even if it *doesn't* happen “to us”) and to which we are indented in silent ways that speak neither Greek nor German. In mindfulness of this silent collectivity of the Earth, there is an archaic debt at work, the debt of breath and blood and sun and soil and sky, and all those hopelessly naïve things the forgetting of which threatens to suddenly and violently trivialize our urbane theorizing with unspeakable ecological events that we, in all our earnestness, cannot outrun or sidestep. (Jardine, 1998, p. 87)

Thus, although an ecohermeneutic curriculum draws much inspiration from its Western roots and gleans domestic wisdom where it is to be found in these traditions, I would now like to explore an ecohermeneutic approach to education primarily as a *re-indigenization* of curriculum. But this requires great care, attention and humility. In the next chapter, I want to explore an ecohermeneutic encounter between Western modernity and Indigenous worldviews. In order to do this respectfully and ethically we must revisit and recognize (re-think) the fierce critical consciousness required to confront, uproot and decompose the colonialist legacy.

4. mycoremediation & education

Are we to be put off and amused in this life, as it were with a mere allegory? Is not Nature, rightly read, that of which she is commonly taken to be the symbol merely? When the common man looks into the sky, which he has not so much profaned, he thinks it is less gross than the earth, and with reverence speaks of ‘the Heavens,’ but the seer will in the same sense speak of ‘the Earths’ and his Father who is in them. ‘Did not he that made which is *within* make that which is *without* also?’ What is it then, to educate but to develop these divine germs called the senses? For individuals and states to deal magnanimously with the rising generation, leading it not into temptation – not teach the eye to squint, nor attune the ear to profanity. But where is the instructed teacher? Where are the *normal* schools? (Thoreau, 2010, p. 403)

Bringing out these living interweavings in their full, ambiguous, multivocal character is the task of interpretation. There is thus an intimate connection between interpretation (concerned as it is with the generativity of meaning that comes with the eruption of the new in the midst of the already familiar) and pedagogy (concerned as it is with the regeneration of understanding in the young who live here with us in the midst of an already familiar world).

It is not simply that pedagogy can be one of the themes of interpretive inquiry. Rather, interpretation is pedagogic at heart. (Jardine, 1998, p. 34)

In the final part of this paper I would like to address the specifically educational dimensions of critical ecohermeneutics. I will begin with a discussion of why education is an ecological issue of central importance and note the limitations of many efforts to date to address the depths and complexities of ecological understanding in the form of “environmental” or “ecological” education initiatives and programs. I will then explore the intricacies of critical ecohermeneutics as a re-indigenization of curriculum within the colonial State of Canada. Before we germinate the spores of an ecohermeneutic curriculum, however, I want to touch upon why it is vital that a critical consciousness coevolves with ecohermeneutics. Just as a boreal forest is not able to reach maturation without symbiotic interactions between subsurface roots and mycelium, an ecologically healthy culture will never mature in the absence of historical and critical consciousness. This might be considered the healing potential of critical ecohermeneutic

recycling, a kind of understanding that emerges to decontaminate the toxic soils of modernity in a time of clear-cuts and diminishing returns.

The activities of mycelium help heal and steer ecosystems on their evolutionary path, cycling nutrients through the food chain. As land masses and mountain ranges form, successive generations of plants and animals are born, live and die. Fungi are keystone species that create ever-thickening layers of soil, which allow future plants and animal generations to flourish. Without fungi, all ecosystems would fail.

Mushroom spawn lets us recycle garden waste, wood, and yard debris, thereby creating mycological membranes that heal habitats suffering from poor nutrition, stress and toxic waste. In this sense, mushrooms emerge as environmental guardians in a time critical to our mutual evolutionary survival. (Stamets, 2005, p. 1)

Critical ecohermeneutics is a philosophical mycorestoration strategy, an attempt to inoculate the worldview of modern Western culture at the site of its educative engineering. With that said, we are already enmeshed within a very complex, ecologically destructive and fragmented situation. A healthy dose of critical consciousness seems appropriate if we are to remediate the current culture of mechanistic dominance. Critical ecohermeneutics promotes the development of a resistant mycorrhizal network; to emerge when the time is favourable and spread like wild spores in the manicured killing fields of History.

4.1. education & the quotidian holocaust of now

From a critical ecohermeneutic perspective, the present educational system is seen to reproduce a dominant culture characterized by fundamental severances; one that transmogrifies our home into “a meaningless objective mechanism which is at the disposal of our whim and consumptive fantasies” (Jardine, 1998, p. 9). This dominant culture has been called a “culture of make believe” by Jensen (2002), where “the problem is that of seeing ourselves and others as instruments to be used, instead of people to be enjoyed in relationship” (2002, p. 601). Ecofeminists have described it as a culture of patriarchy and oppression, a “network of dualisms”, bequeathed to us from a “master rationality” unable to acknowledge its dependency on nature because “its knowledge of the world is systematically distorted by the elite domination which has shaped it...” (Plumwood, 1993, abstract; also see Merchant, 1980). It is a culture of ecological crisis with a “Titanic mind-set” (Bowers, 2008a, p. 11) carried between the lines of “the layered metaphorical nature of thought/language” in the form of root metaphors and environmentally destructive remnants from the past. “This mind-set leads to the constant repetition of the word ‘progress’ - progress in science, in technology, in education, in new consumer markets and in self-discovery. As ‘progress’ serves as the talisman of modern individuals, it makes it unnecessary for them to explore the nature of ecological thinking and why it is needed ” (Bowers, 2008b, p. 3).⁹⁰

If we use the 1962 publication of Rachel Carson’s *Silent Spring* as the initial moment of a gradual mainstreaming of environmentalism in the West, we could say that environmental education has been at least *active* for almost fifty years. Despite the recent swell of public interest in issues of ecology and biodiversity, and the emerging consensus in the scientific community about the impending perils of global climate change, knowledgeable commentators are hard pressed to point to any significant behavioural shifts (Joldersma, 2009).

Populations are still increasing, degradation of the planet is expanding, resource consumption is growing exponentially, and, for the most part, those who are responsible, the privileged of the west and north, continue to fiddle, like modern day Neros, while the globe burns. Ironically, they are also the most likely to have been exposed to environmental education. (Blenkinsop, 2010)

⁹⁰ Along similar lines, ecolinguist M.A.K. Halliday has written, “what is beneficial at one moment in history may be lethal and suicidal at another” (as cited in Steffensen, 2007, p. 15).

David Orr has judiciously observed that the ecological crisis is not necessarily the work of “ignorant people,” rather the “well-educated” populations of developed nations. By way of a metaphoric comparison, Orr reminds us that the perpetrators of the Jewish Holocaust were the direct heirs of Kant and Goethe, and that the Germans were widely regarded as some of the best-educated people on Earth before and during the rise of Nazism. Which begs the question - what characterized their education? He quotes Elie Wiesel, “It emphasized theories instead of values, concepts rather than human beings, abstraction rather than consciousness, answers instead of questions, ideology and efficiency rather than conscience” (as cited in Orr, 1991, p. 52). A similar description might be made of our present educational system in Canada and its instrumental-technocentric approach to the more-than-human world. Orr traces the foundations of these modern education systems back to the usual luminaries of the Enlightenment – Francis Bacon, Galileo Galilei and Rene Descartes.

But what is the point of placing blame so squarely upon the heads of these tragically grand thinkers? In dialectical terms we might even say that these thinkers have been *indispensable*, for without coming to understand the consequences of the Cartesian turn, the modern hermeneutic tradition would never have got off the ground (not to mention a certain level of emancipation from autocratic Church doctrines). Historical consciousness is one thing, but transferring blame for the environmentally destructive lives that we perpetuate to historically iconic figures is quite another, and does not seem to take responsibility in an appropriate way. Again, by way of metaphoric comparison, despite the individualistic slant in much of the history we teach in school about the rise of the Third Reich, Hitler was not solely responsible for the Holocaust. It was incorporated, embodied and executed by everyday, well-educated citizens. Today, we find ourselves in a world of a different kind of holocaust, a world of diminishing returns, of less wildlife and wilderness and wildness every passing year. How could this happen in our time? What, one might ask, is the education system teaching people these days? Where do we even begin with a crisis of this magnitude?

I want believe, like so many others, that education is a potential solution. I would like to say that an enlightened education system, focused on sustainability and stewardship and an eco-friendly ethos can deliver the promise of a new ecological consciousness. But I am given pause by Orr’s observation regarding the *well-educated*, and by Blenkinsop’s wry addition that we are the ones who are most likely to have been exposed to environmental education. Perhaps this is the problem? In attempting to blend ecological education with a school system steeped in Western philosophical presuppositions - dualism, instrumental rationality, reductionism, linear causality

– we may have doomed ourselves to futility. There seems to be a resounding unwillingness or inability to introduce an a suitably deliquescent critical consciousness to this work, to ask questions that challenge the sacred cows of Progress, Technology, of Language itself. How do we begin to recognize that we have already been co-constituted by a world of escalating toxicity (dioxins literally a part of our bodies, instrumentalism literally a part of our minds)? How do we learn to listen to the absences, to the clear-cuts and silent wetlands that were once places of reverberant choruses? How do we recognize the ecological holocaust that we are participating in everyday?



Orr is not the only theorist to draw disturbing connections between the dominant culture and its holocaustic tendencies towards the more-than-human world. Jensen (2002) has commented on the invisibility, familiarity and everydayness of twenty-first century holocausts:

Each holocaust is unique. The destruction of the European Jewry did not look like the destruction of the American Indians. It could not because the technologies involved were not the same, the targets were not the same, and the perpetrators were not the same... And, just as similarly, the holocausts of the twenty-first century will not, and do not already look like the great holocausts of the twentieth...

What will the great holocausts of the twenty-first century look like? It depends on where you stand. Look around.

The holocaust will look like numbers on ledgers. It will look like technical problems to be solved, whether those problems are increasing your access to necessary resources, dealing with global warming, calming unrest on the streets, or figuring out what to do about too many unproductive people on land that could be put to better use... The holocaust will feel like economics. It will feel like progress. It will feel like technological innovation. It will feel like civilization. It will feel like the way things are (p. 592-594).

Maybe it feels like salmon battering themselves against dams, monkeys locked in steel cages, polar bears starving on a dwindling ice cap, hogs confined in crates so small they cannot stand, trees falling to the chainsaw, rivers poisoned, whales deafened by sonic blasts from Navy experiments. Maybe it feels like the crack of tibia under the unforgiving jaws of a leghold trap (p. 596).

Maybe it feels like dragging yourself to a cinder block building every morning to berate and infantilize children because you are too overworked to imagine anything better?⁹¹ Maybe it feels like marching stressed young people into an auditorium of numbered desks in rows to write standardized tests that may well determine their future “earning potential”? Maybe it feels like marking children with red ink and shame tactics? Maybe it feels like doom and gloom reality checks, bringing kids up to speed on glacial recession and ozone depletion, punishing them by making them pick up litter in the name of the environment? Maybe it feels like the business-based solutions of *sustainable development* and *stewardship*? Maybe it feels like going to graduate school for a pay raise? Maybe it feels like losing your philosophy, your *love of wisdom*? But those are difficult things to think about, they require you

pay attention.



Let us take a soil sample of modernity, a lay of the land as it were. Some of the fundamental cultural values that the education system is obliged to inculcate in the next generation include: order, hierarchy, competition, compliance, standardization, individualization, person/world duality and what knowledge is and where it occurs (Blenkinsop, 2010, p. 7). Beeman and Blenkinsop (2008) have further expounded upon the inherent mode of being in modern Western culture as consisting of:

...mobility without penalty; perceived isolation or independence from the ecological processes that actually keep us alive; a historically unprecedented use of non-renewables to satisfy wants more than needs; generally fragmented human relations reduced to short-term interactions, normally for instrumental purposes; competitiveness; the culture of the individual; the culture of the human; and the hubristic conception of linear human progression to a position of superiority over what has gone before in human and ecosystem history. (p. 16)

⁹¹ Michael Apple (2009) has described how teaching and curriculum are controlled by the State in a process he has called *intensification*. “Intensification ‘represents one of the most tangible ways in which the work privileges of educational workers are eroded’. It has many symptoms, from the trivial to the more complex - ranging from being allowed no time at all even to use the bathroom, have a cup of coffee or relax, to having a total absence of time to keep up with one’s field. We can see intensification most visibly in mental labour in the chronic sense of work overload that has escalated over time” (p. 204).

Critical ecohermeneutics attempts to remediate this ecologically unjust and dysfunctional worldview in which modern education is embedded and which it reproduces. This is to reiterate that the education system is truly at the vanguard of this socially unjust and ecologically destructive paradigm. Any attempts to integrate concepts of stewardship and sustainability (to say nothing of a deeper ecological-ontological relationality) into the curriculum invariably run up against systemic barriers:

Environmental education in schools is currently limited in all kinds of ways - by the curriculum, by the nature of teacher preparation, by the expectations of parents, and most of all by a culture of schooling that has always been closely tied to the beliefs and values of the industrial era. As a consequence, despite many small-scale programs and initiatives across Canada (and elsewhere), there is little evidence that public schools anywhere are helping to build sustainable societies, and much evidence that the reverse is the case. (Blenkinsop & Fettes, 2009)

Sammel (2003) voices a similar concern about “state-sanctioned curricula” and the enclosing of education by commercial interests:

Throughout the twentieth century, formal education systems in modern societies have been in service of the state, and more recently of monolithic transnational business. In the past few decades the direction of Western educational agendas has shifted beyond the needs of nation states to embrace the global transnational world where the continual need of capitalism to expand markets is moving beyond the powers of the nation states themselves... education is being reduced to a sub-section of the economy as it increasingly becomes a vehicle for assisting growing markets... The relationship between economic globalization, nation state regulation, and education with its insidious movement towards standardized testing and managerial control disrupts environmental and social justice advancements, both locally and globally, as the conservative function of education allies itself with this current vision maintaining the status quo, thus advancing the agendas of economic globalization. (p. 157)

At this point, there can be little doubt that education is an ecological issue. Though this is fundamentally different from the understanding - now fairly widespread - that ecology is an educational issue. The increasing popularity of Ecological Education in Ministry mandates speaks to the latter. What this kind of education typically entails is the development of an ecology unit in the Science curriculum that covers biotic versus abiotic factors in ecosystems, or the effects of bioaccumulation, or how “traditional ecological knowledge” can affect biodiversity (*See! The Cree burned grasslands in Northern Alberta, so we should be able to frack for gas, right? It is only human nature*). The inclusion of sustainability and stewardship as an overarching educational

imperative for the development of responsible global citizens⁹² is still utterly encased within a Western cultural-historical perspective. As Judson (2010) has written:

The development of what some call *ecological understanding* is often cited as the aim of Ecological Education. To understand ecologically is to make sense of the human world as part of, not apart from, nature; it is to understand humankind's "implicatedness in life" (Orr, 2005, p. 105). The problem, however, is that Ecological Education is ill-equipped to achieve this aim. (p. 1)

On one level, the field as a whole is limited. Its marginal status in schools makes its aim to change students' perceptions of the world at best optimistic and at worst delusional. But simply moving the practice of Ecological Education in its prevailing form from the margins to the center of schools is not going to make it effective. There are deeper problems with Ecological Education practice when one considers its aims and how it attempts to achieve these. (p. 25)

Indeed, the problem with many ecological education initiatives is that they seem to lack both the putrescent critical consciousness required to reveal and decompose worldview presuppositions and the ontological depths to elicit a deeper relationality with the more-than-human world. It is this argument, extending the mycelial network woven in previous chapters, that I would now like to explore.

⁹² A BC Ministry of Education document entitled: *Sustainability Course Content* (2010) proudly proclaims: "Sustainability topics go well beyond natural resource extraction and use. They are linked to environmental indicators such as water quality and ecosystem diversity, and to social indicators such as human health and economic growth. Sustainability also touches on other topics such as design, urban planning, and transportation policy (p. 3)." Suffice to say that deep ontological connection to the resonant ecology of meaning in which our lives are embedded is not a "sustainability topic".

4.2. revitalizing the critical in ecohermeneutic inquiry

The *critical* aspect of ecohermeneutic inquiry is not some kind of sophistic adornment, not a vestigial organ that atrophied in 1968 when radical praxis was an vital threat (or apparently anyways) to the industrial capitalist hegemony. Suspicion, however, is not unwarranted. These days the word *critical* seems to be pinned onto theories more as a rhetorical strategy for mobilizing a tradition in support of an argument, instead of providing an indication (however limited) of a menacing, living, fire-breathing praxis. What does it mean when university campuses are bursting with “critical theorists” and it is otherwise business as usual? What happens when critical theory or ecofeminism or green anarchism become just another “nonanthropocentric egalitarian morality” (van Buren, 1995, p. 265) at the table?

I hear a knock at my door.
Impossibly
It is a telegram from Frankfurt.
I open it to discover a message
From Jurgen –
Ich habe Sie gewarnt

I warned you.



