AN ABSTRACT OF THE THESIS OF

Jason A. Schindler for the degree of Master of Arts in Environmental Arts and Humanities presented on December 3, 2018.

Title: Embodying Gaia: Bruno Latour’s Gaia and the Earthboundedness of Contemplative Pedagogy (a snail’s view)

Abstract approved: ______________________________________________________

Barbara Muraca

Bruno Latour’s Facing Gaia provokes us to embrace our Earthboundedness to approach the problematic political ecologies of the Anthropocene. Latour’s call for the Earthbound is to re-trace networks of society, institutions, and meaning and to challenge, as enemy, those that would continue to behave as if we lived on more than one Earth or would fall prey to the hubris in thinking our solutions were merely technological. Modernist separations of Science and Religion are shown rooted in perceptions and narratives of separateness over the reality of their hybridity and imbrication. Realizing this imbrication, science and religion need not be at odds. Modes of contemplative practices of mindfulness, meditation, and aikido mirror these calls for Latour’s Earthbounded reformation and reorientate the apparent dualities of human origins. Contemplative pedagogies also trace similar modalities of transdisciplinarity in academia and focus on corroborative practice over dogmatic narrative. This is traced through the work by way of a snail’s view, in homage to marginalia, the marginalized, and the chthonic beings of the overlooked world; this view situates an Earthboundedness, sensitivity to kin and encounter, and a praxis for moving forth-with, accomplishing reconciliation and reciprocity. In this way, we may
better perceive the vicissitudes of and connect with the Anthropocene, face Gaia, and make kin of enemies, political and ecological.
Master of Arts thesis of Jason A. Schindler presented on December 3, 2018

APPROVED:

Major Professor, representing Environmental Arts and Humanities

Director of the Environmental Arts and Humanities

Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Jason A. Schindler, Author
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I wish to first recognize our Champinefu¹ landcestors—those that were local stewards of the land before Oregon State University and Corvallis. Locally referred to as the Mary’s River band of the Kalapuya, we are guests of these previous caretakers and of the land we currently reside. The Kalapuya were forcibly removed after the Treaty of 1855 and resettled in what are now the reservations of the Confederated Tribes of the Grand Ronde and Confederated Tribes of Siletz Indians. I am grateful for the peoples, scholars, elders and storytellers that make visible their presence and the injustices to these peoples and to the local environmental and geohistory. It is my hope that our work here continues to build that visibility and bring further restorative justices.

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¹ Variant spellings are available (Chepenefu, Chepenafa), though this is the one most recently adopted by Oregon State University and recent building name changes. See also “Kalapuya,” Wikipedia, https://en.wikipedia.org/wiki/Kalapuya, and Barnd, “A Lot to Ask of a Name,” https://oregonhumanities.org/rll/magazine/turn/a-lot-to-ask-of-a-name/.
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Many thanks to all my other friends and comrades I don’t have the cognizance, spoons, or space left to mention directly: especially dance friends, spider house friends, and gaming friends. You’ve all been helpful and appreciated.

Special thanks goes to my partner Candice for being emotionally and cognitively supportive through all the recent changes in life, universes, and everything.
She has put up with the strange work and hours of my grad student life, and I appreciate the work she does to support my endeavors.

For all my other relations, many thanks and continued compassion goes to all those struggling and continuing to work towards a better world, practical peace, and restorative justice for humans, non-humans and all the entities that make up our world, visible or otherwise. May we find ways of bettering all our selves in the process of continuing the great play of existence. And especially the snails.

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2 A copious amount of music was consumed and appreciated in the creation of this thesis. Many of those playlists are available to enjoy while reading: http://bit.ly/spotifychinji.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epigraph</td>
<td>1</td>
</tr>
<tr>
<td>Preface: On the Overture and the Intrusion of Snails</td>
<td>2</td>
</tr>
<tr>
<td>Introduction: &quot;There's no point in lying down in the path of progress.&quot;</td>
<td>4</td>
</tr>
<tr>
<td>Overture: The Snail Trail Sutra</td>
<td>12</td>
</tr>
<tr>
<td>One: Where Lovelock Went Wrong and a Number of Science's Greater Mistakes</td>
<td>13</td>
</tr>
<tr>
<td>Intrusion I: Methods</td>
<td>35</td>
</tr>
<tr>
<td>Two: &quot;Yes, I said I'd have to think about it didn't I?&quot;</td>
<td>36</td>
</tr>
<tr>
<td>Intrusion II: Results for Interpretation &amp; Translation of Results</td>
<td>66</td>
</tr>
<tr>
<td>Three: &quot;Good. Are you sitting comfortably?&quot;</td>
<td>67</td>
</tr>
<tr>
<td>Intrusion III: Trails Without Apocalypse</td>
<td>104</td>
</tr>
<tr>
<td>Conclusion: &quot;I have no idea. It merely pleases me to behave in a certain way to what appears to be...&quot;</td>
<td>105</td>
</tr>
<tr>
<td>Intrusion IV: Snail Time</td>
<td>107</td>
</tr>
<tr>
<td>Afterword: &quot;Forty-two.&quot;</td>
<td>108</td>
</tr>
<tr>
<td>Bibliography</td>
<td>109</td>
</tr>
<tr>
<td>Appendices</td>
<td>120</td>
</tr>
</tbody>
</table>
**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AGES OF THE EARTH: INTERNATIONAL COMMISSION ON STRATIGRAPHY</td>
<td>7</td>
</tr>
<tr>
<td>2. “BLUE MARBLE” PHOTO TAKEN DECEMBER 7, 1972 BY APOLLO 17</td>
<td>15</td>
</tr>
<tr>
<td>3. MICHAEL RUSE’S CATEGORIES OF RECEPTIONS OF THE GAIA HYPOTHESIS</td>
<td>23</td>
</tr>
<tr>
<td>4. THE TREE OF CONTEMPLATIVE PRACTICES</td>
<td>80</td>
</tr>
<tr>
<td>5. IRIMI &amp; TENKAN: ENTERING AND TURNING IN AIKIDO</td>
<td>89</td>
</tr>
<tr>
<td>6. SHAKYAMUNI BUDDHA GIVING THE BHUMISPARSHA MUDRA</td>
<td>99</td>
</tr>
<tr>
<td>7. SNAIL</td>
<td>108</td>
</tr>
</tbody>
</table>
# List of Appendix Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. “Natural” Religions, from Facing Gaia, Table 5.2</td>
<td>125</td>
</tr>
<tr>
<td>2. Terrestrialization, from Facing Gaia, Table 5.3</td>
<td>126</td>
</tr>
<tr>
<td>3. Comparison, from Facing Gaia, Table 5.4</td>
<td>127</td>
</tr>
</tbody>
</table>
DEDICATION