John van Buren (1995) has written extensively on environmental philosophy (as well as Heidegger) and has sketched the rough outlines of a *critical environmental hermeneutics*. His sketch essentially focuses on hermeneutics as the basis of a critical environmental ethos that addresses the “general features of interpretation, specifically of the environment, and attempts to clarify and help us cope with the epistemological, ethical and political conflicts that arise” around forest usage (p. 260). It all sounds fabulously seditious at the outset; van Buren is extensively well read and writes in a crisp and perspicuous style, summarizing various hermeneutic interpretations of a forest ranging from a lumber company, to the traditional Amerindian experience, to a bioregional anarchist perspective. Yet, amongst the clean categorizations and pedantic models, I kept waiting for the *critical* to emerge - to reach out from the page and grab me by my privileged little throat, to thrust the gift of distress in my face and compel me to question my complacency in the environmentally destructive paradigm of the dominant culture. It never happened. Critical, for van Buren, appears to have more to do with “arbitrating

conflicts” and cultivating “communicative openness in institutional forums for dialogue in which all knowledges, values, and social groups can participate” (p. 267-268). His proposed forums for dialogue are inspired by the Socratic tradition and the so-called fundamental social demand in our civilization for “rationality” and “reasonableness” in our communicative dealings with others.

Wait a minute - what? I find it difficult to expect reasonableness in communication from an insatiable civilization that has been historically characterized by its genocidal treatment of Indigenous populations around the globe. Likewise, what evidence is there to suggest that “rationality” will prevail in dialogue with a State that has pushed our only home to the brink of ecological collapse for short term capital gains? Although there is no doubt in my mind that van Buren is well-intentioned, I fear he is promoting yet another perspective inadvertently and hopelessly enmeshed in the presuppositions of modernity that tend to work towards reforming business as usual, not transforming our fundamental ontological relationality with the more-than-human. The logic informing van Buren’s forums for dialogue remind me of the “*everything-is-of-equal-value* attitude” Bang and Door claim is characteristic of the socio-cultural order of modern capitalist society (2007, p. 11-12). An order that has consistently marginalized or silenced (or forcibly gagged) the voices of Indigenous peoples and the more-than-human world in the name of Progress. Worse than that, I am afraid of the ways I am similarly enmeshed; of all the EPOCHAXis presuppositions that slip by me as I espouse the Ironic Understanding touted by Egan (1997) for example. Is this kind of understanding not also firmly enmeshed within the Western Socratic tradition?

Yes, as we have seen in previous chapters critical ecohermeneutics draws heavily upon Western traditions in order to intertwine all knowledges and values into a more holistic kind of understanding and thus enable diverse kinds of understandings. At least this is part of its potential, but my hope is that it does something else too, something more... *critical*. But what exactly, what does that mean? Moreover, what exactly is my issue with van Buren’s otherwise flawlessly executed academic work, which strives to develop a set of legitimation criteria to which diverse interest groups could subscribe, leading, ideally, to the preservation of more forested land?

Perhaps “having an issue” is too strong. I point to the variances here not so much to quibble with van Buren, but to draw attention to the *something else* that critical ecohermeneutics can offer both hermeneutic theory and ecological pedagogy. There is an obvious kinship between critical environmental hermeneutics and critical ecohermeneutics, and just as in

our “real life” relationships, a kinship implies that we are willing to remain open to negotiating our differences so that we can learn, grow and deepen our ties. With this in mind, I will try to articulate my frustration with van Buren’s critical environmental hermeneutics, in the spirit of stimulating a flourishing kinship of ecocritical theories and praxis. My commentary might best be described as a twofold critique: the first having to do with the straightforward and chaste intellectual style of van Buren’s thinking (i.e. the way his writing *moves*); the second, a comment on his idealized and prescriptive critical consciousness, as compared to the potentially gritty and emergent possibilities proposed by critical ecohermeneutics.

I am reminded of poet Denis Lee’s assertion that, “A poem thinks by the way it moves” (2002, p. 20), and my logical extension that theses, and educational manifestos, and environmental ethics articles also think by the ways in which they move. I would describe the way that van Buren’s article moves as rational, abstract, categorical, precise, punctilious. Not that there is anything *wrong* with this kind of exemplary academic rigor, just that it reveals a certain way of thinking about the world. I cannot help but think that a part of what frustrates me about van Buren’s article, and, more generally speaking, about much of the writing in environmental theory and ecological education theory, is an utter lack of eco-poetic understanding in form. The communication of a message that is ostensibly, I assume, meant to transform our thinking about and behaviour towards the natural world (for example, how we understand forests), delivered in the same prosaic, standardized and unimaginative style that characterizes much of the modernist thinking it critiques. This is the *something else* that critical ecohermeneutics attempts to elicit; something other than broad analytic categories, mechanistic and calcified metaphors, concepts that appeal only to empirical understandings. Again, not that there is anything ill-considered with these ways of knowing, but it is important to point to their co-existence within an ecology of more ambiguous, irrational, lyrical and often ineffable ways of knowing and relating with the world.

For example, van Buren claims that, “The basic perspectives on forests can be broken down into ‘land,’ ‘life,’ ‘lumber’ and ‘leisure’” (p. 262). Well, yes that is true, and makes for a useful mode of analysis. *And* no, that is not true, which is to say, there are no categorical perspectives that can encapsulate and break down our complex relationality with forests. A

critical ecohermeneutic approach, on the other hand, would not only explicate the multiple perspectives on environmental issues; it would work towards ontological elicitation, to draw attention to the multivocal, living and metaphorical resonance of what-is.⁹³ Although van Buren claims that his is a deep hermeneutics, which analyzes the underlying epistemological, ethical and political sense of practices and interpretations of the environment, I find it lacking in resonant depth. In this sense, I am proposing that critical ecohermeneutics runs *deeper* than critical environmental hermeneutics. It is dirtier and more serpentine; it is *of* the dark recesses of the moist Earth itself; it is simultaneously putrefying and beautiful; sometimes (*gasp!*) it is even wildly irrational, lyrical and well beyond reasonable explanation.

My second frustration with van Buren may help to further explore the complex, but necessary push and pull between critical consciousness and ecohermeneutic understanding. On the one hand, a critical ecohermeneutic understanding seeks to draw ways of knowing into an ecology of possibility, for which multivocal interpretation is essential. On the other hand, it is vital not to succumb to the ideological naivete and relativism that Habermas and Apel warned of. Van Buren sees the critical task of environmental hermeneutics as one of arbitrating conflicts between different interest groups and their “truth-values,” ensuring that conflicts are “addressed in a clear and intelligent manner without the parties involved talking, as they often do, at cross-purposes” (p. 267). I, however, see a need to engage (sometimes to confront, to strike out like a shaft of light or a thorn, to putrefy like fungi) all parties with the phenomenology of interwoven ecological-ontological experiences of the more-than-human world, and to engage them in reflection upon the politics of their marginalization. If this process leads to volatile conflicts between those who would exploit our home for their consumptive desires and those who

⁹³ In discussing his “biophysical criterion” for preventing environmental interpretations from becoming relativistic and arbitrary (part of the “demand for rationality” or “reasonableness in our communicative dealings”), van Buren asks: “Does the interpretation fit the biophysical reality of the bioregion in question?” He continues, “The biophysical criterion stipulates only that interpretations must be ‘fitting’ to the bioregion, that they must fit the biophysical world to which they refer. Truth here means interpretive fittingness and adequacy. Even though a particular perspective on the environment is creatively interpretive and obviously goes beyond what is there from a purely biophysical standpoint, it must nonetheless be adequate to the biophysical reality” (1995, p. 268-269). Obviously the idea of a purely biophysical standpoint is at odds with the live, resonant and participatory relationality embodied in eco-poetic understanding. The idea strikes me as un-hermeneutic in a certain sense; one wonders what lies beyond this fixed pureland perspective? Listening to the wisdom of stones perhaps? Speaking to rivers and trees, learning lessons from the winds? Are these “fitting” or “adequate” interpretations of pedagogy from a biophysical standpoint?

recognize our ontological immanence within the ecology of interconnected being - so be it. Not everything can or should be “worked out at the table in rational debate - and not with guns on logging roads and on proposed development sites” (p. 268).

This is to say, a critical ecohermeneutics remains open to multiform possibilities of relation and resistance in the emergent moment, just as it remains open to a multivocal ecology of meaning. Anything less seems inappropriate and, in some cases, overtly colonialist. For example, would van Buren suggest to Zapatistas or Six Nations warriors that they need to set aside their differences and sit down “at the table” to rationally dialogue like civilized, Socratic peoples do? Sometimes *we already are at cross-purposes*, or as Bringhurst has written,

The European colonists’ arrival in the New World marks the escalation of a war that had been fought in Europe and Asia for more than two millennia and continues even now. It is a war between those who think they belong to the world and those who think the world belongs to them. It is the war between the pagans, who know they are surrounded and outnumbered by the gods, and all the devotees of the number one - one empire, one history, one market, or one God - and who nowadays insist on the pre-eminence of everyone for himself: the smallest number one of all. (2006, p. 40-41)

This is not, however, a pre-emptive declaration of war, but an attentive and ethically motivated opening of the landscape of possibility. The political activist in me wants to identify and expose what I see as *obvious* enemies: anthropocentrism, capitalist hegemony, the colonialist policies of the Canadian State, Monsanto, Weyerhaeuser, Enbridge, standardized testing, the banking concept of education (Freire, 2006), just to name a few of the usual suspects. But if we continue to run with mycelium, we recognize that fungal networks do not predetermine what needs to be decomposed; rather, they *encounter* the world as it presents itself, through a process of intimate and complex engagement in the dynamic moment, and respond appropriately. In this sense, a critical ecohermeneutic way of knowing is always a process of critical possibility, not a calcified state, doctrine or subset of behaviours.

Indeed, part of my critique of van Buren is that it seems as if he wants to sit industrialists, politicians, academics, indigenous leaders, environmentalists and “the common people” at the same table, as if levelling the playing field in the (Western) spirit of communicative rationality would somehow lend itself to mutual understanding and shared ethical imperatives. The situation is vastly more complex, emotionally charged, irrational, politically tense, and invariably draws upon the entire cultural-historical matrix that informs people’s ways of knowing. Sitting at a table seems too prescriptive, already too enmeshed in power relations and

the cultural crystallizations of established and dominant ways of relating to the other (the shape of the table itself, the air-conditioned room, pens and paper, cameras, the petroleum based carpet with its dreary corporate color schemes and linear patterns). Why not meet in a pit-house and tell stories of ancestors? Somehow this scenario seems absurd and culturally inappropriate and yet the assumption is that “the table” and rational discourse somehow equalizes?

Van Buren does acknowledge the existence of “nonanthropocentric egalitarian moralities” such as ecofeminism, biocentrism and green varieties of anarchism. However, these seem to be offered as somewhat radical perspectives to be subsumed in his primary categories of human actors related to the forest, namely: *people*, *officials*, and *academics* (1995, p. 265). These categories and constructs unfold seamlessly in an academic paper; and understandably, this may lead one to imagine that an equally seamless and rational communication is possible between various narratives in *real* life. And maybe it is, though I myself have doubts. A critical ecohermeneutic approach would remain at least open to the possibility. An ecohermeneut does not *necessarily* identify enemies in advance, does not predetermine what needs decomposition, rather she remains open to the multiform possibilities of *encountering the world as it presents itself* and responding appropriately. The rest follows of itself.

Although Habermas does not surface in the writings of van Buren in any explicit way, the “ethical-political norms of communicative environmental reason” (p. 275) purposed by van Buren seem reminiscent of Habermas’s quasi-transcendental principles of communicative reason. As we have seen in our discussion of Habermas and Gadamer, critical ecohermeneutics does not see an insurmountable divide between critical and ontological hermeneutics, and the same is true here. As van Buren writes:

...this story of communicative discourse, of “getting together and talking things out,” is a meta-narrative not in the sense of particular, substantive, and homogenous perspective that ideologically marginalizes all other perspectives, but rather in the sense of a nonsubstantive, procedural narrative that, without falling into subjectivism, makes room for radical heterogeneity and localism in environmental narratives. It espouses coexistence, communication, compromise, cooperation, and consensus. (p. 275)

The values that van Buren outlines here certainly seem conducive to classroom discussion; at the very least, we can agree that “getting together and talking things out” is a good starting place for education. But ecological education calls for something else than “dwelling together with our differences under the same roof.” Evoking Heidegger, van Buren has described his environmental communicative discourse as a kind of environmental hospitality, “of opening the doors to

rational debate between different environmental knowledges, values, and interest groups. As an *ideal*, environmental communicative reason is a mansion with many rooms” (p. 275). In contrast, critical ecohermeneutics is a kind of ecopoetic understanding that attempts to elicit ontological identification with the more-than-human world through disciplined awareness of our interconnectivity and ecoethical implicatedness. In principle, it *abhors* mansions with many rooms, just as it abhors the multi-roomed schools that confine and limit our ontological understanding of the more-than-human world. Ecohermeneutic communicative reason is a mycelial matrix with many fruiting bodies, many ways of knowing the world that all contribute to the health of the broader ecology that it inter-is with. Or if we must start from within the House, critical ecohermeneutics goes a different direction than critical environmental hermeneutics. It too wishes to “open the doors,” but not to travel from one room to another; rather, to walk *out*, to hold classes and meetings outside; to fall silent and learn to listen to the more-than-human world; to give rise to a critical ecological consciousness, by any dreams necessary.



David Utsler (2009) has also written on the subject of critical environmental hermeneutics with respect to the development of an ecological educative practice. Utsler offers Paul Ricoeur’s “hermeneutics of the self” as a possible way to overcome the anthropocentric-ecocentric binary and generate a dialectic between self and other-than-self (i.e. the more-than-human world):

The self, in Ricoeur’s philosophy, is not a self-constituting, immediate subject, but is, in part, constituted by the other. Self-understanding comes by way of a reflective, analytical detour and the dialectic of the self and the other-than-self over against the immediate positing of the subject in the cogito. Thus, a hermeneutics of the self as an account of personal identity would not oppose the anthropocentric to the ecocentric, but would actually require a creative tension between both to develop what I call “environmental identity” - i.e., self-understanding in relation to the environment. Neither the ecocentric self nor the anthropocentric self is privileged over the other; rather each is a constitutive element of one’s identity... Whereas at first glance, anthropocentrism and ecocentrism would appear to create a conflict of interpretations, a Ricoeurian hermeneutics of self mediates the two toward a more robust understanding of the self and the relation to nature. (p. 174)

In Utsler’s reading of Ricoeur, our sense of self is inextricably bound up with the ecological relationships of which we are part and that we experience through embodiment and

consciousness. This is what Utsler calls the “intercorporeal relationship between humans and the Earth” (p. 175). This movement towards an ontological relationality between self and world, or an “environmental identity,” is similar to the kind of participatory self-understanding that critical ecohermeneutics seeks to elicit. In this sense, the critical environmental hermeneutics that Utsler develops is much more symbiotic with critical ecohermeneutics than the variety outlined by van Buren.

Consideration of the tapestry of ecological relationships, including the human threads within, reveals a way in which we can come to think of the environment as another self based on intercorporeality. We may begin to understand the self so that it cannot be thought of without the Other of the natural world. And we would be right to do so. To be sure, how nature as event or environmental experience is interpreted is polysemic as well. (p. 175)⁹⁴

There is a recurring problem that has surfaced throughout this paper, one addressed by Heidegger and Gadamer, by Wittgenstein and Herakleitos, and one that will be instantly recognizable to any critically minded educator - that of ordinary meaning, familiarity, everydayness, the way it is. This “tapestry of ecological relationships” is all too often the blanket we were wrapped in at birth in a sense, we have required it to survive every day of our lives and as such, we rarely step back from it to recognize its patterns, to have gratitude for its life-sustaining weaves. Furthermore, many of the cultural presuppositions inculcated through modernist education have led us to believe that there is no tapestry, or that the human thread is somehow more special in the eyes of the Great Artisan, a golden weft that will be saved even if the tapestry becomes irrevocably tattered.

Utsler turns again to Ricoeur and his concept of *distanciation* as both a productive form of recognizing belonging and a form necessary for “the critical moment.” Striving to represent the world, we inevitably forsake its direct presence, we distance ourselves from the pre-reflective

⁹⁴ There is an interesting insight here regarding the polysemous experience of nature as an event of dialectical reciprocity between person and environment, both “biophysical” through eating, breathing, heat transfer, etc. and “interpretational” through gesture and meaning. As Ricoeur has noted, “...the constitution of the self is contemporaneous with the constitution of meaning” (in Utsler, p. 176). Why is the more-than-human world any different? Is the ontological nature of nature not polysemous (polyphonic, multivocal) as well? Is its unfolding existence in the aspect of time not “contemporaneous with the constitution of meaning”?

experience, the body's silent conversation with things. Within environmental philosophy we speak of being a part of nature and then contradict this by referring to the human impact on and devastation of nature, as if nature is something other than human. Ustler offers Ricoeur's distanciation as a "dialectical counterpart of participatory belonging that represents an oscillation between remoteness and proximity that makes up a fuller understanding of environmental experience" (p. 176). Distanciation "interrupts" the relation of belonging in order to "signify" it. Ustler applies this to environmental philosophy:

In whatever way we narrate our understanding or approach to the environment (e.g. deep ecology, shallow ecology, ecofeminism, ecophenomenology and so on), it is important to allow for this critical moment of distanciation. The divergence of interpretations and even the conflict of interpretations of the environment provide a space for critique through which we remain open to new and possible worlds. (p. 176)

This description seems consonant with a hermeneutics of possibility, and yet, instead of focusing on the pole of critical distanciation, I want to reemphasize that the real critical aspect of ecohermeneutics is manifest in the "oscillation," the interchanging movement between remoteness and proximity. That is, distanciation in and of itself can be critical but not ecohermeneutically critical; one needs the reciprocity between distanciation and proximal engagement for that. On the one hand, excessive distanciation could lead one to some kind of epistemological disconnection from an earthen ontology or a tendency towards transcendental universalities of the kind we tend to find with Habermas. On the other end, persistent proximity evokes the potential for relativism or, perhaps worse, the unconscious reproduction of ordinary meanings and familiar ways of relating to the world. A critical ecohermeneutic understanding always emphasizes movement, resonance, oscillation, interweaving - it has to in order to maintain its equivocal nature and safeguard against any hypostatic tendencies towards transcendental or relativistic ways of knowing.



The term *critical environmental education* has gained some prominence in academic literature and as a focus of study in recent years.⁹⁵ Sammel defines the term as representative of “pedagogies that strive to expose the taken for granted assumptions underpinning the content and process of teaching environmental issues while seeking action around injustices occurring as a result of our dominant cultural narrative” (2003, p. 157). The term ecocritical education does not designate a variety of “environmental education”, as in education devoted to environmental activism per se, but rather a framework for analyzing the way we have tended to think about the world and how else we might think about it and be within it. Critical ecohermeneutics might similarly be described in these terms, which is to say, it shares a kinship with ecocritical pedagogies that seek to move beyond existing historical-hegemonic structures that reproduce social and ecological injustice.⁹⁶ There is little in the literature regarding critical environmental education’s philosophy of language or its ontological inclinations, although Sammel has employed Gadamerian hermeneutics to interpret how one group of teachers made sense of practicing this curriculum (2003). Preliminarily there seems to be much shared ground between these two ecocritical pedagogies, though my initial sense is that critical environmental education also lacks the ecopoetic understanding and deep ecological-ontological interrelationality proposed by critical ecohermeneutics. My hope is that the following outline of an ecohermeneutic approach to curriculum will stimulate further exchange between these ecocritical pedagogies and provide some mycorrhizal food for thought.

⁹⁵ The University of Saskatchewan, for example, offers a two year masters degree cohort in Critical Environmental Education: <http://www.usask.ca/education/efdt/critical-enviro-cohort>.

⁹⁶ For example the work of C.A. Bowers (2008a; 2008b; 2009) and others in the Ecojustice Education milieu (Martusewicz, Edmundson, & Lupinacci, 2011). Ecojustice education is an approach that analyzes the increasing destruction of the world’s diverse ecosystems, languages and cultures by the globalizing and ethnocentric forces of Western consumer culture. EcoJustice scholars and educators also study, support and teach about the ways that various cultures around the world actively resist these colonizing forces by protecting and revitalizing their *commons*, that is the social practices and traditions, languages, and relationships with the land necessary to the sustainability of their communities.

4.3. critical ecohermeneutics as re-indigenization

Traditional systems of Indian education represent ways of learning and doing through a Nature-centered philosophy. They are among the oldest continuing expressions of “environmental” education in the world. Taken as a whole, they represent an environmental education process with profound meaning for modern education as it faces the challenges of living in the twenty-first century. These processes have the potential to create a deeper understanding of our collective role as caretakers of a world that we have thrown out of balance. (Cajete, 1994, p. 21)

Among ecocritical pedagogies, a more definitively ecohermeneutic approach to learning has been offered by Andrejs Kulineks, Dan Longboat and Kelly Young (2010) as a *re-indigenization* of curriculum. This conceptualization is the most consonant and complementary example of a critical ecohermeneutic approach to curriculum in the current literature. I would like to consider some of the key features of this ecohermeneutic curriculum, such as the connection to an ecojustice framework, the ecological significance of the oral traditions and ways of knowing, and the cultivation of a deep interrelationality with place. I would then like to further examine what exactly *re-indigenization* means within the colonial state of Canada and examine the shallow and expedient attempts by the British Columbia educational system to incorporate Indigenous knowledges. I will finish by exploring the concept of *Indigenous Metissage* (Donald, 2009) as a way to respectfully, humbly and critically move towards an ecohermeneutic re-indigenization of curriculum that necessarily entails a process of decolonization.



Ecojustice education has provided a framework for understanding the connections between education, cultural ways of knowing and the ecological crisis since the 1970s (Bowers, 2008a; 2008b; 2009; Bowers & Martusewicz, 2004; Martusewicz, Edmundson, & Lupinacci, 2011). Its foregrounding of the interrelatedness of human cultures with the more-than-human world and the linguistic dimension of ecological injustice presents obvious sites of symbiotic connection with ecohermeneutics. There is a shared kind of spirited critical consciousness in ecojustice education, specifically in its development of a framework for analyzing industrial-consumer culture in terms of *root metaphors* and patterns of thought that are environmentally destructive. Its proposed educational reforms often focus largely on enabling teachers’ critical understandings of cultural-linguistic processes, in order to help students recognize that the

metaphors that we live by (for example, valuing progress over tradition) are calcifications of archaic thought-patterns and power dynamics embedded in language. The task of an ecojustice education is to reveal these metaphors as cultural-historical constructs and call attention to how they have been implemented to manipulate human and more-than-human interrelationality (Kulnieks et al., 2010, p. 22). Indeed, according to an ecojustice perspective, the exploitative person-world relationship inculcated by Western education functions as a kind of toxic fountainhead for other forms of social injustice. Or as Abram has written: "...justifications for social exploitation draw their force from the prior hierarchicalization of the natural landscape, from that hierarchical ordering that locates 'humans', by virtue of our incorporeal intellect, above and apart from all other, 'merely corporeal', entities" (1996, p. 48; also see Jensen, 2002; 2004).

Ecojustice education is committed to supporting communities' efforts to revitalize their *cultural commons* (intergenerational practices, relationships, rituals, policies, etc) and recognize their connection to biological, cultural and linguistic diversity as critical strengths.⁹⁷ An important element of this revitalization process lies in encouraging opportunities to re-learn and develop a language that lends itself to eliciting interwoven relationships with place. One of the key reasons that Kulnieks et al. (2010) have drawn connections between an ecojustice framework and an ecohermeneutic curriculum stems from this shared respect for oral traditions and Indigenous knowledges.

Developing an ecojustice framework of reconnecting with life-sustaining ecologies of place can provide a much needed opportunity to develop the language required to re-learn and develop human relationships with the land that gives life to the present and future generations. Since ecohermeneutics necessitates storytelling, it is important to develop language that helps learners connect with natural landscapes. An ecojustice framework ultimately supports an ecohermeneutic curriculum by providing a vocabulary for naming the very

⁹⁷ Ecojustice as defined by Bowers includes five aspects that have special significance for educational reformers. (1) eliminating the causes of eco-racism, (2) ending the North's exploitation and cultural colonization of the South (3) revitalizing the commons in order to achieve a healthier balance between market and non-market aspects of community life, (4) ensure that the prospects of future generations are not diminished by the hubris and ideology that drives the globalization of the West's industrial culture, (5) reducing the threat to what Vandana Shiva refers to as "earth democracy" –that is, the right of natural systems to reproduce themselves rather than to have their existence contingent upon the demands of humans; ecojustice provides the larger moral and conceptual framework for understanding how to achieve the goals of social justice (<http://www.ecojusticeeducation.org>).

things that separate humans and the natural world... and seeks to develop an awareness that humans are part of the natural world. (p. 21)

By generating a vocabulary to name our fundamental severances, an ecojustice pedagogy provides obvious critical support for ecohermeneutic deliquescence and the decomposition of persistent ontological presuppositions in the curriculum - but does this necessarily develop the language required to re-learn and develop human relationships with the land? Does providing a vocabulary for naming the very things that separate humans and the “natural world” actually engender an awareness that humans are participants in an interwoven and resonant ecology all the way down?

An ecojustice vocabulary, for me, is a manifestation of the critical capacity to situate oneself at the distancing pole outlined by Ricoeur as it were, but a critical ecohermeneutic process always entails oscillating between this critical distance and the relational proximity necessary for resonance. An ecopoetic understanding that seeks to draw people into “imaginative encirclement as a primary mode of thought” offers the possibility of remaking “one’s relationship to knowing” (Hirschfield as cited in Zwicky, 2003, p. 68). This is essentially the point I tried to make in my previous juxtaposition of ecolinguistics as a highly structured ecocritical mode of *analysis* and ecopoiesis as a kind of ambiguous and multidimensional ecocritical mode of *relationality*. The latter seems less prominent in the ecohermeneutic approach to curriculum outlined by Kulnieks et al. (2010), although Kulnieks himself has explored ecopoetics in his unpublished doctoral dissertation (*Ecopoetics and the epistemology of landscape: Interpreting Indigenous and Latvian ancestral ontologies*, 2008).



The significance placed on oral traditions and oral ways of knowing the world in ecohermeneutics is more than recognizing that orality precedes literacy in the linear progression of a Western historical recapitulation. It is not a straightforward matter of developing the cognitive tools of orality *en route* to the inevitable literacy of highly cultured and “civilized” people. Oral traditions are viewed as key for re-learning how to speak and, more importantly, how to listen to the language of the more-than-human world. Implicit within many oral traditions and logics is an understanding that situates meaning as a relational resonance immanent in the world; as Bringham (2006) has described, the Earth is understood both as a source and record of meaning. Whereas Gadamerian hermeneutics, with its roots deep in

Western textuality and logocentricity, cannot imagine the meaning of oral language as other than purely human, ecohermeneutics acknowledges “pan-elemental” or more-than-human sources of meaning and learning, in oral language communities which have maintained an intimate relationality with place.

Kulnieks et al., drawing from both Bringhurst and Abram, point at the way our cultural-linguistic historicity has shaped our relationship with the more-than-human world and how Indigenous knowledges might be drawn upon as ways to elicit a sense of the “sonorous presence of Earth spirits” (Kulnieks et al., 2010, p. 17). As Abram has written, oral traditions engender an intrinsically different kinship with the world:

The practice of language among indigenous peoples would seem to carry a very different significance than it does in the modern West. Enacted primarily in song, prayer, and story, among oral peoples language functions not simply to dialogue with other humans but also to converse with the more-than-human cosmos, to renew reciprocity with the surrounding powers of earth and sky, to invoke kinship even with those entities which, to the civilized mind, are utterly insentient and inert. (1996, p. 70-71)

Ecohermeneutically speaking, even texts are relationally embedded within ecosystems.⁹⁸ “Writing, like human language, is engendered not only within the human community but between the human community and the animate landscape, born of the interplay and contact between the human and the more-than-human world” (Abram, 1996, p. 95). The seemingly obvious nature of this realization (how else could text exist?) is easily obfuscated by the distancing effect that text tends to have on the “experiential landscapes” in which stories initially emerge; this distancing, of course, has contributed to the way textual language excludes the natural world (Kulnieks et al., p. 21-22). It goes without saying that Western educational systems are indisputably fixated on text, whether it is via pencils or digital media. Whereas ecohermeneutic pedagogy seeks connection with the emergent, localized ecology of meaning emanating from the places that we learn and live with, the places we are *of*:

⁹⁸ Bringhurst (2006) offers us a lyrical way to think about this potentially counterintuitive observation: “Paper is two dimensional space, but as soon as language dances on the paper, it becomes a form of time” (p. 12).

An *eco-hermeneutic* curriculum includes moving beyond exclusively print-centered forms of learning in order to develop deeper understanding of place. Rather than depending solely upon its reconstruction through print-centered learning, eco-hermeneutics seeks to include interpretive experiential learning in the process of inquiry. These investigations include properly learning to tell and interpret stories that are indigenous to the place they live. (p. 17)

An eco-hermeneutic tracing of text includes the development of an experiential relationship with the places that fostered the development of a particular story. An eco-hermeneutic inquiry would require the reader to develop an understanding of the physical, ecological, and bio-cultural aspects of the story... (p. 18)

Perhaps the more difficult question here is *what to do with print* in such a curriculum? Like Kulnieks et al. I do not see a “hard and fast dichotomy between oral and literary tradition in cultures that employ both as a means of representing knowledge because they can become part of one another” (p. 17). This seems to be a problem of hypostatization and an unbalanced cultural privileging of and focus on literacy, not one of fundamental contrariety. Although I think that writing in context and allowing for time and relationship building with the more-than-human world (as both writing exercises and experiential play) will naturally lend itself to the permeation of the false membrane between orality and literacy. I envision an ecopoetic encounter manifesting as a kind of rewilding of literacy; as Bringham has asserted, poetry is what all language aspires to rejoin (2003, p. 210). This does not strictly mean that I envision outdoor poetry writing sessions (though one would hope for a few), but rather a complex intertwining and imaginative engagement with the more-than-human world that lends itself to the emergence of an ecological cadence in our writing.

Perhaps we could envision this as the establishment of a rhythmic oscillation between the “poles” of orality and literacy, the reciprocal interplay of the cognitive tools associated with each kind of understanding. This may engender a deepening reciprocity with the world itself via the lessons of oral traditions that would ideally manifest as a rich and variegated ecoliteracy. As we let go and allow an ecohermeneutic vortex to draw our attention “down,” the subtleties and particularities of the world will feed our creativity and hopefully inspire new kinds of insights, new metaphors, new engagements with the world. As Zwicky has written: “The ability to think analogically is a reflection of sensitivity to ontological form” (2003, 6). This reciprocity between metaphoric thinking and rich sensory experience and relationality is what is meant by ecopoetic understanding and ontological elicitation and why I insist they are fundamental for a critical ecohermeneutic pedagogy that truly draws upon oral traditions.



My sense is that there is no lack of concern about ecological issues amongst *most* educators. The real question is, what, in practice, should we do? How do we inspire an ecological consciousness? How do everyday Science, Math, History and English teachers address the complexities of incorporating oral traditions when new books about the Great Pacific Garbage Patch or genetic engineering or the threat of nanotechnology arrive every month? Documentaries on everything from peak oil to the obese excesses of the American diet arrive regularly on the resource shelf and the school library just received a shipment of National Geographic photography on, “The Hidden Tribes of the Amazon”. Is awareness of these global issues not the primary objective of environmental education? Are these not the ecological problems that future generations will have to solve? Or, to get more to the point, as Bringhamst has asked: why are oral traditions so important to a healthy coexistence with the world? What makes oral traditions an *ecological* issue that ought to concern educators?

Because oral culture means much more and less than simply talking. Rekindling oral culture means rejoining the community of speaking beings - sandhill cranes, whitebark pines, coyotes, wood frogs, bees and thunder.

Oral culture also means much more than telling stories. It means learning how to hear them, how to nourish them, and how to let them live. It means learning how to let stories swim down in yourself, grow large in there, and rise back up again. It does not - repeat does *not* - mean memorizing the lines so you can act the script you’ve written or recite the book you’ve read. Oral culture - and any culture at all - involves, as nature does, a lot of repetition. But rote memorization and oral culture are two very different things.

If you embody an oral culture, you are a working part of a place, a part of the soil in which stories live their lives. There will in that event be stories you know by heart - but when the stories come out of your mouth, as when the trees come out of the ground, no two performances will ever be the same. Each incarnation of a story is itself. (2006, p. 175)

It has been my experience that when *most* people hear one turn to the topic of oral traditions or Indigenous knowledges or even primitivism, they tend to respond with something to the effect of: *yes, that is all well and good, but we cannot go back you know*. This sentiment is interesting in that it reveals much about the directionality of *everyday* thinking. Firstly it reveals an essentially Western presupposition about the movement and geometry of time, which is to say that time is a unidirectional and linear phenomenon in which “we” march “forward” towards “progress”. Secondly it reveals much about political agency and the directives of the socio-cultural power elite; that is, this progressive march is not only desirable but inevitable, come hell

or high water as it were. Finally I think it hints at a deep-seated belief that we simply cannot *return* to an intimate relationality with the Earth, that we have been expelled and now we must look ever skyward in order to transcend this condemned flesh. Conversely, the directionality of critical ecohermeneutics tends to draw one out into the world, or downwards towards the moist and sensuous Earth - its geometry is recyclical, seasonal, iterative, a vortex of now. No one (or very few) who speak of the significance of oral traditions are suggesting that we somehow *go back*; rather what they are trying to get at is this deep sense of embodying a place as an ever-present possibility. Orality is an ecological issue because it offers us a means of “rejoining the community of speaking beings”. Its curriculum does not entail more talking or discussion necessarily, but learning how to listen, how to enter into stories and embody them⁹⁹ as a flourishing part of a place, how to let them come out of your mouth as trees from the ground, to mean and be meaning. When we think intensely and beautifully, something happens, and when that something comes out of our mouths, poetry is what people hear (Bringhurst, 2006, p. 143). Ecological educators need to be poets in that they need to think intensely and beautifully, they need to have an ability to think metaphorically and to critically scrutinize on the level of metaphor.