For my mothers,
considered,
personal, terrestrial, and spiritual.
Every man takes the limits of his own field of vision
for the limits of the world.
—Arthur Schopenhauer

Knowledge is an affair of symbols and is, all too often, a hindrance to wisdom,
to the uncovering of the self from moment to moment.
—Aldous Huxley

The Art of Peace is the religion that is not a religion;
it perfects and completes all religions.
The true meaning of the term samurai is one
who serves and adheres to the power of love.
—Morihei Ueshiba

The quantum physicists have it right; they are beginning to think like Indians:
everything is connected dynamically at an intimate level.
When you remember this, then the current wobble of the [E]arth makes sense.
How much more oil can be drained,
Without replacement; without reciprocity?
—Joy Harjo

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4 Blau, Krishnamurti: 100 Years.
5 Morihei Ueshiba; John Stevens (trans.), The Art of Peace.
 Preface: On the Overture and the Intrusions of Snails

I have represented the entities, concepts and theories within this thesis as best I can. I further assume any mistakes in understanding, translation or misrepresentation thereof. Hopefully any mistakes may prove useful, not least of all to myself.

Throughout the rest of this document, I have done the best I can to abide by the academic rigors of what is expected of a thesis at the master’s level. However, I also believe the very inquiry demands some transgression against those same institutional constraints and formatting. As I develop the arguments of the other entities of the planet and show the hubris and falsehood in taking too high a bird’s eye view of the planet as a globe and map, I intend to mirror an important ground-level view. Other ground-level perspectives are borrowed from the worm’s-eye view of architecture, the frog’s-eye view of Barbara Muraca, and others. I would endeavor to cite all of the other animal perspectives, but that will suffice for now.

One of the larger influences for the use of snails here specifically has been the marginalia of medieval illuminated texts. A long tradition exists of scribes writing in the margins of their painstakingly constructed texts. A great deal of marginalia is similarly devoted to knights fighting large snails. Some scholars have suggested it derives from the ancient feud against the Lombards, snails being a racial slur against the encroachment of them as foreigners. But the history is not completely clear and other connotations of meme adoption, homage to illumination manuals, and general punning also exist. I give my homage in the latter sense and for the purposes of inciting commentary on the whole of this text. If I can accomplish nothing else with this thesis than to inspire an examination of the margins and marginalized, I will be successful.

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7 Common to architectural design, a worm’s-eye-view shows the perspective from the ground, opposed to human height.
8 Similarly, also developed from others’, as well as Barbara Muraca.
9 It’s turtles, wombats, and elephants, all the way down. Probably up too.
11 See also: Medievalists.net, “The Humility of Snails”; and Hunt, “Medieval Marginalia.”
Additional inspiration came from Elizabeth Tova Bailey’s book *The Sound of a Wild Snail Eating*. Indeed a brilliant work of creative non-fiction and memoir, Bailey’s book recounts her life after becoming bedridden from a mysterious illness. Made horizontal, she finds companionship and poetic kinship in a snail brought to her by a colleague. Many thanks for the snail poetry collected there, not least of all the Kobayashi Issa.\(^\text{12}\)

Further inspiration comes from concrete poetry, asemic writing, and the intrusive work of e.e. cummings, Julia Kristeva,\(^\text{13}\) Barre Toelken,\(^\text{14}\) and Mark Z. Danielewski.\(^\text{15}\)

In the interstitial pages between sections and chapters, I will develop and trace a snail’s view. These poetic and artistic intrusions of snail viewpoint will be intentionally transgressive, transdisciplinary forays intended to bridge some of the gaps between the pages and perspectives presented. These snail views are anti-aggressive argumentation; they approach from the ground of being, that gooey connection to life and being lost in such higher academic speech and semiotics. Indeed, the speech may be overly simple at times to a point. Further implications of other snail qualities—intraversion [sic], spirality, hermaphroditism and queering ecology, at-home-ness, thin-shelléd-ness, and the tentacular—I leave to the poetry and the reader to explore and enjoy.

We must practice citing our kin.\(^\text{16}\)

/\ Jason Schindler

November, 2018

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\(^\text{12}\) Bailey, *The Sound of a Wild Snail Eating*.

\(^\text{13}\) Kristeva, “Sabat Mater,” c/o Vicki Tolar Burton.

\(^\text{14}\) Toelken, *The Anguish of Snails*.

\(^\text{15}\) Danielewski, *The Familiar, Volume #1* and Danielewski, *House of Leaves*.

\(^\text{16}\) Acknowledgement to Jason Magabo Perez and inspiration from his dissertation and citing his mother, as well as Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*. 
INTRODUCTION: “THERE’S NO POINT LYING DOWN IN THE PATH OF PROGRESS.”\textsuperscript{17}

We live on a strange and wonderful planet.\textsuperscript{18} Our planet is under threat.

Douglas Adam’s \textit{Hitchhiker’s Guide to the Galaxy} is a widely loved BBC radio and book series about the destruction of the Earth\textsuperscript{19} and how some of those Earthlings survive.\textsuperscript{20} In \textit{Hitchhiker}, the destruction of the planet Earth is most unfortunate because the Earth is “deconstructed”\textsuperscript{21} by a bureaucratic, plodding, banal assemblage of aliens known as Vogons, and mirrors the destruction of the protagonist’s home in semi-rural England by “construction” workers. Both destructors follow political instructions taken as gospel and claim bureaucratic mandate of hidden actors for the need of a transportation bypass.\textsuperscript{22}

I find that this mirrored metaphor and subtext holds for the present environmental problems of the Earth, the implicit assumptions of “progress,” and the creation of larger problems by ignoring smaller entities and processes. By staking

\textsuperscript{17} From Douglas Adams, “Fit the First,” \textit{The Hitchhiker’s Guide to the Galaxy: The Original Radio Scripts}. Many of the chapter subtitles are drawn from \textit{Hitchhiker} and the relevance globalistic view and of planetary destruction is hopefully relevant; its inspiration in my life has been considerable enough that it bears consistent citational relevance.