The importance of an oral logic is not limited in any strict way to verbalization or the language arts as we commonly understand them. Emphasizing oral understanding is a way to weave a fundamentally different way of knowing the world into the educational experience. This applies, of course, to conventional subject matter, but it also begins to get at a whole new relational ontology with the more-than-human world that emphasizes how one *is*, or how one *walks* in the world. As Saulteaux (Anishinaabe) scholar L. Akan has written:

⁹⁹ In an article discussing the importance of imagination and imagery in education, Egan and Gajdamaschko (2003) have offered us an interesting way to think about embodiment, “The image can carry the imagination to inhabit in some sense the object of our study and inquiry. By such means mathematics and physics, history and auto mechanics are not conceived as external things that the student learns facts about but become a part of the student; students thus learn that they are mathematical, historical, mechanical creatures. So, for example, in teaching poetry this principle will lead us to attend to images not only as things to be observed in the mind’s eye and understood in the overall structure of the poem, but also as things the student can inhabit or get inside of, so to speak. Poetry, then, is not something we do, but something we are” (p. 91).

The Elders' "walk talks" help us not to "walk around blind" or not to be in ignorance. This involves being mindful, to be aware of ourselves, conscientious of our actions and other living things... it involves knowing our epistemology, our ontology and our cosmology. (in Kulnieks et al., 2010, p. 17)

Kulnieks et al. (2010) have similarly emphasized the connection between eating and place-based knowing: "As with food, it is clear that stories come from a particular place" (p. 19). Walking, eating, speaking, knowing, being - each gesture a confirmation of a particular worldview, each a potentially fecund entry point into a vast web-like ecology of meaning. We are what we eat, but we are also what we say (and what we remain silent about), how we listen and to whom, how we walk in the world, our *really real* ecological footprint as it were. If ecological education is to be more than State sanctioned resource-extraction-with-a-human-face, if it is to be conceived as a reorientation towards an ecological worldview, it must involve an understanding of our epistemology, our ontology, our cosmology in these everyday ways - just as it must involve understanding other ways of meaning and being, human (historical and cross-culturally) and more-than-human.



To summarize then, an ecohermeneutic curriculum is conceived of as a re-indigenization of curriculum by Kulnieks et al. (2010) in part because it "requires the orature of Indigenous knowledge[s]" in order to engender a participatory interrelationality with place. In addition, an ecohermeneutic curriculum is characterized by the following features:

- engendering an understanding of place as animate, storied and interconnected;
- acknowledging the value of oral traditions and intergenerational knowledges;
- cultivating a deep relationship to place, history and culture through storytelling;
- utilizing interpretive and experiential learning in the process of inquiry;
- learning about holistic medicines, local foods and ethnobotanical knowledges;
- using an ecojustice framework to analyze the linguistic roots of the ecological crisis.

Ecohermeneutic pedagogy as re-indigenization is a conceptualization that, I believe, would find much support from ecologically-minded thinkers such as Abram, Bringhurst, Jardine, Zwicky, Bowers, and many ecolinguists - but I wonder how it might land with Indigenous scholars, educators, activists, and communities? What are the implications of proposing re-indigenization in a (post)colonial State that has utilized, and continues to utilize, its educational system as a

means of genocidal assimilation? I too would ideally like to support education as a process of re-indigenization, but as a second-generation Irish-Canadian immigrant (whatever that means?) currently occupying unceded Coast Salish territory, the whole proposition is beginning to make me a tad trepidatious.

Hey, wait a minute - says the ultra-left critical side as it suspiciously eyes its ecohermeneutic alter ego in the mirror - *what exactly does re-indigenization mean?*

Indeed, what exactly Kulnieks (non-Indigenous), Young (non-Indigenous) and Longboat (Haudenosaunee) mean by “re-indigenizing curriculum” is not made adequately clear, other than the fact that their work builds on hermeneutic researchers as well as “Indigenous knowledge holders who use the land as a primary resource for their understanding” (2010, p. 15). For example, what is the difference between *indigenizing culture* and *being Indigenous*? How will critical ecohermeneutics eschew cultural appropriation and support Aboriginal communities in resisting further infringements upon their cultural commons? How do we *all* come home to the world after what has happened and what continues to happen?



The educator who sees education as culturally neutral is similar to the spouse of an alcoholic who denies the alcoholism. There are implications for practice, self-concept, and feelings that both are unable to face. Perverse ignorance is a particular form of the defence mechanism of denial... It is understandable that the educator with a self-concept tied to the ideal of helping children, with preparation that does not include multicultural competence, with a curriculum that ignores or systematically distorts the culture of his or her students, and with unresolved personal issues of racism and ethnocentrism could not recognize the extent to which education is both culturally bound and actively hostile to Native culture. (Hampton, 1995, p. 36)

Adding a sprinkling of our culture to European parasitic culture is offensive, particularly in the absence of an understanding of our laws and the philosophy that underlies them. To spice the ideology of exploitation, individualism and middle-class aspiration with the emptied art-forms and stripped songs of the ancients, is to reduce ourselves to a joke. Tradition is useful only insofar as it allows us to continue to make use of our history. (Maracle, 1996, p.89)

What both Chickasaw scholar Eber Hampton and Stó:lō scholar Lee Maracle are pointing to are latent and destructive presuppositions about education in Western culture; problems, essentially, of hermeneutic understanding. They reassert that a Western educational experience is characterized by print-centrism, abstract thinking, individualism, and decontextualization, and even when it is “sprinkled” with Indigenous “spices,” it retains its fundamentally bland and chalky constitution. Although this paper is concerned primarily with education as a means of germinating an ecological consciousness, to misconstrue education as a culturally neutral and universal process is to discredit the Indigenous experience and reproduce Western hegemonic thinking.¹⁰⁰ For many Indigenous peoples the very edifice of education is oppressive, “Western education is hostile in its structure, its curriculum, its context and its personnel” (Hampton, 1995, p.37). And Maracle has echoed many critical theorists frankly stating, “Schools have shown themselves to be ideological processing plants, turning out young people who cannot produce the means to sustain themselves, but who are full of the ideological nonsense of European culture” (1996, p.88).

Despite decades of open hostility and egregious abuse by the Canadian educational system, there are still few Indigenous peoples that would prefer a segregated school system (Hampton, 1995, p. 7). Maracle explains, “Segregated schools alone will not change the basic historical pattern of colonialism; only decolonization will do that” (1996, p. 89). An ecohermeneutic approach to learning, conceived as a project of re-indigenizing Western epistemic norms then, necessarily entails a fundamental element of decolonization. This critical aspect does not only apply to Aboriginal students, but to all peoples living in Canada. As Papaschase Cree educational theorist Dwayne Donald has written, “One of the central curricular and pedagogical challenges of decolonization is to contest the assumption that the historical experiences and perspectives of Aboriginal peoples in Canada are their own separate cultural preoccupations” (2009, p. 6). This is not to make the thinly veiled, though all too common, claim that “everyone is indigenous to somewhere” in a colonial sense, which is to say everyone is indigenous to somewhere therefore we as settlers might as well be Indigenous to here. Rather, it is attempt to

¹⁰⁰ Ivan Illich has written: “Our colleagues are unwilling to recognize that education is a concept... inconceivable in other societies... They assume the need for education as an a-historical given... Wherever the historian of education finds a poetry ritual, an apprenticeship, an organized game, he smells educational activity” (as cited in Rasmussen, 2011, p. 22).

recognize the relationship between place, knowing and being and *return* Western thinking towards place-based consciousness.

Despite our “shared” historical experience, it is crucial that non-Indigenous peoples not begin to lay claim to *being* Indigenous to this land, no matter how many (relatively few) generations their families have been in Canada. Ironically, the first step towards re-indigenization for many may involve honestly acknowledging our own essential non-Indigeneity. As Rasmussen has asked: “What makes our society non-Indigenous? Why do we in the dominant society refuse to face our non-Indigeneity?”

An Indigenous people are those who believe that they belong to a place; a non-Indigenous people are those who believe that places belong to them... an honest appraisal says that we non-Indigenous folks have little or no sense of long-term belonging to this land... We are non-Indigenous because we don't belong anywhere yet. Belonging has not soaked into our bones and myths. We still set our course by following the Empire's markers. As a result we have almost no stories that weave us into this landscape. (2011, p.28-29)

This point is perhaps best illustrated by a story:

It happened at a meeting between an Indian community in northwest British Columbia and some government officials. The officials claimed the land for the government. The natives were astonished by the claim. They couldn't understand what these relative newcomers were talking about. Finally one of the elders put what was bothering them in the form of a question. “If this is your land,” he asked, “where are your stories?” He spoke in English, but then he moved into Gitksan, the Tsimshian language of his people - and he told a story.

All of a sudden everyone understood... even though the government foresters didn't know a word of Gitksan, and neither did some of his Gitksan companions. But what they understood was more important: how stories give meaning and value to the places we call home; how they bring us close to the world we live in by taking us into a world of words; how they hold us together and at the same time keep us apart. They also understood the importance of the Gitksan language, especially to those who do not speak it. (Chamberlin, 2003, p. 1)

But this is only half of what Donald is talking about. He is saying that Indigenous experiences and traditions have co-constituted Canadian society, so we may not be *Indigenous*, but we are certainly touched by *indigeneity*.



A critical ecohermeneutic approach recognizes that commitments to Indigenous political solidarity and cultural revitalization, and the return of place-based consciousness to Western culture are two threads of the same intertwining project. But the word *decolonization*, like the word *ecological* or *community*, has become a catchy kind of keyword these days, too often employed as a non-specific panacea to a vast array of social and ecological problems or misappropriated by corporate interests. How are vastly different cultural ways of knowing and being to occupy the same space? How are we to critically examine the deep (and often aggressively univocal) presuppositions of settler culture? How do settler peoples honestly face our essential non-Indigenity, while opening ourselves to the transformative possibilities of indigenization?

Although ecocritical discourse analysis is a powerful analytic tool, I worry that it is perhaps too pedantic, too trenchant, too prosaic to provoke the kinds of deep relational understandings that seem to rise primarily from sharing emotionally laden stories, myths, songs, poetics. Perhaps we might approach the process of understanding and healing between Indigenous and non-Indigenous as a kind of ecohermeneutic intertwining – as a process of braiding an *ethical relationality*. As a curriculum sensibility this approach has been called *Indigenous Metissage*.

Dwayne Donald (2009) defines Indigenous Metissage as a place-based and interpretive approach to curriculum informed by an ecological and relational understanding of the world. It is offered as a way to decolonize educational approaches that are tacitly embedded within “colonial frontier logics”. These epistemological presuppositions are derived from the colonial project of dividing the world according to cultural categorizations and normalizing the fragmentation of meaning and identity through cultural-historical narratives that serve colonial interests (p. 20). For example, by pointing to the fort as a mythic symbol within the Canadian national narrative, Donald illustrates how curricular and pedagogical approaches often reinforce colonial logics and perpetuate the enduring message that Aboriginal peoples and Canadian settlers “occupy separate realities”. Or as he states, “The stories told to children in schools about Aboriginal peoples have been largely based on a Eurowestern theory of primitivism that unilaterally places Indigenity outside comprehension and acknowledgment” (p.18).

Undoubtedly, these “colonial frontier logics” are nothing but modern manifestations of preceding Western cultural imperatives (anthropocentrism, reductionism, dualism, etc.); and as such, they reinforce the impetus to negate or annihilate any experience or worldview that does not empirically fit into the epistemology of “Eurowestern” modernity. As living memory of the carnage, obscenity and unapologetic imperialism of the historical *belligerent genocide* fades, the colonial project mutates and manifests in subtler forms of *hegemonic genocide*. Outwardly racist assertions about Indigenous inferiority are now increasingly rare, but the logic of colonialism persists in the infantilization of oral and animistic logics of Indigenous cultures by means of scientific and historical narratives masquerading as culturally neutral fact. This has the dual effect of aiding in the assimilation of First Nations and preventing the indigenization of settlers (indeed, it might be seen as *continuing* the process of assimilation and colonization of *indigenous* Europeans) as they become more at home in the land and have contact with other cultural ways of knowing and being.¹⁰¹ The modern education system results in a hypostatization of the colonial logic of separation, both Indigenousness and place-based indigeneity are kept as “separate realities” that are seen as archaic and essentially unknowable. Or in other words, the animistic logics of indigeneity and Indigenous cultures are deliberately distorted by Eurowestern narratives steeped in racism and negative conceptions of primitivism, so that they seem beyond comprehension and acknowledgment in today’s *modern* world.



Despite the fact that provincial governments across Canada have recently introduced policy shifts in curricular approaches requiring “meaningful consideration and exploration of Aboriginal perspectives across subject areas” (Donald, 2009, p. 6), the all too common “tipis and

¹⁰¹ For some fascinating accounts of Western colonials “rocking the freshly laid colonial foundations of North America” see Ron Sakolsky and James Koehnline: *Gone to Croatan: Origins of North American Dropout Culture* (Eds., 1993). These accounts do not simply represent early forms of escapism or “going native” but challenge the then newly constructed boundaries between wilderness and civilization. As Sakolsky and Koehnline have written, “This is no mean feat. If we can question the division of our world into the categories of ‘civilization’ and ‘barbarism’, then we have begun to question all forms of hierarchy” (p. 9).

costumes approach”¹⁰² is nothing more than a token “sprinkling” of Western curriculum with the “emptied art-forms and stripped songs of the ancients” and retains (and reinforces) a colonial logic. As Maracle has alluded to, what is absent is a genuine understanding of Indigenous laws and the philosophy (Indigenous EPOCHAXis) that underlies them (2009, p. 89). In a similar sense, provincial governments have established *sustainability education frameworks* to ensure that all students are being educated in the basics of “living sustainably” (whatever that means). My contention is that these frameworks also retain and bolster the colonial logic of modernity. Our task as educators then, must be one of ecohermeneutically recycling and re-imagining the interrelationality that connects and intertwines Indigenous peoples, non-Indigenous peoples and the more-than-human world in ethical ways.

But how are teachers to confront such an odious, genocidal history of colonial relations with First Nations (not to mention the continuation of this tradition in today’s current events)? How are teachers to confront the equally appalling ecocidal tendencies of (post)modernity? As Donald has written, teachers naturally find it difficult to relinquish the “more comfortable stories of Canada that they have been told and grown accustomed to telling.” And asks: “On what terms should this re-reading and reframing be done?” (p. 4).

To help with rereading, reframing, and reimagining the relationships connecting Aboriginal peoples and Canadians, and thus facilitate the decolonization process in educational contexts, I suggest a curriculum sensibility termed *Indigenous Metissage*. Indigenous Metissage is a research sensibility that imagines curriculum and pedagogy together as a relational, interferential, and hermeneutic endeavour. Doing Indigenous Metissage involves the purposeful juxtaposition of mythic historical perspectives (often framed as commonsense) with Aboriginal historical perspectives. The ethical desire is to reread and reframe historical understanding in ways that cause readers to question their own assumptions and prejudices as limited and limiting, and thus foster a renewed openness to the possibility of broader and deeper understandings that can transverse perceived cultural, civilizational, and temporal divides. One central goal of doing Indigenous Metissage is to promote ethical relationality as a

¹⁰² Donald (2009): “With reference to curriculum, the tipis and costumes approach has been applied in classrooms for many years, but leaves teachers and students with the unfortunate impression that Indians have not done much since the buffalo were killed off and the West was settled. Attempts at the so-called inclusion of Indigenous perspectives have usually meant that an anachronistic study of Aboriginal peoples is offered as a possibility in classrooms if there is time and only if people are still interested. What are required are curricular and pedagogical engagements that traverse the divides of the past and the present” (p. 5).

curricular and pedagogical standpoint. Ethical relationality is an ecological understanding of human relationality that does not deny difference, but rather seeks to more deeply understand how our different histories and experiences position us in relation to each other. This form of relationality is ethical because it does not overlook or invisibilize the particular historical, cultural, and social contexts from which a particular person understands and experiences living in the world. It puts these considerations at the forefront of engagements across frontiers of difference. (p. 5-6)

Hey, wait a minute, the BC Ministry of Education exclaims indignantly, *we have included Aboriginal and ecological content across the curriculum*. Are these instructional strategies, assessment tools and models not a juxtaposition of Western perspectives with Aboriginal perspectives? Do our sustainability frameworks not indicate a commitment to interdependence and respect for all cultures? Is this not a kind of ethical relationality?

In the BC Science 10 Integrated Resource Package, under the heading *Aboriginal Content in the Science Curriculum*, we find the following definition:

Traditional Ecological Knowledge and Wisdom (TEKW) is defined as the study of systems of knowledge developed by a given culture. It brings the concept of wisdom to our discussion of science and technology. TEKW tends to be holistic, viewing the world as an interconnected whole where humans are not regarded as more important than nature. It is a subset of traditional science, and is considered a branch of biological and ecological science. This knowledge with its characteristic respect for sustaining community and environment offers proven conceptual approaches which are becoming increasingly important to all BC residents.

Examples of TEKW science may be accessed through living elders and specialists of various kinds or found in the literature of TEKW, anthropology, ethnology, ecology, biology, botany, ethnobiology, medicine, horticulture, agriculture, astronomy, geology, climatology, architecture, navigation, natural science, engineering, and mathematics.

In British Columbia, the report of the scientific panel for sustainable forest practices in Clayoquot Sound emphasizes TEKW and the importance of including indigenous knowledge in planning and managing traditional territories. (2008, p. 14)

This calculated bit of political manoeuvring succeeds in ostensibly sounding... eco-friendly. But careful ecocritical examination of the subtle language and subtler absences in this statement reveals a well-concealed colonial logic at its foundations. The “sprinkling” of its message with some key root metaphors such as *traditional, ecological, wisdom, holistic, interconnected, elders, sustainable* and the invoking of Clayoquot Sound does not represent a reframing of historical understanding that provokes readers to question their prejudices as limited and limiting. Rather

it invidiously conceals its underlying Western presuppositions and works to reframe Science as culturally tolerant and progressive in its appropriation of “traditional knowledge and wisdom”. A detailed ecocritical analysis is too protracted for this paper, but allow me to point to some of the more obvious indications of its colonial logic.

Although situated underneath the heading *Aboriginal Content*, the term *Traditional Ecological Knowledge and Wisdom* seems conspicuously vague and does not necessarily indicate nor pay proper respect to Indigenoussness. This is further exacerbated by its definition as a “study of systems of knowledge developed by a given culture”. The use of a system of “knowledge,” and later, “proven conceptual approaches,” reveals the statement’s implicit epistemic prejudice, thus negating the deeper ontological-cosmological relationality (or animistic logic) implicit within Indigenoussness and place-based indigeneity. In addition, the generative capacity of any “given culture” to develop ecological knowledge and wisdom overlooks or invisibilizes the particular historical, cultural, and social matrix unique to the Indigenous peoples of “British Columbia” and decontextualizes the particular wisdoms indigenous to *this* place (or *these* places).

Allegedly, the inclusion of TEKW brings “the concept of wisdom to our discussion of science and technology.” The philosophically critical mind reels at the ostensible ease and seamlessness with which Science 10 teachers in BC are supposedly able to consolidate modern Western scientific concepts with traditional oral wisdoms. Apparently these scientist-ethnographer-philosopher kings attended a different Post Degree Professional Program for teacher training than the one I attended. In any case, the presupposition here is that traditional and ecological wisdom, in order to be valid, *must be* complementary to the Scientism that dominates modernist thinking. The only way this idea even makes sense is if one assumes that Science, Education and Technology are culturally and ecologically neutral rather than inextricably bound up with exploitative technological advance, short-term commercial and political interests, and cultural hegemony. The explicit inclusion of wisdom in the curriculum objectives is fascinating in light of Zwicky’s axioms: “To know the meaning of what-is is wisdom” (p. 86) and, “Wisdom is a form of domestic understanding” (2003, p. 96). The invocation of wisdom in the resource package is empty and meaningless. A plastic mushroom with detailed botanical descriptions sitting stoically on the shelf in some classroom laboratory next to the cheap Kwakwaka’wakw totem rip off made in China. No student ever bothers to look at either and the teacher is too busy “integrating technology into the classroom” to deal with all that inconsequential Indian stuff.

The effect, if not conscious intention, in calling TEKW a “subset of traditional science” and “a branch of biological and ecological science” is to marginalize its significance and further appropriate it into the Western canon of scientific thought. An animistic logic is not a “subset” of or a stepping-stone to a more literate, higher, scientific, or civilized way of knowing. As we have seen it represents a wholly different way of understanding, knowing and being in the world. We have already been warned of the perils of becoming “just another branch” by Bang and Door (2007, p. 11) who have claimed that such attempts are embedded within the “bureaucratic logic” (read: colonial logic) of an “*everything-is-of-equal-value* attitude.” Such attempts at marginalization seek to downplay the paradigmatic significance of a participatory and interrelated way of being in the world and subsume or syncretize its implications within a matrix dominated by reductionist and objectivist knowing.

Although examples of TEKW are acknowledged to be “accessible” through “living elders” this oral and indigenous tokenism is belittled by the bulk of the statement which champions the knowledge held by “specialists”, “literature” and an absurdly broad and generalized list of Western academic disciplines, many of which have been instrumental in perpetuating colonialism and the ecological crisis in the first place (i.e. anthropology, agriculture, geology, etc). Here the superiority of scientific and literate (read: Western) ways of knowing is reaffirmed and the discomfort and uncontrollability of speaking with an “elder” (perhaps not even an *Indigenous* elder?) is largely discredited. Why go to the trouble to develop a relationship with an Indigenous elder and have her come to speak when you can easily access TEKW via an on-line engineering forum? As we can see, the blatant denigration of indigenous, oral ways of knowing has been (or is on its way to being) replaced by a falsely positive ethos of equal access to ecological wisdom via specialists and literature, but the effect is the same: colonial business as usual.

The last excerpt in this section is perhaps the most bizarre. A Cartesian subject-object duality is clearly reinforced in verbs like “planning” and “managing” resources for “sustainable

forest practices,” as is the capitalist ethos that underlies sustainability.¹⁰³ The statement goes on to discuss “the importance of including indigenous knowledge in planning and managing traditional territories”. Is this implying that Indigenous people need to employ more managerial skill when extracting resources from the few “traditional territories” that they have been accorded? Or is it acknowledging that all of British Columbia is “traditional territory” and that colonials should include some Native drumming or wear some feathers or something (or at least donate some money for a “cultural center”) before corporations construct an oil pipeline across the unceded territory? Despite employing all the catchy key words and skilfully navigating a dangerous political knife edge, an ecocritical reading of the Aboriginal and ecological content in the BC Science curriculum confirms its fundamental colonial logic and illustrates the guileful adaptations that modernity will adopt in order to maintain its hegemonic negation of an indigenous, animistic logic.



Despite the tenacious persistence of modernity, Indigenous Metissage and ethical relationality offer potentially fecund ways to envision an ecohermeneutic re-indigenization of curriculum. The fountainhead of the colonial logic in the BC curriculum is in its juxtaposition of Western and Aboriginal narratives in a cultural-linguistic-historical-philosophical vacuum, divorced from the places in which these narratives emerge.¹⁰⁴ As Donald has written, our

¹⁰³ Bowers in his on-line ecojustice dictionary has defined *sustainability* as such: “A word that is being adopted by corporations in order to sustain the illusion that their practices are environmentally sustainable, when what the word really means is that their profits are sustainable; within the context of thinking about educational reforms that address ecojustice and revitalization of the commons, sustainability refers to cultural practices that do not degrade the ability of natural systems to renew themselves; the emphasis on not degrading the prospects for the future thus encompasses both cultural and natural systems” (Bowers & Martusewicz, 2004).

¹⁰⁴ Donald (2009) has echoed many of the theorists in this paper (Abram, 1996, Basso, 1996, Kulnieks et al., 2010, Hampton, 1995, etc.) in his emphasis on place as a key aspect of both decolonization and (re)connection to Indigenous ways of relating to the more-than-human world. “For various reasons, I emphasize land and place as key aspects of Indigenous Metissage and decolonization of curriculum and pedagogy. The most significant reason for this is a fascination with the connectivity between place and identity, and how my ancestors choose to map their territory as a way to express who they think they are. Indigenous place-stories and mapping conventions are expressions of sovereignty that are deeply influenced by wisdom traditions and provide specific examples of how to recognize the land as relative and citizen” (p. 18).

relationships are “deeply rooted in colonial processes” and must be understood as a series of historical layers.

The layers symbolize the sediments of experience and memory that come to characterize the contested cultural terrain in which particular places and contexts have a shared, albeit contested, significance. The spirit and intent of this emphasis on the notion of layeredness is to foster attentiveness to an ethic of historical consciousness. This ethic holds that the past occurs simultaneously in the present and influences how we conceptualize the future. It requires that we see ourselves related to, and implicated in, the lives of those who have gone before us and those yet to come. It is an ethical imperative to recognize the significance of the relationships we have with others, how our histories and experiences are layered and position us in relation to each other, and how our futures as people similarly are tied together. It is also an ethical imperative to see that, despite our varied place-based cultures and knowledge systems, we live in the world together with others and must constantly think and act with reference to these relationships. Any knowledge we gain about the world interweaves us more deeply with these relationships and gives us life. (p. 7)

The indigenization of curriculum and return of place-based consciousness as conceived by critical ecohermeneutics seems somewhat akin to this “hybridization of identities as a result of colonialism and transcultural influences” (Donald, 2009, p. 7). The imagery of interweaving, or as Donald refers to it, of “braiding” (p. 8) our relationships and understandings also presents an auspicious indication of their synchronicity. One cannot help but compare Donald’s image of an alpha helix shaped braid of sweetgrass to the hermeneutic “interweaving texts and textures of human life” described by Jardine (1998, p. 34) or my own visualizations of critical ecohermeneutics as a writhing Caduceus or an interconnected network of living mycelia.

The metaphor of the braid (exemplified by the Metis sash and sweetgrass) and the notion of the metissage researcher as the weaver of a textual braid are integral to metissage praxis because they provide a certain unity of vision regarding the relational ethics guiding the work. The metaphor of the braid addresses the question: “What does metissage look like”?

The act of weaving a textual braid of diverse texts provides a means for metissage researchers to express the interconnectedness of wide and diverse influences in an ethically relational manner. The assumption is that braiding in these ways will facilitate a textual encounter of diverse perspectives that creates a provocative interpretive engagement. The creation of texts and stories that emphasize human connectivity can complexify understandings of the significance of living together that traverse perceived frontiers of difference. One of the vital beginnings for such a project is an awareness of the “historically constituted present state of affairs, with the capacity for illuminating how any humanly liveable future begins by acknowledging those historically derived debts and obligations that are part of any identity of the present”. We must pay closer attention to the multiple ways our human sense of living together is constructed through the minutiae of day-to-day events, through the stories and

interactions which always are imbued with a living principle of reciprocity, and hence moral responsibility for a shared future. (p. 8)

To return to our original concern, which was the requisite inclusion of a decolonization process in any critical ecohermeneutic approach to curriculum. As aforementioned, the qualities and features of an ecohermeneutic curriculum as demonstrated by Kulnieks et al. (2010) (place-based, ecojustice frameworks, balance of orality and literacy, etc.) are wholly commensurate with critical ecohermeneutics but there was some vagueness about what exactly *re-indigenization* means. Perhaps the “critical” in critical ecohermeneutics sometimes seems a little redundant, but in this case it serves as a vigilant reminder that decolonization is a necessary prerequisite for establishing healthy, respectful relations with Indigenous peoples.¹⁰⁵ By now it should be clear that the re-indigenization of curriculum is by no means cultural appropriation of Indigenousness, but rather, nurturing an authentic ethical relationality between Indigenous peoples and settlers who are able to acknowledge their non-Indigenousness and still work towards the place-based animistic logic of indigeneity. Again, it is important to reiterate the critical aspects of ecohermeneutics here in order to guide and assess what forms indigeneity may take if it becomes a more widespread cultural ethos. The implication here is that colonialism is a shared condition, and as Donald has written: “ If colonialism is indeed a shared condition, then decolonization needs to be a shared endeavor. I am convinced that decolonization in the Canadian context can only occur when Aboriginal peoples and Canadians face each other across historic divides, deconstruct their shared past, and engage critically with the realization that their present and future is similarly tied together” (p. 5). The way in which our education system approaches Indigenous issues and issues of ecological understanding are similarly tied together. Or as Donald has written, they share a resonance:

¹⁰⁵ In theory, some form of re-indigenization of Western culture (establishing healthy relationality to place) might not necessarily entail healthy ethical-political-historical relations with Indigenous populations or “host nations”. The cultural appropriation of many New Age movements provides a conceivable sense of what a cultural shift towards (I hesitate to say) “indigenous” ways of knowing might look like in a political and historical vacuum, i.e. in the absence of critical consciousness (see Churchill, 1994, p. 207). In this sense, re-indigenization becomes a process of postmodern imperialism seen as necessary or “natural” in an age of ecological crisis where so-called Traditional and Ecological Knowledge and Wisdom is being offered as a messianic model of sustainability. Indigenous human resources are mined for their traditional wisdom, the valuable extracts are refined through Western cultural understandings (syncretic legitimization), and the colonial culture slowly establishes itself as more indigenous than the Indigenous. Critical ecohermeneutics, with its spirited historical consciousness, animistic logic, and great respect for and solidarity with Indigenous peoples, maintains that healthy relations with Aboriginals and re-indigenization are parts of the same process.

Through the reciprocal process of teaching and learning, we move closer together. This movement towards holistic interreferentiality and recognition of difference has resonances with ecological understandings of the earth that are antithetical to the teleologics currently shaping the habits and priorities of *Homo Oeconomicus*. Universalized market logics that seemingly justify intensified resource exploitation and voracious consumerism are indeed deeply connected to the violence— epistemic, institutional, and otherwise—that has been committed in accordance with fort teachings. It is the denial of connectivity that allows such violence and exploitation to continue. I am convinced that we require a new or renewed ethical framework that clarifies the terms by which we can speak to each other about these pressing issues of shared concern. This is the visionary spirit and intent of Indigenous Metissage. (p. 18)

I imagine inoculating the “fort teachings” of educational theory and practice with the spores of critical ecohermeneutic inquiry to catalyze a deliquescent process that decomposes the teleologics and root mythopoetic support structures of modernity. This is, in a sense, the primary objective of critical ecohermeneutics, to mycoremediate our calcified and normalized denial of connectivity. To intertwine and braid and move together through the reciprocal process of teaching and learning. To oscillate between the potential clarity of critical analysis and the bewildering ambiguity of eco poetic relationality in order to elicit a kind of ethical relationality. To ecologically understand meaning and identity as live, metaphorical relations that echo the resonant structure of the world itself (Zwicky, 2003). To recycle and sprout new meanings and reveal new connections that were always already there. To struggle against intensified resource exploitation and voracious consumerism together. This is the visionary spirit of critical ecohermeneutics.

5. healing & the resonant ecology of things

Beings eat one another. This is the fundamental business of the world. It is the whole, not any of its parts, that must prevail, and this whole is always changing. There is no indispensable species, and no indispensable culture. Especially not a culture that dreams of eating without being eaten, and that offers the gods not even the guts or the crumbs. (Bringham, 2006, p. 44)

This, perhaps, has been my greatest relief and greatest pleasure: envisaging education as a deeply Earthly task, part and parcel of the breath of the world. Ecology offers both education and hermeneutics images of the old and the young, of places and histories, of disciplines and work, that break out beyond the confines of the human voice, out into the pitter-patter of an animate, living Earth, *of which* the disciplines of schooling are a part, not an exception. Thinking about curricular disciplines as open fields of living relations that not only undergo but require constant renewal and transformation makes these disciplines inviting again, full of the sparkle of old wisdoms and the sparking voice of the child. (Jardine, 1998, p. 3)

I wanted this thesis to *move* differently, to think with a mycelial mind. I wanted it to course and surge and proliferate like wild mycorrhizae, provoking symbiotic associations and writhing interconnections between history-culture-language-philosophy-education-ecology-cosmos.

Mycelium, constantly on the move, can travel across landscapes up to several inches a day to weave a living network over the land. (Stamets, 2005, p. 1)

...Merleau-Ponty comes in his final writing to affirm that it is first the sensuous, perceptual world that is relational and weblike in character, and hence that the organic, interconnected structure of any language is an extension or echo of the deeply interconnected matrix of sensorial reality itself. Ultimately, it is not human language that is primary, but rather the sensuous, perceptual life-world, whose wild, participatory logic ramifies and elaborates itself in language. (Abram, 1996, p. 84)

I wanted to draw attention to our ecological-ontological interrelationality with the living matrix that resonates *beneath* our thinking and understanding. Beneath our very feet.¹⁰⁶ The awe-inspiring mycelial superstructure of the sensual world itself echoes in our minds when we think intensely and beautifully; when it gets into our mouths we call it poetry; when it guides our lives we call it integrity; when we help someone else learn it we call it good teaching; when we eat it we feel healthy, good, full of truth.

The centrepiece of Heidegger's *Introduction to Metaphysics* is a chorus from Sophokles' *Antigone*. That play has lasted a long time – but so has the social myth of Teutonic supremacy, so perhaps longevity is not test of social value or truth. The play, in any case, and especially the chorus Heidegger chose, seems to me to shine some light on the distinction between social myths and real myths, or false myths and the true. Poetry, actually, is the test. The myth of racial superiority doesn't shine like a flowering apple tree or a star. It isn't poetic. That's evidence – possibly not proof in itself, but certainly evidence – that it isn't true. (Bringhurst, 2006, p. 153-154)

Awe... is the beginning of metaphysics. The awe at the multiplicity of things and the awe at their suspected unity. (Simic as cited in Zwicky, 2003, p. 99)

I wanted the multivocal, multidimensional, multiform phusis of ecological understanding to reverberate out from the pages, as in the ringing of a bell, because a resonant ecological hermeneutics is what is called for in education today in response to the univocal, monotone din of (post)modernity.