\textsuperscript{18} Stephen Hawking. \textit{A Briefer History of Time}, 2005. I pay further homage to Hawking’s book and his inspiration to become a chemist, which also contains reference to Richard Feynman worthy of critique: “We are lucky to live in an age in which we are still making discoveries. It is like the discovery of America—you only discover it once. The age in which we live is the age in which we are discovering the fundamental laws of nature.”

\textsuperscript{19} I capitalize Earth whenever it refers to our planet, not only because it is similarly implicated with later examinations of constituation, but also because Ursula Le Guin insists that it should be as well. See Ursula K. Le Guin and David Naimon, \textit{Ursula K. Le Guin: Conversations on Writing}. See also, inspiration for this work, Le Guin, “In Ashland,” \textit{Late in the Day}, p15.


\textsuperscript{21} The destructive Vogons after mentioned are part of a ‘construction’ fleet, akin to the ‘construction’ that occurs to the environment that makes way for civilization. In \textit{Hitchhiker}, the Earth is put in the role of galactic “environment” rather than one of its subjects, and thus subverting the typical position its readers might expect. The irony becomes satire and humor, though it is difficult to understand precisely how much is intentional; Adams seems aligned with the environmental problem at hand even at the time of his publishing.

\textsuperscript{22} It is never particularly clear what a bypass means in the story other than to introduce that “you’ve got to build bypasses.” Later it is revealed that these bypasses were no longer necessary, better technologies eliminating their use. Again, essentializing progress and acceleration without examination and oversight.
progress on the claim of necessity, the [de]constructors invoke a hidden actor—be it legal, natural, economic or political—a form of Providence guiding their unerring plod. The literal bypass by the [de]constructors is the same bypassing of a political and ethical process writ large in destruction of the local and then larger for the planet. I also associate this notion of progress with the ideals of Modernity defined further below. The questions of life, the universe, and everything, portrayed in humor and satire in Hitchhiker become touchstones for the world we live in now and for a thesis I endeavor to reveal here.

We seem to face the destruction of our planet as well. We face now an apparent calamity in global warming, climate change, large scale pollution (both in quantity and distribution), persistent chemicals and their disruptions, habitat encroachment and destruction, an unfolding mass extinction, and the associated political, religious, and societal complications and upheavals to go with it. We would hope that something can be done. To find a solution we may have to carefully construct and articulate how we got to this present condition and why our current methods have not allowed the solution. Instead of external alien forces of the Vogons destroying the Earth, in our case scientists greatly agree that these apparent climactic devastations are predominantly created by human activity. Production of carbon emissions, pollutions unmanaged, human expansion, species destruction and human exceptionalism, and political strife leading to war and its environmental impact are socially caused. If nothing is changed in our notion of social progress, at least according to the Intergovernmental Panel on Climate Change (IPCC), the trajectories for the Earth’s warming will bring increasing catastrophic social, environmental, and economic upheaval. Increased warming is readily apparent in exacerbating hurricanes, droughts and wild-fires. If we do not carefully “deconstruct” our view of progress, there may

23 I will be capitalizing many words in this document after a nod towards Bruno Latour’s use of them and their institutional nature. They are treated as proper nouns because of their idiosyncratic nature. See Appendix: Glossary for more detail and a collection of the more often used terms and further reference.

24 See also Adams and Carwardine, Last Chance to See, as well as Kolbert, The Sixth Mass Extinction on cogent response to this.

25 Deconstruction is a loaded term in the humanities and critical theory, nodded to in conjunction with
be no future for “civilization”.

This is the progress of the Modern world.

Why is this notion of progress a distinctly Modern one? This is not modern in the sense of contemporary. Modern and the beings that purport to be Modern, comprising Modern “civilization,” the Modern Society, I capitalize and quote to bring special attention to these terms after the work of Bruno Latour. These capitalizations and sense of the Modern represent the act of constituting those groups and narratives about these groups. Many scholars and writers have talked about Modernity for some time, and that discussion alone would take considerable re-tracing and recapitulation.

For most participants in this discourse, Modernity also stands for the ideals of Cartesian dualism: the notion of an external Nature to be studied by the disciplines of Science, and the human Cultures that exist to make Society. These bifurcations are not to be transgressed: humans study and observe Nature through the process of science. Modernity suggests that clear distinctions between the two can always be made:

We—the peoples of Europe and North America—self-consciously declared ourselves to be Moderns. Modern, that is: to be no longer bound to the social practices and values of traditional societies, to be enlightened; in Kant’s famous words: to be released from man’s self-incurred tutelage. Science enables us to rationally control nature; democracy and the rule of law guarantee our political freedom. They are two of the keystones that define societies as ‘modern’ ones.

This is a drastic, simplified, and probably overly reductionistic depiction of what it means to be Modern. But until we can see a little more of where this leads and why we would want to understand Bruno Latour’s perspective, it may suffice to say I will base my use of Modernity on Latour’s concept and come to explain more of it later.

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the Hitchhiker reference. However, we will not go much further into the vicissitudes of the field of deconstruction and postmodernity here, though it is potentially relevant.

26 Kingsnorth, Hine, and Dark Mountain Project, Uncivilisation: The Dark Mountain Manifesto.
27 I use this especially in Latour’s use of Modern, this is the supposed collection of those behaving and claiming to be modern in a sense of the separations between culture and nature, further discussed.
28 See also: Toulmin, Cosmopolis: The hidden agenda of modernity; and Snow, The Two Cultures and the Scientific Revolution.
29 Vries, Bruno Latour, 20xx.
Paul Crutzen has suggested that this Modern age of human activity dominating global changes to the environment warrants its own geological designation: the Anthropocene. Submitted for review by the International Commission on Stratigraphy as a geological epoch, the Anthropocene would be seen as a transition from the most recent geologic age, the Holocene, a relatively stable period of climate for the last several millennia. Our impact can be seen not only in global carbon dioxide levels but also in the deposition of micro-plastics in oceanic sediment, increased radioactive isotopes in the atmosphere from above-ground nuclear testing, and near universally increased global deposition of poly-aromatic hydrocarbons from complex combustions found in hereto-unknown levels. While this geologic age of human

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32 To say little of the other anthropogenic garbages and wastes.
dominant activity is highly controversial for many reasons, it may yet suffice for the time being as the moniker of some collective threat.