The great danger is single-mindedness: reducing things to one perspective, one idea, one overriding rule. (Bringhurst, 2006, p. 41)

We hate the people who try to make us form the connexions we do not want to form. Justice consists of establishing between analogous things connexions identical with those between similar terms, even when some of these things concern us personally and are an object of attachment for us. (Weil as cited in Zwicky, 2003, p. 50)

¹⁰⁶ Stamets: "I calculate that every footstep I take impacts more than 300 miles of mycelium" (2005, p. 10).

I wanted these words - as coarse and soiled as they are - to approach you, to reach for your clean hands and hold them for a moment until (maybe) a light dawned. To trace a gesture of address with hands filthy from seismic explorations and digging for roots.

The intuition of resonant relation is the experience of meaning.

Which is not to say that we always experience meaning when we use language, or think. It is possible to use words or signs, and to manipulate nonverbal concepts or images, without experiencing their meaning. We often use the word 'mechanical' to describe this kind of speech or thought.

When attempting to say what an experience of meaning was an experience *of*, on the other hand, we sometimes reach for one or more of the following words: 'truth', 'beauty', 'goodness', 'integrity'. (Zwicky, 2003, p. 49)



The educator produces the beautiful by fixing her and her students' attention on something *real*. It is the same with the act of love and ecological responsibility, which are the same. To know that this world that is being exploited and harmed really exists as much as I do – that is enough, the rest follows of itself.

The authentic and pure values – truth, beauty and goodness – in the activity of a human being are the result of one and the same act, a certain application of the full attention to the object.

Teaching should have no aim but to prepare and co-create, by training the attention, for the possibility of such an act. All the other advantages of instruction are without interest.



I have described critical ecohermeneutics as a kind of mycoremediation, a term borrowed from mycologist Paul Stamets (2005), who describes it as a process whereby mycelia are used to inoculate contaminated soil, remove toxins and generate the conditions for a flourishing biodiversity. Mycoremediation is a healing process that represents one facet of a

broader strategy to improve ecosystem health that Stamets has termed *mycorestoration*.¹⁰⁷ Although ecohermeneutics is intended to be employed to critically inoculate toxic ideologies and decompose calcified ways of knowing and habitual ways of being in the world, I wanted it to retain its remedial capacity for eliciting a deep kind of interwoven relationality with the more-than-human world. To point to the phenomenology of reading and being read, eating and being eaten, meaning and being meaning, healing and being healed.¹⁰⁸

A metaphor can appear to be a gesture of healing - it pulls a stitch through the rift that our capacity for language opens between us and the world. (Zwicky, 2003, p. 59)

The living soils of modern cultures have been depleted. Critical ecohermeneutics has been envisioned as mycoremedial because we find ourselves already struggling in this fragmented wasteland, all too familiar with its reductionisms, its patriarchal dualities, its standing-reserves and diminishing returns. But as promising as mycoremediation sounds, revitalizing the landscape of possibility will require a bio-diverse approach. My hope is that critical ecohermeneutic inquiry accelerates the decomposition of univocal toxins as it prepares our cultural soils for re-inhabitation by other species and emergent ways of knowing (this might be thought of as a process of re-indigenization); always deliquescing before it calcifies itself, consuming its own tales as it liquefies, recycling and returning and reimagining.

Using fungi first in bioremediation sets the course for other players in the biological community to participate in its rehabilitation... The introduction of a single fungus, for instance oyster mycelium, into a nearly lifeless landscape triggers a cascade of activity by other organisms. (Stamets, 2005, p. 89)

As Illich has reminded us, "Look down at soil, humbly. Search below our feet because our generation has lost its grounding in both soil and virtue" (as cited in Prakash, 2009).

¹⁰⁷ Mycorestoration practices can be implemented in the following ways: mycoremediation, mycofiltration, mycoforestry, mycopesticides. For more information see Stamets (2005, p. 55).

¹⁰⁸ Or to put it differently Abram (1996) has asked: "Does the human intellect, or "reason", really spring us free from our inherence in the depths of this wild proliferation of forms? *Or on the contrary, is the human intellect rooted in, and secretly borne by, our forgotten contact with the multiple nonhuman shapes that surround us?*" (p. 49)



Numerically ordered students sit obediently in rowed desks and await instruction. A disembodied head, shrivelled somewhat, and yet bearing some semblance to Ayn Rand floats into the lecture hall and pontificates at great length on the virtues of green capitalism, then, hands out a disposable Walmart chainsaw to each student. The initiation rite is straightforward enough; cut off your own head

discard the rest.



Jardine (2006) has claimed that hermeneutics – to put it bluntly – provides a critique of how education has become spellbound by a weak and intellectually dull-minded version of the methodologies of the natural sciences (p. 274). These methodical renderings, he argues, work to sever us from the interpretive and imaginative possibilities of an ecology of meaning.

This is a fascinating process to which we subject both the instance and ourselves... Regarding the instance itself, ambiguous linkages and telltale signs and marks of potentially violating interconnectedness are systematically eliminated, producing a sort of virginal, untouched instance. And regarding ourselves, we can no longer approach this instance with the moist and fleshy and playful and imaginative familiarity with which we began... We must remain strictly within the parameters of the methods of severance we have enacted, for any other interconnection would despoil or defile the instance we have so carefully and methodically isolated and purified. Our connection to this instance thus becomes gutted. We understand it “from the neck up” and only within the bounds that our severing and isolating methodology allows. We deny that it is our kin. (p. 275)

Critical ecohermeneutics has thus been construed as a kind of ecopoetic understanding in order to restore to educational theory and practice its ambiguous linkages and imaginative familiarity and kinship with the world. To restore attention to ontological form, both the resonant ecology of the world itself and the way our writing forms move and the metaphors they convey in order to get at how we think about and experiences the world. This is a critical discipline, as Zwicky has reminded us: “...one’s preference for a style of explanation will depend on one’s purposes. (Just don’t imagine there are purposes in which politics play no role)” (2003, p. 107). It is critical but it is not critique from the “outside” with the fancy jargon and supposed transcendental clarity of critical theory, but rather a deeply reflexive and imaginative space from within the flux

that draws upon lyric and ambiguity as a form of *deep* critical consciousness. Why is a(n) (eco)poetic encounter viewed as an ecological-ontological issue of great significance? As Hirschfield has explained, drawing upon her experience with Japanese Buddhism, there is a connection between “the mind of poetry” and deep, relational contemplation on what-is. She has claimed that the core experience is characterized by “the interpenetration of self and Other:”

The nonseparation of Buddhist understanding lies close to the ground of all poetry, Western as well as Eastern. Every metaphor, every description that moves its reader, every hymn-shout of praise, points to the shared existence of beings and things. The mind of poetry makes visible how permeable we are to the winds and moonlight with which we share our house. (1997, p. 98-99)

Abram has attempted to describe a similar experience as a kind of perceptual reciprocity with the more-than-human world, a silent conversation between our bodies and things (1997). Utsler, in turn, drawing upon the work of Ricoeur, has described our embeddedness in the tapestry of ecological relationships as a kind of intercorporeality (2009); so that we might begin to understand the self as inseparable from the more-than-human other. Both of these conceptualizations are helpful in moving towards a deeper understanding of our ecological relationality, but the real thrust of critical ecohermeneutics (as indicated by Hirschfield, Zwicky and Bringhurst) is the role of metaphorical thinking in ecological consciousness. Which is to say, our intercorporeality is not strictly perceptual in a mechanistic sense or biophysical, but metaphorical as well, language too is a natural phenomenon.

To the extent that we are part of the ecology of what-is, our thinking displays the *phusis* of what-is – the fit of response and co-response.

Coming to experience the fit of human thought to the world is a way of finding ourselves at home. (Zwicky, 2003, p. 27).

Coming home, in this respect, means recognizing that we belong to places, that we are *of* places, and that our interrelationality with these places is perceptual and interpretational. Bringhurst has claimed, the ecology of the world “speaks” (i.e. means) in stories in at least two ways: through lexical reference and through form.

It [ecology] speaks through form because the world has form, and the things of the world have form, and the forms that the things of the world have are all contributory parts of the form of the world, and the things of the world include languages, their speakers, the thoughts they think and the stories they tell. (2006, p. 253)

The Western cultural imperative of corralling meaning into a conduit model of linguistic transaction strictly between humans (and further hierarchicalizing language to privilege literate societies over oral traditions) has served to sever our interrelationality with this resonant and storied ecology of things. Indeed, Evernden has maintained that “the defence of meaning” or rather, the defence of whole cosmic worldview (i.e. an animistic logic) is often the underlining initiative for “environmentalists” (or in this case ecological educators). “For although they seldom recognize it, they are protesting not the stripping of natural resources but the stripping of earthly meaning... at bottom, their action is a defence of cosmos, not scenery” (1993, p. 124).



I wanted this thesis to embody a kind mycelial mind, a mycelial or interconnected way of thinking and being. I have fallen short of course. These words could never meander like a stream, never writhe like a serpent, never reticulate and entwine like the vibrant expanse of mycorrhizal threads beneath us. But then again, is this not one of the fundamental insights of critical ecohermeneutics? That we are addressed by an already familiar and teeming world of variegated colours and patterns and voices and relations that can co-elicit the “aesthetic experience” of being drawn out of our our-centeredness. That our task is not only to encapsulate the world within the horizons of language and epistemic constructs, but sometimes to remain ambiguous, analogical, attentive? To speak and write with language of some of the things that language is not? To gaze back upon the world and repeat again and again: *don't think, but look!*

Our task... is that of *taking up* the written word, with all of its potency, and patiently, carefully, writing language back into the land. Our craft is that of releasing the budded, earthly intelligence of our words, freeing them to respond to the speech of the things themselves – to the green uttering-forth of leaves from the spring branches. It is the practice of spinning stories that have the rhythm and lilt of the local soundscape, tales for the tongue, tales that want to be told, again and again, sliding off the digital screen and slipping off the lettered page to inhabit these coastal forests, those desert canyons, those whispering grasslands and valleys and swamps... Planting words, like seeds, underrocks and fallen logs – letting language take root, once again, in the earthen silence of shadow and bine and leaf. (Abram, 1997, p. 273-274)



The task posed to understanding at such a juncture cannot be simply one of corralling that teeming world back into the confines of our constructs... What addresses us does so from beyond our wanting and doing, beyond our constructs. (Jardine, 2006, p. 271)

Jardine has proposed that a special affinity exists between hermeneutics and education because hermeneutics is inherently educative in its intent, “It wants to listen, to affect and to invite, not merely to inform” (2006, p. 269). One of the tasks of ecohermeneutic pedagogy then is to elicit attention to the world and recognize its living and resonant ecology in order to provide a way to recognize (to re-think, recycle, reimagine) what we understand teaching and learning to be, “what we understand knowledge and tradition and language and conversation and art and play and imagination and words and images and the methods of science to be” (p. 269). Perhaps one way to elicit an understanding of these complex interrelations is to iteratively enquire what something *is* and what something *means* in an intermittent or hermeneutic fashion? For example, we might ask: what is a tree? Then, what does a tree mean? Then again, informed by our inquiry and attention and the passing of time - what is a tree *now*? What does a tree mean *now*? Thus, as time goes on, an ecohermeneutic vortex may emerge, drawing the attention *down* towards the multidimensional possibilities of understanding

here.



Donald (2009) has provided us a kind of example of such an inquiry vis-à-vis Indigenous Metissage, asking: what does a rock *mean*? His narrative explores cross-cultural interpretations of a rock known to the Cree as *papamihaw asiniy* or *flying rock* and the relationship between things, place, identity and story as understood through different cultural understandings of this particular rock. A thing, or artefact, in this sense is used to, “provide an aperture into the unique character and complexity of particular places... Artefacts are imbued with meaning when human hands craft them, but also when humans conceptualize them as *storied* aspects of their world” (p. 11). The effect of opening the mind to the cross cultural interpretability of things – to a thing’s ecology of meaning - via the juxtaposition or braiding of worldviews is similar, in a sense, to Zwicky’s ecopoetic ontology of *thisness*. “*Thisness* is the experience of a distinct thing in such a way that the resonant structure of the world sounds through it... The ontology of *thisness*, of

ontological attention and address, has the character of metaphor: its object is, and is not, everything” (2003, p. 55). Zwicky employs similar aperture-like metaphors when describing the phenomenal experience of ecological interrelationality as experienced through particular things:

...the phenomenal experience of *thisness* is not a complex series of relations shading off into the temporally hazy distance. Rather, we are pierced. The *this* strikes into us like a shaft of light. We are focussed by it, and experience it as focussed: what is *this* is unique, it has an utterly distinct – and here notice the sense modality we reach for – flavour or fragrance. (What is important about the metaphor is that it recognizes the object as knowable, but neither visible nor graspable.) (p. 53)

Wittgenstein has claimed: “A poet’s words can pierce us.” Which, as Zwicky explains, means “...what the poet says can point to *thisness*. To the experience of limitless responsibility that is the inner sleeve of love” (2003, p. 58). Or to repeat, “Good poetry, like all meaningful thought, traces a gesture of address. It enacts ontological attention. Metaphor is one of the means it uses to do this” (2003, p. 58). In this sense, the vocation of the ecohermeneutic educator is to use words that pierce like a shaft of light, that strike and provoke and elicit ontological attention.

Blenkinsop (2005) has provided us another kind of example, perhaps, of this kind of ecological-ontological teaching in his examination of Martin Buber’s writings on education. According to Blenkinsop, Buber viewed relationality with the world as a developmental process and the pivotal role of the educator was one of “bursting asunder” the typically estranged relationship between teacher, student and world. An essential feature of this bursting asunder is the idea of coming to approach the wilderness or the more-than-human world as co-teacher (Blenkinsop & Beeman, 2010). Blenkinsop refers to several of Buber’s early experiences of “deep encounter with the natural world” as having a formative influence on his *relational developmentalism*; in particular, Buber often refers to mystical experience from his book, *Daniel*:

On a gloomy morning I walked upon the highway, saw a piece of mica lying, lifted it up and looked at it for a long time; the day was no longer gloomy, so much light was caught in the stone. And suddenly as I raised my eyes from it, I realized that while I looked I had not been conscious of ‘object’ and ‘subject’; in my looking the mica and ‘I’ had been one; in looking I had tasted unity.

I looked at it [the mica] again, the unity did not return. But there it burned in me as though to create. I closed my eyes, I gathered my strength, I bound myself with my object, I raised the mica into the kingdom of the existing. And there,... I first was I. (Buber as cited in Blenkinsop, 2005, p.288)

Despite the temporal nature of these mystical mica moments, when Buber looked back upon his life he suggested that such deep encounters with the world (what I have called ecopoetic encounters) were fundamental in the development of his relational capacity. Which is to say, the *I* becomes more *I* through conscious engagement with and openness to interrelationality, not only with other human individuals but also with the more-than-human world (and according to Buber, *beyond*) (Blenkinsop, 2005, p. 288). A moment of *thisness* can be a profound experience and precipitate a more conscious search for relationship in the world; and yet, this relational or ontological dimension rarely features in our educational initiatives, ecological or otherwise.

Buber claimed that, through such things as technology, science and institutionalization, today's world is in a situation of ever increasing '*I/It-ness*', moving farther from relation. Though we live constantly within potential reach of the *Thou* and it is, as Buber said, always 'coming towards us and touching us', yet we 'have become inept and uneager for such living intercourse' (Buber, 1970, p. 92). However, there is hope, since 'all of these *Thou's* which have been changed into *It's* have it in their nature to change back again into presentness' (Friedman, 1960, p. 63), a change which can be accomplished by learning again to revere the world and its objects. (Blenkinsop, 2005, p. 295)

Although it may seem as if we are again left pointing and hoping (Zwicky, 2003) for spontaneous mica moments to reach out and touch people - to strike into their lives of instrumental desperation like a shaft of light - with Buber, at least, we are left with a relational ability that can be consciously developed, that can be *learned*. For Buber, all humans are born with an ability to relate, what he called an instinct for communion; or as Abram (1996) has similarly written, "Humans are tuned for relationship. The eyes, the skin, the tongue, ears, and nostrils – all gates where our body receives the nourishment of otherness" (p. ix). Just as the child begins to discover the *It* of the objective world, at least partially through his or her formal education, and internalizes the worldview presuppositions of his or her cultural-historical reality, the child can equally be taught to retain and further develop an *I/Thou* relationship (Buber) or Mythic / Ironic Understanding (Egan, 1997) or animistic logic (Abram, 1996) or Indigenous knowledge (Kulnieks et al., 2010; Cajete, 1994) or ethical relationality (Donald, 2009) or an ecopoetic understanding of the world. In this sense, the vocation of the teacher is truly to burst asunder the hypostatization of normal instrumental relationality. Buber saw the teacher in a position not of "making" things happen, but of drawing attention to the world, of allowing for the possibility of deep encounters with the world, of providing support and guidance and remaining open to authentic relationship (Blenkinsop, 2005, p. 303). Metaphor is one of the ways she can do this.

Buber reminds us, once again, that there is an ecological relationship in which we are all immersed and that this relationship, although often unseen and unacknowledged, buried as it is beneath our understanding and being in the world, is fundamental to both our humanity and to education.