Many important voices have also been very critical about the robustness of perspective and terminology using the term of “Anthropocene” may bring. As a geologic age, it remains unratified by geologists because of important scientific questions unanswered. Here and elsewhere, it has been widely used as a moniker for the present age of human caused climate issues, if at least to start that complex discussion. While I will use the Anthropocene to refer to some of our present-day conundrums, there are at least a few important considerations about this concept of the Anthropocene that we should know.

One of the reasons geologists are reluctant to officially approve the term is that geological ages are typically considered on the order of hundreds of thousands to millions of years. Even transition periods may last thousands upon thousands of years in the geologic record. While there may be layers of plastic infiltrating and sedimenting the geology of our world, it remains to be seen what will come of that and if it merits an epoch. Many things are found in the geologic record that only constitute events due to their relatively short temporality. Donna Haraway, John Michael Greer, and others suggest that the Anthropocene may be seen, geologically especially, as a brief bifurcation and boundary event, akin to meteor strikes, major volcanic eruptions, or other changes between geologic epochs. Indeed, the mass extinction events currently seen between geologic epochs are similar to our current, sixth great mass extinction event. Should we survive the Anthropocene, perhaps a future Neocene may be the relatively stable aftermath and herald re-speciation that typically follows such catastrophic events. In short, humans are still not necessarily notable on a geological time scale. Indeed, there may be no humans later to record that epochal shift—thus negating the need to call it an age, but rather the end mark of the Anthropos, of humans.

Greer, *Dark Mountain*, vol. 12.
While the human-centric origins of climate change are well to be defined from IPCC reports, further climate change reports, and the global scientific community, not all humans participate in the same way in producing anthropogenic climate changes. Indeed, the “we” of the Anthropocene and Society in general from our Modern construction must be better unpacked. The subtext already present in this discussion is challenging the strict bifurcation between Nature and Culture, but should also put into question how we make and constitute the “we” of Society in general. Is the population of the Indian subcontinent with approximately a billion people as responsible for the Anthropocene as the United States with only 350 million people? The IPCC report details which nation states contribute most to global climate change emissions—and the U.S. is well above India, and China has only recently caught up in producing as much emissions as the U.S. with a billion people to their state’s population.

Chirstophe Bonneuil and Jean-Baptiste Fressoz in *The Shock of the Anthropocene* draw a more complete picture of the histories informing the Anthropocene and other epochal ‘cenes’. Some of the other contending terms may take the tracing of capitalism into the “Capitalocene”: an even greater epochal threat from our globalized economies. They point out that Anthropocene was not entered into absentmindedly—“we,” being the conglomerations of large business and politics mostly, knew what we were doing most of the time and refused to alter that path.

Again, we return to which “we” to refer. Does it seem a simple mistake to totalize any Society of the world? They are obviously diverse and impossible to lump into one totalized organization, it seems ludicrous. And yet, this seems suggested by the Modern constitution between Nature and Culture. The Anthropocene demands, by definition, an acknowledgement that our geology must incorporate an age of the Earth that is at least as influenced by humans than the mere “natural” forces and geology. While it may be obvious humans are not the only beings on the planet, and still only apparently active in recent geological history, our effect in the “natural” world in such

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drastic ways in such a short tenure on the planet seems convincing.

Kyle Whyte, prominent indigenous scholar and decolonialist advocate, suggests the Anthropocene could also be seen as a form of colonization, both in name and force.\textsuperscript{38} Indigenous peoples and most of the population of the world lives on far less energy consumption and produces less emissions. Not all peoples wanted the world we have, and should not be blamed for the calamity. Thus, the West’s colonization impact and inequality in resource consumption should be implicated in indicting the Anthropocene. Bonneuil and Fressoz help further trace the “imperial ecologies” of the Capitalocene that have dominated and contributed to those silencings and genocides. This also further implicates Modernity as a force of Western colonialism, replete with racial, gender, and intersectional biases. The Anthropocene is as much a force of colonialism as it is capitalism as it is with externalizing Nature in general. These alignments reinforce each other as we further trace their origins.

Throughout this introduction, the many constituted terms, Nature, Society, and Science will require further unpacking.\textsuperscript{39} If we understand that life in the Anthropocene includes humans, then the distinction between Nature and Culture becomes blurry. As the Anthropocene suggests, if we are to examine and understand what it is to live on this planet and how our actions are contributing to our own as well as others’ suffering and the inability to live, it may behoove us to examine our thoughts and beliefs about the world and how we live upon it. This is the core call to further a discipline of the Environmental Arts and Humanities, and is the program of which I am submitting this thesis.\textsuperscript{40}

As the subtitle for this chapter suggests, what will "we" will have to do to get up\textsuperscript{41} to the task of examining what progress has wrought and facing the Anthropocene?


\textsuperscript{39} See Appendix: Glossary for further reference and assistance.

\textsuperscript{40} Also echoed from Bonneuil and Fressoz, The Shock of the Anthropocene.

\textsuperscript{41} In Hitchhiker, the protagonist must literally lie down in the face of progress and a buldozer—a bodily blocadia action we see more common today in such actions as NODAPL. He gets up only soon enough to preserve himself from the Earth’s destruction. I suggest that both actions and more may be necessary to help preserve life, health, and well-being for all entities—but that too, will take some reconcilliation.
I begin that journey and potential task with Bruno Latour’s book, *Facing Gaia*, and to introduce *Facing Gaia*, I will first introduce the Gaia hypothesis.

By means of understanding the lineage between the Gaia hypothesis, Lovelock and Latour’s interpretation of that intervention, we begin to see more of how science’s role in the Anthropocene is cast. *Facing Gaia* traces more of the role of Modernity and Latour’s indictment of the particularities of science and religion’s roles in prefiguring aspects of the world, the externalization of Providence, and how by forming a new perspective on that relationship between Science and Religion, we may understand them as not being at ontological odds, but performing different functions of a more difficult and muddled medial zone Latour intends as a localized view of the Earth.

In understanding the registers of Latour’s Religion and Nature, their practices can be better integrated, understood, and collaborated. Thus, other views of Religion, especially those espoused by Latour’s AIME project become available.

This allows for contemplative studies initiatives in academia to align with the roles Latour is asking for in facing Gaia and the Anthropocene. I will help to show this alignment and reconcilability through the practice of some of these contemplative practices and pedagogies, particularly meditation and aikido. These efforts are then further imbricated into a snail’s view of how to practice, continue in the Anthropocene, and understand how to better make kin with the entities and lands encountered in trying times.
OVERTURE

The Snail Trail Sutra

In order to bind, we must understand the glue of our world. This calls for a different register, a different lens and perspective, a different mode of being.

While you flit across these pages, these intrusions between the academic constitute a ground level perspective. To contact the ground is to go slowly. It is to count every bead.

Where the thread of argument is lost, perhaps a snail trail or pheromone will do us all a bit of good.

I mean to be clear and as legible as possible, when clarity is needed. But the world is covered in muddiness and it surrounds. Cleanliness and purity are the prefiguration of an ideal without precedence. Babies must be cared for and bathwaters do not merely go away.

Care must be taken to find the threads again. The act of looking, refining the tools to search the mud, clean what can be, find the threads of importance, the baubles of coherency, see how they themselves are made, and to sew, reweave, collect the beads we can, and point at them anew.

Time must be taken to see the snail. We cannot assume its slowness will always continue.

Old stories are always new when reread.

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42 Or was it buffer... soften the edges, wrinkle the edges, to make more, to better grip the connection—to have more surface area.

43 This bead is the same one embedded in the Tao, the Chinese kanji, for the way: 道. As a whole character, is defined as a road or path. The radicals of the kanji depict walking with a counter for songs or poems around one's neck. My understanding is that this depicts the ancient practice of prayer bead counting, using what we now call mala or rosaries. So, quite literally, the road one practices on cannot be further talked about but counted out by practice. But this is just my translation. I recommend its use as a mantra, way-posting, inch-marking, and rhizomatic signaling. Use the object to track the subject. Or, the relationship between the quasi of the object and the quasi of the subject are traversed. See also, Lao Tsu and Le Guin, Tao Te Ching, ch 1, and “道 #kanji,” J unsOG.
**ONE: WHERE LOVELOCK WENT WRONG AND A NUMBER OF SCIENCE’S GREATER MISTAKES**

The invention of the scientific method is one way to assemble knowledge about the world. Scientists follow a methodology that can give us that knowledge or truth about specific areas of constraint and predictive ability about those evidences. Science forms an explanation of the world given these aggregations of data and forms predictive models. Many of these discoveries, if they become axiomatic, trusted and replicable enough, attain greater stature as natural laws.

Thomas Kuhn has suggested with *The Structure of Scientific Revolutions* that the history of science shows how these successive revolutions in Science are one of the key advantages to the practice of science. These revolutions and paradigm shifts allow for further refinement and reanalysis of previous bodies of knowledge. One simple example can be easily traced in the evolution from Newtonian mechanics, to Einstein’s relativity, and to Hawking’s cosmological mechanics. These worldviews have tremendous power in allowing us to understand the world in which we live.

How have we come to this view of the world, the Earth, that has brought us into the Anthropocene? Do we look at this picture from the perspective of the astronauts in the Apollo 17 that have taken it? Do we know how much carbon dioxide it produced to get them there? How much money, paid by whom, and what further impact that has had on the lives of those involved? Does this view of Africa adequately account for the biomes, peoples, and entities living there?

How do we see this world warmed by carbon dioxide—the few added parts-per-million that threaten the biomes of this planet, the way of human and non-human life alike. How do we see the increase of storms, the geopolitical arms race, the

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45 We must start somewhere, and by implying Science as invention will lead us further towards understanding Science as a social process intended to gain empirical knowledge about natural processes.

46 Kuhn and Hacking, *The Structure of Scientific Revolutions*.
movement of fossil hydrocarbons, the movement of refugees, and the threats to water rights?

We might see this planet as full of life or, more accurately, covered in life. Can we see the planet as alive? Will the domination of humans in this epoch or event, called by some the Anthropocene, threaten the viability of life at the planetary scale?

How do we know what we see between what we think we see?
While conceptions and views of the Earth bear an extensive treatment, here I would simply like to start with the view of the Earth as a “Blue Marble” from the Apollo 17 mission. The Blue Marble image changed the narrative of what it means to be human on a planet. Humans from the Earth could venture far enough to bring back photographic evidence of what the planet looked like, confirming conceptions of the

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NASA Johnson Space Center, “Blue Marble.”
world as a planet circling the sun. Many other peoples had believed this, had found
evidences before then, but this was no map. It gave our increasing globalization a more
accurate picture of a new world.

One useful and scientifically challenging view of the world is that of James
Lovelock. Lovelock’s Gaia hypothesis, developed with then colleague Lynn Margulis,
became the center of a complicated and controversial discussion about the possibility
of the Earth as a living being. The hypothesis was problematic and disputed for a
number of reasons. For starters, life is actually a difficult concept to define. Many
definitions include life that is homeostatic, maintaining itself and processes within a
narrow zone of optimization. Life must have autopoeisis and reproduce, even if only by
itself. Life is also considered to have teleology, the ability to have goals and strive
towards them often for food and environments that support the prior two aspects. Life
also is assumed to evolve, typically in a framework of Darwinian evolution, natural
selection, and often competition.

For this chapter, I hope to examine some of the reasons for the Gaia
hypothesis’s complex reception. I have found historian Michael Ruse’s analysis in The
Gaia Hypothesis: Science on a Pagan Planet fairly insightful. These receptions of Gaia are
at least as multi-layered in the same scientific, social and mythological contexts as the
Gaia hypothesis itself. As complicated as Gaia was for Lovelock, Gaia continues to be
invoked and present in our discussion of the Anthropocene, so a greater understanding
will help to see how others examining the social and philosophical implications and
uses of Gaia.

**Lovelock’s Gaia**

James Lovelock was a Ph.D. chemist, inventor, and progenitor of what would eventually become the Gaia hypothesis.

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49 I will remark on its status in science as theory or hypothesis below.
50 I have drawn much of the history of Lovelock and the Gaia hypothesis from a more extensive
Gaia to Selfish Genes.*
biomedical industry, inventing solutions for wartime problems like high altitude infection prevention. One of his greatest claims to fame in chemistry was his invention of the electron capture detector (ECD) for use with gas chromatography (GC). This device allowed for unprecedented detection limits and eventually allowed scientists to test for chlorofluorocarbons (CFCs) in the atmosphere and pesticide residues in mothers’ milk, which led to further critique of their use and ban due to their harmful effect on ozone depletion, and allowed for the crucial data to support Rachel Carson’s *Silent Spring*.\(^5\) This innovation was noticed by NASA and Lovelock was invited to work on detection of gases on Mars to look for signs of life.