As we have seen, Buber's encounters with the non-human environment were so significant that they shaped him and led him to emphasize similar kinds of encounters for the child in his essay *Education*. However, it was not strictly the encounters that were important, but that the encounters allowed him to see the possibility of relationship and to see the *I* with more clarity. As a result, Buber did not want us to objectify nature, to approach nature in the one-directional monological way of *I/It*, but to understand that any approach to a specific object holds with it the possibility of engaging with the *Eternal Thou*... This is because the self is discovered and nurtured by means of continually more reflective and conscious relationships, so that the individual becomes a person 'in between' others... (Blenkinsop, 2005, p. 304)

Gadamer (2004), in speaking of the relationship between an individual and a historical text has described the hermeneutic aspect as a tension between the polarities of strangeness and familiarity. In regard to what has been said, the way in which the text addresses us, the story it tells; there is a tension, a play, an oscillation – “*The true locus of hermeneutics in this in-between*” (p. 295). Ecohermeneutically, the way that we understand the form and address of the world takes on a more ecological-ontological nature, an oscillation between the poles of critical distance and relational proximity, between self and other, between things and the resonant structure of the world (Zwicky, 2003).



What kind of tree is this?

This is the kind of tree that grows *here*, in this moss covered, shallow recess by the river. In the autumn it is fertilized by the bodies of sockeye salmon that come up the river to spawn in its shade. One day perhaps the tree will return the favour by falling into the river, creating a deep pool favourable to spawning. Look *here*, you see how this “stump” beside it has grown over, it is being kept alive because its roots are connected to the surrounding trees. Did you know that trees *eat light*? Look *here*, at these florescent lichen splattered up its side. *Shhhh*, do you hear the northern spotted owl? Do you feel the mist coming off the river? Feel the bark *here*, what does it remind you of? Now listen to what ecophilosopher and cultural ecologist David Abram (1996) has said about touching and being touched by trees:

To touch the coarse skin of a tree is thus, at the same time, to experience one's own tactility, to feel oneself touched by the tree...

Walking into a forest, we peer into its green and shadowed depths, listening to the silence of the leaves, tasting the cool and fragrant air. Yet such is the transivity of perception, the reversibility of the flesh, that we may suddenly feel that the trees are looking at us – we feel ourselves exposed, watched, observed from all sides. If we dwell in this forest for many months, or years, then our experience may shift yet again – we may come to feel that we are a part of this forest, consanguineous with it, and that our experience of the forest is nothing other than the forest experiencing itself. (p. 68)

This is Nuu-chah-nulth territory, now listen to this story by hereditary chief E. Richard Atleo:

In the Nuu-chah-nulth language, when we speak of the importance of relationships, we also speak of relationships with Wolf, Bear, Deer, and, indeed, with all other life forms for they are all *quu-as*, just like us. Roy Haiyupis, an uncle of mine who served as an elder to the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, told the story of when, as a boy, his grandfather showed him how to take down a tree. Roy described how his grandfather revered even the bushes and foliage around the tree and treated each with respect. When this paying of respect to the bushes and foliage was completed, his grandfather lifted up his voice to communicate with the great tree. (2011, p. 49-50)

What do you think his grandfather said to the tree? What would you say to this tree? What does this tree say to you? *What does this tree mean?*

To repeat: don't think, but listen!

Hear.

References

- Abraham, R. (1994). *Chaos, Gaia, Eros*. San Francisco: Harper San Francisco.
- Abram, D. (1996). *The Spell of the Sensuous: Perception and Language in a More-than-human World*. New York: Vintage Books.
- Abram, D. (2010). *Becoming Animal: An Earthly Cosmology*. New York: Pantheon Books.
- Adorno, T. (1991). The essay as form. *Notes to Literature, Vol. I*. (Sherry Weber Nicholsen, Trans.). New York: Columbia University Press.
- Alfred, T. (1999). *Peace Power Righteousness: An Indigenous Manifesto*. Don Mills, Ontario: Oxford University Press.
- Alfred, T. (2005). *Wasase: Indigenous Pathways of Action and Freedom*. Toronto: University of Toronto Press.
- Apple, M. (2009). Controlling the work of teachers. In D. Flinders & S. Thornton (Eds.), *The Curriculum Studies Reader, 3rd ed.* London: Routledge.
- Atleo, E. A. (2001). *Principles of Tsawalk: An Indigenous Approach to Global Crisis*. Vancouver: UBC Press.
- Atwood, M. (1987). *Selected Poems II: 1976 - 1986*. Boston: Oxford University Press.
- Atwood, M. (1995). *Morning in the Burned House: New Poems*. Toronto: McClelland & Stewart.
- Bahls, P. (2009). Math and metaphor: Using poetry to teach college mathematics. *The WAC Journal*, 20, 75-90.
- Bain, B. (Ed.). (1986). *The Sociogenesis of Language and Human Conduct*. New York: Plenum.
- Bang, J., & Door, J. (2007). *Language, Ecology, and Society: a Dialectical Approach*. New York: Continuum.
- Bang, J. & Door, J. (2000). Ecology, ethics & communication: An essay in ecolinguistics. A.V. Lindo and J. Bundsgaard (Eds.), *Dialectical Ecolinguistics - Three Essays for the Symposium 30 Years of Language and Ecology in Graz December 2000*. Odense: Research Group for Ecology, Language and Ideology, Odense University.
- Basso, K. (1996). *Wisdom Sits in Places: Landscape and Language among the Western Apache*. Albuquerque: University of New Mexico.
- Bateson, G. (1972). *Steps to an Ecology of Mind*. Chicago: The University of Chicago Press.

- BC Ministry of Education. (2007). *Environmental Learning and Experience: An Interdisciplinary Guide For Teachers*. Retrieved April 13, 2011 from <http://www.bced.gov.bc.ca/environment-ed/envisust.html>
- BC Ministry of Education. (2008). *Science Grade 10: An Integrated Resource Package 2008*. Retrieved March 10th, 2012 from <http://www.bced.gov.bc.ca/irp/course.php?lang-en&subject-Sciences&course-Science-Grade-10&year-2008>
- BC Ministry of Education. (2010). *Sustainability Course Content: A Curriculum Framework*. Retrieved March 10th, 2012 from <http://www.bced.gov.bc.ca/greenschools/sustcoursecontent.htm>
- Bennett, J. (2010). *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Berman, M. (1981). *The Reenchantment of the World*. New York: Cornell University Press.
- Berry, T. (1988). *The Dream of the Earth*. San Francisco: Sierra Club Books.
- Betti, E. (1980). Hermeneutics as the general methodology of the *Geisteswissenschaften*. (Josef Bleicher, Trans.). *Contemporary Hermeneutics: Hermeneutics as Method, Philosophy and Critique*. London: Routledge and Kegan Paul.
- Blackner, D. (1993). Education as the normative dimension of philosophical hermeneutics. *Philosophy of Education*. 1-9.
- Bleakly, A. (2004). Education Research in the Postmodern. Retrieved March 10th, 2012 from: <http://www.edu.plymouth.ac.uk/resined/postmodernism/pmhome.htm>
- Blenkinsop, S. (2005). Martin Buber: Educating for relationship. *Ethics, Place and Environment*. 8(3), 285-307.
- Blenkinsop, S. (Ed.). (2009). *The Imagination in Education*. Newcastle: Cambridge Scholars Publishing.
- Blenkinsop, S. (2010). Four slogans for cultural change: An evolving place-based, imaginative, and ecological learning experience. Unpublished paper.
- Blenkinsop, S. & Beeman, C. (2008). Dwelling Telling: Literalness and Ontology. *Paideusis*, 17 (1), 13-24.
- Blenkinsop, S. & Beeman, C. (2010). The world as co-teacher: Learning to working with a peerless colleague. *The Trumpeter: Journal of Ecosophy*, 26 (3), 26-39.
- Blenkinsop, S. & Fettes, M. (2009). *Aligning Education and Sustainability in Maple Ridge, BC: A Study of Place-Based Ecological Schooling*. Successful SSHRC eCURA Grant Application.
- Bonnett, M. (2002). Education as a form of the poetic: A Heideggerian approach to learning and the teacher-pupil relationship. In Michael A. Peters (Ed.). *Heidegger, Education, and Modernity*. Lanham, Maryland: Rowman & Littlefield Publishers.
- Bonnett, M. (2004). *Retrieving Nature: Education for a Post-humanist Age*. Oxford: Blackwell.

- Bowers, C.A. (1993). *Education, Cultural Myths and the Ecological Crisis: Toward Deep Changes*. Albany: SUNY Press.
- Bowers, C.A. (2003). Can critical pedagogy be greened? Retrieved July 24th, 2012 from <http://www.cabowers.net/pdf/Can%20CP%20be%20Greened.pdf>
- Bowers, C.A. (2008a). *Transitions: Educational Reforms that Promote Ecological Intelligence or the Assumptions Underlying Modernity?* University of Oregon Libraries. Retrieved March 10th, 2012 from <https://scholarsbank.uoregon.edu/xmlui/handle/1794/3067>
- Bowers, C.A. (2008b). *Toward a Post-Industrial Consciousness: Understanding the Linguistic Basis of Ecologically Sustainable Educational Reforms*. University of Oregon Libraries. Retrieved March 10th, 2012 from <https://scholarsbank.uoregon.edu/xmlui/handle/1794/3067>
- Bowers, C.A. (2009). *Educating for Ecological Intelligence: Practices and Challenges*. University of Oregon Libraries. Retrieved March 10th, 2012 from <https://scholarsbank.uoregon.edu/xmlui/handle/1794/3067>
- Bowers, C. & Martusewicz, R. (2004). The ecojustice dictionary. Retrieved March 10th, 2012 from <http://www.ecojusticeeducation.org>
- Bringhurst, R. (1999). *A Story as Sharp as a Knife: The Classical Haida Mythtellers and Their World*. Lincoln: University of Nebraska Press.
- Bringhurst, R. (2002). The tree of meaning and the work of ecological linguistics. *Canadian Journal of Environmental Education*. 7: 9-22.
- Bringhurst, R. (2006). *The Tree of Meaning: Thirteen Talks*. Kentville, N.S.: Gaspereau Press.
- Bringhurst, R. (2008). *Everywhere Being is Dancing*. Kentville, N.S.: Gaspereau Press.
- Buber, M. (1970). *I and Thou*. (W. Kaufmann, Trans.) New York: Charles Scribner's Sons.
- Cajete, G. (1994). *Look to the Mountain: An Ecology of Indigenous Education*. Durango, CO: Kivak.
- Capra, F. (2002). *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability*. New York: Doubleday.
- Caputo, J. (1987). *Radical Hermeneutics: Repetition, Deconstruction and the Hermeneutic Project*. Bloomington: Indiana University Press.
- Cardinal, H. (1969). *The Unjust Society: The Tragedy of Canada's Indians*. Edmonton: M.G. Hurtig.
- Carson, R. (1965). *The Sense of Wonder*. New York: Harper & Row.
- Carson, R. (2002). *Silent Spring*. Boston: Houghton Mifflin.
- Catton, W.R. (1982). *Overshoot: The Ecological Basis of Revolutionary Change*. Chicago: University of Illinois Press.

- Chamberlin, J.E. (2003). *If This is Your Land, Where Are Your Stories?: Finding Common Ground*. Toronto: Vintage Canada.
- Chruikshank, J. (1994). Oral tradition and oral history. Reviewing some issues. *Canadian Historical Review*, LXXV (3), 403-418.
- Churchill, W. (1994). Another Dry White Season. *Indians Are Us? Culture and Genocide in Native North America*. Monroe, Maine: Common Courage Press.
- Cook, G. & Van Horn, J. (2011). *How Dirty is Your Data? A Look at the Energy Choices that Power Cloud Computing*. Amsterdam: Greenpeace International.
- Cooper, D. (2005). Heidegger on nature. *Environmental Values*, 14, 339-351.
- Creeping Snowberry. (2010). "Why are those Leaves Red?": Making sense of the complex symbols: Ecosemiotics in Education. *Trumpeter*, 26 (3), 50-60.
- Davis, H. (1990). Introduction. Hayley Davis & Talbot Taylor (Eds.), *Redefining Linguistics*. London: Routledge.
- Debord, G. (1983). *Society of the Spectacle*. London: Rebel Press.
- Deluca, K. M. (2005). Thinking with Heidegger: Rethinking environmental theory and practice. *Ethics & the Environment*, 10 (1), 67-87.
- Denton, D. (1972). *Existential Reflections on Teaching*. North Quincy, Mass.: Christopher Pub. House.
- Donald, D. (2009). Forts, curriculum, and Indigenous Metissage: Imagining decolonization of Aboriginal-Canadian relations in educational contexts. *First Nations Perspectives*, 2 (1), 1-24.
- Drinnon, R. (1980). *Facing West: the Metaphysics of Indian-hating and Empire-building*. Minneapolis: University of Minnesota.
- Egan, K. (1997). *The Educated Mind: How Cognitive Tools Shape Our Understanding*. Chicago: University of Chicago.
- Egan, K. (2005). *An Imaginative Approach to Teaching*. San Francisco: Jossey-Bass.
- Egan, K. & Madej, K. (Eds.). (2010). *Engaging Imagination and Developing Creativity in Education*. Newcastle: Cambridge Scholars Publishing.
- Egan, K. & Nadaner, D. (Eds.). (1988). *Imagination and Education*. New York: Teachers College Press.
- Eliot, T.S. (1962). *The Wasteland and Other Poems*. New York: Harcourt, Brace & World, Inc.
- Elson, C. (2010). No leading note: A chord for Jan Zwicky. In M. Dickinson & C. Goulet (Eds.), *Lyric Ecology: An Appreciation of the Work of Jan Zwicky*. Toronto: Cormorant.
- Emerson, R. W. (1968). *The Complete Works*. Boston: Houghton-Mifflin.

- Evernden, N. (1993). *The Natural Alien: Humankind and the Environment*. Toronto: University of Toronto.
- Ferrari di Pippo, A. (2000). The concept of poiesis in Heidegger's an introduction to metaphysics. *Thinking Fundamentals*, 9, 1-33.
- Fettes, M. (2000). *The Linguistic Ecology of Education*. PhD Dissertation. University of Toronto.
- Fettes, M. (2010). The TIEs that bind: How imagination grasps the world. In K. Egan & K. Madej (Eds.), *Engaging Imagination and Developing Creativity in Education*. Newcastle: Cambridge Scholars Publishing.
- Fettes, M. (2011). Sense and sensibilities: Educating the somatic imagination. *Journal of Curriculum Theorizing*, 27(2), 114-129.
- Fettes, M. (2012). Imagination and experience: An integrative framework. Under review.
- Fettes, M. & Judson, G. (2011). Imagination and the cognitive tools of place-making. *The Journal of Environmental Education*, 42 (2), 123-135.
- Fill, A. & Muhlhausler, P. (Eds.). (2001). *The Ecolinguistics Reader*. New York: Continuum.
- Finke, P. (2001). Identity and manifoldness: New perspectives in science, language and politics. In Alwin Fill & Peter Muhlhausler (Eds.), *The Ecolinguistics Reader*. New York: Continuum.
- Forbes, J. (2008). *Columbus and Other Cannibals*. New York: Seven Stories Press.
- Foucault, M. (1984). *The Foucault Reader*. New York: Vintage.
- Friedman, M. (1960). *Martin Buber: The Life of Dialogue*. New York: Harper and Row.
- Friedrich, P. (1986). *The Language Parallax: Linguistic Relativism and Poetic Indeterminacy*. Austin: University of Texas Press.
- Freire, P. (2006). *Pedagogy of the Oppressed*. London: Continuum.
- Frye, N. (1988). *On Education*. Markham, Ontario: Fitzhenry & Whiteside.
- Gadamer, H. G. (2004). *Truth and Method*. London: Continuum.
- Gajdamaschko, N. (2005). Vygotsky on Imagination: Why an Understanding of the Imagination Is an Important Issue for Schoolteachers. *Teaching Education* 16.1, 13-22.
- Gallagher, S. (1992). *Hermeneutics and Education*. Albany: State University of New York.
- Gatta, J. (2004). *Making Nature Sacred: Literature, Religion, and Environment in America from the Puritans to the Present*. New York: Oxford University Press.
- Gibran, K. (1926). *Sand and Foam*. New Delhi: Sterling Paperback.
- Gibran, K. (2007). *The Collected Works*. New York: Alfred A. Knopf.