At NASA, Lovelock shared an office with Carl Sagan and met Lynn Margulis, a Ph.D biologist. Lovelock and Margulis both found each other fascinated with the search for planetary life. Lovelock’s work on planetary gasses (from the GC-ECD) primed his thinking about the features of life on planets—and thus how the atmosphere of how a planet might show if it is in long-term chemical equilibrium (e.g. Mars, arguably Jupiter, etc.) or in atmospheric disequilibrium (Earth); disequilibrium at geological time-scales would persistent oxidizing (oxygen, carbon dioxide) and reducing (hydrogen, ammonia, methane) gases and indicate signs of life, like on Earth. More precisely, this disequilibrium was later developed with Margulis into a homeostatic theory of planetary life that produces and reproduces this disequilibrium intentionally. We will return to this particular kind of intentionality soon.

Working with Lynn Margulis, Lovelock also incorporated her research into symbiosis. The world, to Margulis, was teeming with micro-organisms that were constantly antagonizing and adapting to the environment, other microbes, and themselves. Darwinistic theory is defined by life forms adapting to their environment; they do not change it directly, at least not at the level of the species. Margulis was adamant that there was a ‘both-and’ relationship of adaptation, microbes modifying their environment and themselves through iteration and reproduction. Margulis further developed this idea into endosymbiosis, the integration or nesting of lifeforms

\(^5\) Joseph, *Gaia*, 22-23. See also Lovelock’s critique of the use of his ECD in the DDT conundrum and its implications treating malaria, etc. in Lovelock, *Rough Ride to the Future*.
in other lifeforms, particularly eukaryotic cellular organelles like mitochondria and chloroplasts. This further paved the way for microbiome and microbial ecology research later.

Lovelock searched for a better name for this new theory of planetary life, displeased with his first take of “Biocybernetic Universal System Tendency/Homeostasis.” In England, Lovelock’s lived near the writer William Golding, famous for *Lord of the Flies*. They became collaborators, discussed their work often at a local pub, and Lovelock famously misheard Golding’s suggestion of the old Greek goddess as a moniker for his theory. It is not clear if Golding or Lovelock failed to remember Gaia as a troubled force-of-nature, trickster, progenitor of the Olympic gods, and not necessarily popular as a focus of worship. The Gaia of mythology was actually far from benevolent and harmonious; Gaia acted more as an advisor, strategist, and schemer in the affairs of other gods—far from a maternal figure of nature. Lovelock found the name seemed to fit his taste if not his intentions for his theory.53

Lovelock and Margulis published their first paper about Gaia in 1972 and tried it out in a few peer-reviewed journals. Publishing his first full-length book on the subject in 1979, Lovelock intended it for a public science and otherwise lay audience. While Margulis was formative in conceiving the Gaia hypothesis with Lovelock, she continued in her own scientific and academic direction and Lovelock carried on the Gaia-specific work.

Lovelock and Margulis, influenced by cybernetic theory of the time, conceived of Gaia as a planetary cybernetic feedback system. The life zones of the planet, from the edges of the atmosphere to the depths of the oceans until the unlivable magma filled mantle, were alive with microbial activity. This system was the definition of Gaian life: self-regulation (homeostasis), self-direction (teleology), and self-reproduction (autopoeisis) were the major defining aspects of life as science knew it.

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Gaia proposed to be a lifeform, mega-life, or superorganism.\textsuperscript{54}

At least, that is a prevailing interpretation of their work. How exactly L&M conceived of Gaia is a challenge of reconstruction. We must take them at their word, their print copy, their revisions of the many versions of books, interpretations of Gaia with a growing community, and the evolution of that theory, in both myth, name, and scientific intention. Often that intention is not only clouded by poor rhetoric and the ontological pinnings of their perspective,\textsuperscript{55} but also the lack of further intended bounds by which they hoped their theory could reach. One of those intentions was for Gaia to be seen as a relativistic principle of life on planet Earth; that Life, as a principle, was being conserved and promulgated. The definition of being was challenged at the cellular level because the embeddedness of activity was a key part of everything about Gaia. Actual beings may or may not exist depending on what perspective you look at them, but at the level of Gaia, there was “merely a hierarchy of intensity going from the ‘material’ environment of the rocks and the atmosphere to the living cells.”\textsuperscript{56} Think of mitochondria within eukaryotic cells and the cells embedded within tissues, organs, and structures of any mammal. Gaia was descriptive of translations between the minute to the global, following life processes. This fit Lovelock’s view of an atmosphere far from chemical equilibrium as well as Margulis’ endosymbiotic views of life. Life was hard to define at the small scales of viruses and yet played fundamental roles in genetic transfer. What other way than through the concept of a superorganism was there to suggest that these processes were going on?

But first and foremost to the prevailing Darwinistic (or neo-Darwinist perspective) views of life, Gaia was instrumental in challenging the notion that the environment was static, that species only ever evolved to their surroundings. It seems plainly obvious now that organisms interact with their environment and the environment changes organisms. Life-processes are continuous and discontinuous in all kinds of ways, and the environment is not a static background—it too was full of

\textsuperscript{54} Superorganism also brings us to further ecological discussions along with Clements and his introduction of the term to apply to ecologies. The individualization vs holism discussion is continued below and in Muraca, “Ecology.”

\textsuperscript{55} Is Gaia a being? Is it the planet? How is it bounded, individualized, etc.?

the same active properties that gave way to life and evolutionary processes; the environment has always been other life-forms, and chemicals, compounds, and material that must be active at times to be incorporated into life-processes. However, Lovelock often poorly navigated these definitions of life, homeostasis, and, in suggesting a Gaian superorganism of the planet, overstepped currently accepted definitions of life.

The Antagonists of Gaia

The Gaia hypothesis challenged the views of life that had been hard won for evolutionary biology. Religious creation stories and scientific claims for a fundamental essence of life, sometimes grouped into vitalist claims (see hylozoism below), were still difficult to counteract. The appeals to those other paradigms are ongoing, though science is in general agreement with most tenets of evolution if the exact carrying out of the natural selection process may not exactly follow Darwin's claims. How would Gaia evolve in a system of natural selection of other planets? There was no apparent planetary competition, or any sort of selectivity, or reproduction. Gaia could not be seen to fit the basic tenets and definitions of life.

A further undercurrent was also that Gaia was still associated with the mythological and religious connotations of mother nature. Lovelock often seems to misstep by touting Gaia as a homeostatic and teleological system, self-determinant and bent towards supporting life. Lovelock is sometimes hard to pin down on his stance on this, arguing and modeling how Gaia would be governed internally by natural selection, as well as altruistic and life sustaining in toto, and at an extremely long view of time of the Earth. This was difficult to support with even the most favorable of geologic stratigraphy and evidences; punctuated equilibriums occur and are hard to explain away as life affirming and intentional when they also involve mass extinctions and drastic upheaval in geological history and ecospheres.

Richard Dawkins in particular, famed for his selfish-gene hypothesis, was adamantly against the Gaia hypothesis. He and other evolutionary biologists and neo-

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57 See also Lovelock, *The Ages of Gaia*. 
Darwinists had a lot of support in their mechanistic outlook of science. Further
distaste for Lovelock’s Gaia was even more vitriolic; Lovelock recounts how John
Maynard Smith called Gaia “just an evil religion.” Stephen Jay Gould was a similar
detractor that found arguments about kindness, mutuality, synergism, and harmony
social order concerns, and was wary of confusing them as elements intrinsic to nature.
Gaia might be metaphor, but not a mechanism to explain a planetary system.
Lovelock retorts with: “They see Gaia as metascience, something like a religious faith
and therefore from their deeply held materialistic beliefs, something to be rejected.”

Further examples of how Lovelock at times confuses his audience about the
position of Gaia continue. Lovelock contends in the foreword to the 2000 edition of
*Gaia* that his science is intended as postmodern, giving little reference than Vaclav
Havel’s claim to the end of modernity to what a postmodernity should mean for Gaia.
In a later book, *Revenge of Gaia*, he positions his writing as a call to environm
action (fitting with his general interest), but confusing in that it seems to require Gaia
as a planetary force to take revenge on the humans pushing ‘her’ so far outside of
homeostasis with anthropogenic climate change. This “revenge of Gaia” continues to
slip on the teleological problems of ‘revenge’, the lifeform that is Gaia now requiring a
consciousness and embodiment (and externality) to fulfill common notions of how a
being would understand revenge. Lovelock would seem to return to a mythic Gaia in
alignment with her Greek origins, a harsh mistress to those that would work against
her aims at sustaining and promoting life. While it is clear to the scientific community
that humans are the predominant cause of contemporary climate change and stress in
the planet’s ecosystems, even that it may be easy to recognize how nature and humans

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58 Lovelock in an interview, from Ruse, *Gaia*, 32.
59 Ibid., 32.
60 Lovelock, *Gaia*, 2000, xii.
61 Whether he has read widely in postmodernity or how he has allied himself with others is up to debate;
Lovelock cites Vaclav Havel as declaring an end to modernity in 1994, though it is not clear how or
where Lovelock intends to take this postmodernity and his reference.
62 Lovelock, *Revenge of Gaia*.
63 And more fitting with Peter Ward’s *Medea Hypothesis*, of a world full of examples and extinction events
far from peaceful or benificent to life on the planet. See also Bradshaw and Brook, “The Chronus
Hypothesis.”
are rarely intrinsically beneficent, establishing those behaviors as scientific discourse is another matter, even in light of Dawkins’ famously titled and anthropomorphically titled ‘selfish genes’ theory.

I first turn to Michael Ruse in *The Gaia Hypothesis: Science on a Pagan Planet* to help us further understand the reception and primary adherents of Lovelock and Margulis’ Gaia hypothesis from an academic historian of science account. Ruse characterizes Lovelock as producing Gaia like his other instruments, an instrument of inquiry to examine the concept of a living planet, or a planet with life. Ruse recognizes Lovelock’s slippage in metaphor and mythological conveyance of the theory from time to time, views often too easily and haphazardly expressed. Lovelock attends: “Occasionally it is difficult … to avoid talking of Gaia as if she were known to be sentient.” Lovelock claims transferability in naming our sea vessels and ships, so why not our planet? Perhaps this was some further nod to Buckminster Fuller and his framing of Spaceship Earth and further incorporation of cybernetic theory.

Both Lovelock and Margulis were often branded as mavericks in their scientific theory. Some of the ridicule of Gaia comes from Lovelock’s work outside of the formal structures of academia and academic publishing. He was associated with academia, but held no specific seat or position at an institutional level—thus outside the typical reach of scientific socialization and expertise. Even while at NASA he was more the ‘bachelor’ chemist working independently and contributing to private organizational goals. Lovelock published *Gaia: A New Look at Life on Earth* independently, gaining the ire of peer-reviewed scientists. It is true scientists publish independently all the time, sometimes preferring the publicity and disruption to academic paradigms to play out in the public sphere. Stephen Jay Gould used this tactic, as well as Charles Darwin. For such iconoclastic theories it seemed preferable even, and Kuhn would corroborate this tendency in scientific paradigm shifting.

Whether or not Lovelock had the clarity or communication skills to deliver the theory he intended, many scientists did not overlook that above disclaimer about

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64 Ruse, *The Gaia Hypothesis*.
65 Lovelock, *Gaia*, x.
talking of Gaia as sentient. They attacked, often vehemently, many definitional claims of Gaia fulfilling life—and that point most of all. The teleological implications of a living planet were in question. Critics from evolutionary biology and neo-Darwinists had rather strict views of how life was defined; to Darwinists, autopoeisis, homeostasis and teleology had to be scientifically shown.