- Glenn, L. (2010). Resonance, Loss. In M. Dickinson & C. Goulet (Eds.), *Lyric Ecology: An Appreciation of the Work of Jan Zwicky*. Toronto: Cormorant.
- Goodwin, B. (2007). *Nature's Due: Healing Our Fragmented Culture*. Edinburgh: Floris Books.
- Goodman, P. (1971). *Speaking and Language: Defense of Poetry*. New York: Random House.
- Gould, S.J. (1985). For want of a metaphor. *The Flamingo's Smile: Reflections in Natural History*. New York: W.W. Norton.
- Greene, M. (1995). *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. San Francisco: Jossey-Bass.
- Gruenewald, D. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32 (4), 2-12.
- Grun, M. (2005). Gadamer and the otherness of nature: Elements for an environmental education. *Human Studies*, 28 (2), 157-171.
- Hampton, E. (1995). Towards a redefinition of Indian education. In Marie Battiste & Jean Barman (Eds.), *First Nations Education in Canada: The Circle Unfolds*. Vancouver: UBC Press.
- Harding, S. (2007). *Animate Earth: Science, Intuition and Gaia*. White River Junction, Vermont: Chelsea Green.
- Harre, R., Brockmeier, J. & Mühlhäuser, P. (1999). *Greenspeak: a Study of Environmental Discourse*. Thousand Oaks, CA: Sage Publications.
- Harris, R. (1981). *The Language Myth*. London: Duckworth.
- Harris, R. (1990). On redefining linguistics. Hayley Davis & Talbot Taylor (Eds.), *Redefining Linguistics*. London: Routledge.
- Heidegger, M. (1962). *Being and Time*. San Francisco: Harper & Row.
- Heidegger, M. (2001). *Poetry, Language, Thought*. New York: Harper & Row.
- Hirsch, E.D. (1967). *Validity in Interpretation*. New Haven : Yale University Press, 1967.
- Hirschfield, J. (1997). *Nine Gates: Entering the Mind of Poetry*. New York: HarperCollins.
- Hopper, P. (1990). The emergence of the category 'proper name' in discourse. Hayley Davis & Talbot Taylor (Eds.), *Redefining Linguistics*. London: Routledge.
- How, A. (1995). *The Habermas-Gadamer Debate and the Nature of the Social: Back to Bedrock*. Brookfield, Vt, Aldershot, Hants, England: Avebury.
- Hughes, T. (1988). Myth and education. In Kieran Egan & Dan Nadaner (Eds.), *Imagination and Education*. New York: Teachers College Press.
- Hymes, D. (1974). *Foundations in Sociolinguistics*. Philadelphia: University of Pennsylvania Press.

- Idhe, D. (1999). *Expanding Hermeneutics: Visualism in Science*. Evanston, Illinois: Northwestern University Press.
- Illich, I. (1971). *Deschooling Society*. New York: Harper & Row.
- Illich, I. (1980). Vernacular values. *Philosophica*, 26, 47-102.
- Jardine, D. (1998). *To Dwell with a Boundless Heart: Essays in Curriculum Theory, Hermeneutics, and the Ecological Imagination*. New York: Peter Lang.
- Jardine, D. (2006). On hermeneutics: "Over and above our wanting and doing". In K. Tobin & J. Kincheloe (Eds.), *Doing Educational Research: A Handbook*. Rotterdam: Sense Publishers, 269-288.
- Jenkins, E. (2003). Environmental education and the public understanding of science. *Frontiers in Ecology and the Environment*. 1 (8), 437-443.
- Jensen, D. (2002). *The Culture of Make Believe*. New York: Context.
- Jensen, D. (2004). *A Language Older than Words*. White River Junction, VT: Chelsea Green Publishing.
- Jensen, D. & McBay, E. (2009). *What We Leave Behind*. New York: Seven Stories Press.
- Joldersma, C. (2009). How can science help us care for nature? Hermeneutics, fragility, and responsibility for the Earth. *Educational Theory*, 59 (4) 465-483.
- Judson, G. (2010). *A New Approach to Ecological Education*. New York: Peter Lang.
- Kane, S. (1998). *The Wisdom of the Myhtellers*. Peterborough, Ontario: Broadview Press.
- Kincheloe, J. (2010). *Knowledge and Critical Pedagogy: An Introduction*. New York: Springer.
- Klagge, J. (2011). *Wittgenstein in Exile*. Cambridge, Mass.: MIT Press.
- Koch, T. (1995). Interpretive approaches in nursing research: The influence of Husserl and Heidegger. *Journal of Advanced Nursing*. 21, 827-836.
- Koepnick, L. (1999). *Walter Benjamin and the Aesthetics of Power*. Lincoln, NE: University of Nebraska.
- Kuhn, T. (1996). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Kulnieks, A. (2008). *Ecopoetics and the epistemology of landscape: Interpreting Indigenous and Latvian ancestral ontologies*. Unpublished doctoral thesis, York University, Toronto, ON.
- Kulnieks, A., Longboat, D.R., & Young, K. (2010). Re-indigenizing curriculum: An eco-hermeneutic approach to learning. *AlterNative: An International Journal of Indigenous Peoples*. 6 (1), 15-24.
- Kuykendall, E. (1981). Feminist linguistics in philosophy. M. Vetterling-Braggin (Ed.). *Sexist Language: A Modern Philosophical Analysis*. Totowa, N.J.: Littlefield

- LaDuke, W. (2005). *Recovering the Sacred: The Power of Naming and Claiming*. Cambridge, MA: South End Press.
- Lakoff, G. & Nunez, R.E. (2000). *Where Mathematics Comes From: How the Embodied Mind Brings Mathematics Into Being*. New York: Basic Books.
- Laverty, S. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods*, 2 (3), 1-29.
- Lear, L. (1997). *Rachel Carson: Witness for Nature*. New York: Henry Holt.
- Lee, D. (2002). Body music: Notes on rhythm in poetry. In Tim Lilburn (Ed.), *Thinking and Singing: Poetry and the Practice of Philosophy*. Toronto: Cormorant.
- Lee, D. (2010). The music of thinking. In M. Dickinson & C. Goulet (Eds.), *Lyric Ecology: An Appreciation of the Work of Jan Zwicky*. Toronto: Cormorant.
- Leopold, A. (1989). *A Sand County Almanac*. New York: Oxford University Press.
- Lilburn, T. (2002). Going home. In Tim Lilburn (Ed.), *Thinking and Singing: Poetry and the Practice of Philosophy*. Toronto: Cormorant.
- Louv, R. (2008). *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*. Chapel Hill, N.C. : Algonquin Books of Chapel Hill.
- Love, N. (1990). The locus of languages in a redefined linguistics. Hayley Davis & Talbot Taylor (Eds.), *Redefining Linguistics*. London: Routledge.
- Maffi, L. (1999). Language and the environment. In D. A. Posey (Ed.), *Cultural and spiritual values of biodiversity*. Nairobi, Kenya: United Nations Environment Programme.
- Maffi, L. (Ed.). (2001). *On Biocultural Diversity: Linking Language, Knowledge and the Environment*. London: Smithsonian Institution Press.
- Malotki, E. (1983). *Hopi Time: A Linguistic Analysis of the Temporal Concepts in the Hopi Language*. New York: Mouton Publishers.
- Mander, J. (1991). *In the Absence of the Sacred: The Failure of Technology and the Survival of the Indian Nations*. San Francisco: Sierra Club Books.
- Maracle, L. (1996). *I Am Woman: A Native Perspective on Sociology and Feminism*. Vancouver: Press Gang Publishers.
- Martusewicz, R. & Edmundson, J. (2004). Social foundations as pedagogies of responsibility and eco-ethical commitment. In D. Butin (Ed.), *Teaching context: A primer for the social foundations of education*. Mahwah, NJ: Lawrence Erlbaum Publishers.
- Martusewicz, R., Edmundson, J. & Lupinacci, J. (2011). *Ecojustice Education*. New York: Routledge.

- McKay, D. (2002). The bushtits' nest. In Tim Lilburn (Ed.), *Thinking and Singing: Poetry and the Practice of Philosophy*. Toronto: Cormorant.
- Michelfelder, D. & Palmer, R. (Eds.). (1989). *Dialogue and Deconstruction: the Gadamer-Derrida Encounter*. Albany: State University of New York.
- Merchant, C. (1980). *The Death of Nature: Women, Ecology, and the Scientific Revolution*. San Francisco: Harper & Row.
- Merleau-Ponty, M. (2008). *Phenomenology of Perception*. London: Routledge.
- Moldenhauer, J. (1990). Walden and Wordsworth's Guide to the English Lake District. *Studies in the American Renaissance*. 261-292.
- Monk, R. (1990). *Ludwig Wittgenstein: The Duty of Genius*. London : Jonathan Cape.
- Muhlhauser, P. (1996). *Linguistic Ecology: Language Change and Linguistic Imperialism in the Pacific Rim*. London: Routledge.
- Naess, A. & Haukeland, P.V. (2008). *Life's Philosophy: Reason and Feeling in a Deeper World*. Athens, Georgia: The University of Georgia Press.
- Orr, D. (1991). What is education for? *The Learning Revolution* , Winter, 52- 58.
- Orr, D. (2005). Recollection. In M.K. Stone & Z. Barlow (Eds.), *Ecological Literacy: Educating Our Children for a Sustainable World*. San Francisco: Sierra Club Books.
- Ramberg, B. & Gjesdal, K. (2009). Hermeneutics. In Edward N. Zalta (Ed.). *The Stanford Encyclopaedia of Philosophy* (Summer 2009 Edition). Retrieved March 10th, 2012 from: <http://plato.stanford.edu/archives/sum2009/entries/hermeneutics/> .
- Rasmussen, D. (2011). Some honest talk about Non-Indigenous education. *Our Schools, Our Selves*, 20 (2), 19-33.
- Rhees, R. (Ed.). (1984). *Recollections of Wittgenstein*. New York: Oxford University Press.
- Sachs, W. (Ed.). (2010). *The Development Dictionary: A Guide to Knowledge as Power*. London: Zed Books.
- Sahlins, M. (2008). *The Western Illusion of Human Nature : with reflections on the long history of hierarchy, equality and the sublimation of anarchy in the West, and comparative notes on other conceptions of the human condition*. Chicago: Prickly Paradigm.
- Sakolsky, R. & Koehnlne, J. (Eds.). (1993). *Gone to Croatan: Origins of North American Drop-Out Culture*. New York: Autonomedia.
- Sammel, A. (2003). An invitation to dialogue: Gadamer, hermeneutic phenomenology, and critical environmental education. *Canadian Journal of Environmental Education*. 8, Spring, 155-168.
- Sanger, P. (2010). Almost blind with light. In M. Dickinson & C. Goulet (Eds.), *Lyric Ecology: An Appreciation of the Work of Jan Zwicky*. Toronto: Cormorant.

- Sapir, E. (2001). Language and environment. In Alwin Fill & Peter Muhlhausler (Eds.), *The Ecolinguistics Reader*. New York: Continuum.
- Sartre, J.P. (1964). *Nausea*. New York: New Directions Publishing.
- Schokel, L.A. (1998). *A Manual of Hermeneutics (Biblical Seminar)*. Sheffield: Sheffield Academic Press.
- Shepard, R. (1988). The imagination of the scientist. In Kieran Egan and Dan Nadaner (Eds.), *Imagination and Education*. New York: Teachers College Press.
- Shepard, P. (1982). *Nature and Madness*. Athens, GA: University of Georgia Press.
- Sinclair, S. (2010). Wisdom. In M. Dickinson & C. Goulet (Eds.), *Lyric Ecology: An Appreciation of the Work of Jan Zwicky*. Toronto: Cormorant.
- Smith, M. (2001a). *An Ethics of Place: Radical Ecology, Postmodernity, and Social Theory*. Albany: State University of New York Press.
- Smith, M. (2001b). Lost for words? Gadamer and Benjamin on the nature of language and the 'language' of nature. *Environmental Values*. 10, 59-75.
- Smith, M. (2007). Wild-life: Anarchy, ecology, and ethics. *Environmental Politics*. 16 (3), 470-487.
- Snyder, G. (1980). *The Real Work*. New York: Wm. Scott McLean.
- Stamets, P. (2005). *Mycelium Running: How Mushrooms Can Help Save the World*. Berkeley, CA: Ten Speed.
- Steffensen, S.V. (2007). Language, ecology and society: An introduction to Dialectical Linguistics. In J. Bang and J. Door, *Language, Ecology and Society*. New York: Continuum.
- Steiner, G. (1998). *After Babel: Aspects of Language and Translation*. New York: Oxford University Press.
- Suzuki, D. & Grady, W. (2004). *Tree: A life Story*. Vancouver: Greystone Books.
- Taylor, T. (1990). Normativity and linguistic form. Hayley Davis & Talbot Taylor (Eds.), *Redefining Linguistics*. London: Routledge.
- Thoreau, D. (2010). *A Week on the Concord and Merrimack Rivers* (Classic Reprint). Charleston, South Carolina: Forgotten Books.
- Utsler, D. (2009). Paul Ricoeur's hermeneutics as a model for environmental philosophy. *Philosophy Today*. Summer, 173-178.
- Pateman, T. (1987). *Language in Mind and Language in Society*. Oxford: Oxford University Press.
- Perlman, F. (1983). *Against His-story, against Leviathan!: An Essay*. Detroit: Black & Red.

- Piercey, R. (2004). Ricoeur's account of tradition and the Gadamer-Habermas debate. *Human Studies*, 27 (3), 259-280.
- Plath, S. (1998). *The Colossus and Other Poems*. New York: Vintage Books.
- Plumwood, V. (1993). *Feminism and the Mastery of Nature*. London: Routledge.
- Polyani, M. (2009). *The Tacit Dimension*. Chicago: The University of Chicago Press.
- Prakash, M.S. (2009). Soil, seeds, salt: Education brought down to Earth. *Yes! Magazine*. Retrieved from <http://www.yesmagazine.org/issues/learn-as-you-go/soil-seeds-salt-education-brought-down-to-earth>
- Prakash, M.S. & Esteva, G. (1998). *Grassroots Postmodernism: Remaking the Soils of Culture*. New York: Zed Books.
- Prakash, M.S. & Esteva, G. (2008). *Escaping Education: Living as Learning within Grassroots Cultures*. New York: Peter Lang.
- Russell, C. (2005). 'Whoever does not write is written': the role of 'nature' in post-post approaches to environmental education research. *Environmental Education Research*, 11 (4), 433-443.
- van Buren, J. (1995). Critical environmental hermeneutics. *Environmental Ethics*. 17 (3), 259-275.
- Vizenor, G. (1970). *Anishnabe Adisokan: Tales of the People*. Minneapolis: Nodin Press.
- Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, Mass.: Harvard University Press.
- Vygotsky, L. (1986). *Thought and Language*. (Alex Kozulin, Trans.). Cambridge, Mass: MIT Press.
- Vygotsky, L. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology*. 42: 1, 7-97.
- Waddington, T. & Johnson, J. (2010). Imaginative Education and the National Framework for Values Education in Australian schools: Practical implementations for promoting ethical understanding. *International Research Handbook on Values Education and Student Wellbeing, Part 2*, 559-577. doi: 10.1007/978-90-481-8675-4-32.
- Weil, S. (1952). *Gravity and Grace*. New York: Putnam.
- Weil, S. (1970). *First and Last Notebooks*. (Richard Rees, Trans.). London: Oxford University Press.
- Weil, S. (1974). *Cahiers Vol. 3*. Paris: Plon.
- White, L. (1967). The historical roots of our ecological crisis. *Science* 155, 1203-1207.
- Wittgenstein, L. (1980). *Remarks on the Philosophy of Psychology, Vol I*. (C.G. Luckhardt & M.A.E. Aue, Trans.). Oxford: Basil Blackwell.

- Wittgenstein, L. (1982). *Last Writings on the Philosophy of Psychology, Vol. I*. (C.G. Luckhardt & M.A.E. Aue, Trans.). Chicago: University of Chicago Press.
- Wittgenstein, L. (1984). *Culture and Value*. (Peter Winch, Trans.). Chicago: University of Chicago Press.
- Wittgenstein, L. (1993). *Philosophy*. (C.G. Luckhardt & M.A.E. Aue, Trans.). *Philosophical Occasions 1912-1951*. James Klagge & Alfred Nordmann (Eds.). Cambridge: Hackett Publishing Company.
- Wittgenstein, L. (2007). *Zettel*. G.E.M. Anscombe & G. H. von Wright (Eds.). Los Angeles: Basil Blackwell.
- Wittgenstein, L. (2009). *Philosophical Investigations*. Rev 4th ed. by P.M.S. Hacker and Joachim Schulte. (G.E.M. Anscombe, P.M.S. Hacker and Joachim Schulte, Trans.). Chichester, West Sussex: Wiley-Blackwell.
- Wood, D. (2003). What is eco-phenomenology? In Charles S. Brown and Ted Toadvine (Eds.), *Ecophenomenology: Back to the Earth Itself*. Albany: State University of New York Press.
- Zerzan, J. (1999). *Elements of Refusal*. 2nd Edition. Seattle: Left Bank Books.
- Zerzan, J. (Ed.). (2005). *Against Civilization*. Los Angeles: Feral House.
- Zwicky, J. (1992). *Lyric Philosophy*. Toronto: University of Toronto Press.
- Zwicky, J. (1986). *Wittgenstein Elegies*. Ilderton, Ontario: Brick Books.
- Zwicky, J. (1998). *Songs for Relinquishing the Earth*. London, Ont.: Brick Books.
- Zwicky, J. (2002a). Once upon a time in the west: Heidegger and the poets. *Thinking and Singing: Poetry and the Practice of Philosophy*. T. Lilburn, (Ed.). Toronto: Cormorant
- Zwicky, J. (2002b). Dream logic and the politics of interpretation. *Thinking and Singing: Poetry and the Practice of Philosophy*. T. Lilburn, (Ed.). Toronto: Cormorant.
- Zwicky, J. (2003). *Wisdom & Metaphor*. Kentville, N.S.: Gaspereau Press