Michael Ruse's Categories of Responses to Gaia

Mechanistic

- Cartesian mechanistic view of nature
- Laws of nature are consistent
- Most physical sciences, biology, geology
- Natural selection occurs at the level of the individual
- e.g. Darwin, Hutton, Lyell, Lovelock

Organicist

- Holism: the whole is greater than the sum of the parts
- Emergentism: properties emerge from systems
- Natural selection works at the level of populations and species or higher
- Integrative aspect to nature that selects for life (but not vitalistic)
- e.g. Spencer, Wright, Henderson, Allee, Margulis

Hylozoic

- Everthing is alive; rejects the inertness of anything; often unitarily
- Often considered pseudoscience for rhetorical and dismissive reasons
- Often typefied by vitalism, trascendentalism, anthroposophy, theosophy, neo-pagan, pantheistic, animistic, spiritualist, and New Age worldviews
- Viewed from the perspective of professional science
- e.g. Thoreau, Leopold, Carson, Naess

Figure 5: Michael Ruse’s Categories of Receptions of the Gaia Hypothesis

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66 This is my chart and construction from Ruse, The Gaia Hypothesis; and Dutreuil, “Michael Ruse, The Gaia Hypothesis.”
Figure 3 helps us understand Ruse’s casting in the many, and what I shall call, “camps”\(^{67}\) of the Gaia debate. Lovelock is put in a mechanistic camp and for the good reason considering his invention-based technological and modeling science. Margulis is called into in an organicist\(^{68}\) camp and, by extension, a systemic, holistic, and emergentist view of nature. The Gaia hypothesis itself as articulated by them seems to waver between all of them depending on which passages, papers, and books are cited, and an exhaustive analysis on that regard would be difficult to construct here. Lovelock is searching for a new approach to the problems of mechanistic and reductionistic science, but seems to remain in a mechanistic view all the same. If a change in Lovelock’s perspective can be seen, besides Margulis’ influence, it seems to be in viewing of Gaia as a larger cybernetic system.

Many supporters of Gaia as a mother nature figure, theistic or not, ecological romantics, theorists like Thoreau, Rudolf Steiner (responsible for anthroposophy), neo-pagans and others are lumped into Ruse’s hylozoic camp.\(^{69}\) The philosophical and religious connotations to hylozoism (and the “élan vital”, or vitalistic notions fundamental to life)\(^{70}\) are difficult to integrate with a scientific epistemology and worldview. Indeed, it would seem scientific worldviews directly oppose these hylozoic explanations. Ruse also points out that notions of teleology have been with us for some time and at least since Plato’s inspiration of proto-science.

The organicism that seems to be between the mechanistic and hylozoic seems the majority of where Lovelock and Margulis’ Gaia hypothesis falls. This is the work of negotiating between the extremes of reductionism and mechanism and the non-scientific explanations of another force or theistic Providence behind the activity of life. We will return to this shortly.

Sebastien Dutreuil, reviewing Ruse’s book, also shows how Ruse miscarries the

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\(^{67}\) While Ruse did not articulate them as “camps” per se, I use them here for shorthand, and in view of the review of the same sources of Ruse and Dutreuil, “Michael Ruse, The Gaïa Hypothesis.” Instead of categories, camps imply at least some additional fuzziness between silos.


\(^{69}\) Dutreuil, “Michael Ruse.”

\(^{70}\) See Ruse, \textit{The Gaia Hypothesis}, 100, on Henri Bergson.
mechanistic categorization of Lovelock too far. Lovelock himself seems to register in many of the categories at once. Ruse makes important associations with Lovelock and Margulis (and even nodding toward Rachel Carson) about their Anthroposophic leanings and sympathies. Part of Lovelock’s theory can be seen to have aspects of this hylozoic thought, if nowhere else than in the call for new views of nature and the life affirming teleologic aspects that are clear from Gaia’s inception.

Sebastian Dutreuil, in review of Ruse’s work, also points out that the camp of evolutionary biologists that were so outspokenly vitriolic about Lovelock’s Gaia were a small, if notable, camp of public, “professional scientists.” They were also outspoken skeptics in the field of Science (of which Ruse is often associated as well). That they were “professional scientists” in Ruse’s terms speaks more to a Society of Scientists concerned with preserving a particular paradigm of Science, one that did not recognize non-materialist interpretations. This also speaks to Ruse gliding over what constitutes “professional science” and how that becomes defined, other than through the institutional self-vetting process and peer review in academia. Of that construction of Science and its society in academia, we are still building towards.

Many other disciplines, “geochemists, geologists, atmosphere physicists and chemists, climatologists, oceanographers, modelers from Earth sciences, paleontologists, Earth historians, global ecologists” were, if not absolutely thrilled with Lovelock’s Gaia theory, examined it and found it helpful as a means of inquiry. They cast it as a guiding theory with which to view anew, a narrative constructed with science in mind, rather than a scientific hypothesis to be tested right or wrong. The further preponderance of Earth systems science that Gaia fomented has been important in developing our current climate models and the influence of the Anthropocene in general.

Eileen Crist and many other prominent Gaian scholars provide a useful summary in *Gaia in Turmoil*. If nothing else, the continuance of Gaian research and the extensive amount of research in many disciplinary areas contends to the richness of

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71 Dutreuil, “Michael Ruse.”
Gaian inquiry. There is at least a predominant agreement that emergent properties of some kind exist for a planet than one that is not affected by life. Indeed, the definitions of emergent properties and how those are collected and which they affect is key to how this discussion will unfold. This challenged the predominant assumption that Earth was simply in the right place, a Goldilocks habitable zone, just right for life to be not too hot or cold. Gaia, the habitable zone on the planet, instead of teleologically controlling its status by homeostasis, may conform to homeorrhesis, punctuated equilibriums that change and re-establish different occurrences of life-sustaining experiences for limited times. This fits better the observed phenomena of geological data and the broad and planetary feedback models and loops we use to model today. Indeed, the planet may not control itself, but neither is the ‘environment’ or inorganic matter merely benign and background.

While not new, the argument that the environment is not static suggests there is subjectivity in the environment that a mechanistic, reductionistic scientific narrative has, formerly, given only to human societies. Nature was externalized and viewed as an inert background. The Gaia hypothesis continues to challenge this reductionistic scientific narrative that only humans can be subjects and the environment is an external inanimate space. Societies of other organisms, organisms no longer objectified by reducing their teleology out of the picture, now were included in ecological perspectives.

This argument that the environment can be a subjective entity, or even more complex a space and dynamic zone, gives way to an ecological paradigm. This characterizes a “weak Gaia” hypothesis, articulated by James Kirchner, and now seems so obvious that we could not have climate change modeling and the Earth systems science that is supported by this view without that basic concept. A “strong Gaia” hypothesis, one that supports a controlling teleology of the entire planet as a cybernetic superorganism, self-directed like any lifeform, and actively pursuing conditions for life is both problematic and largely abandoned. The above inclusion of

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73 Probably any planet, and as Latour would have it in *Facing Gaia.*

74 Kirchner, “The Gaia Hypothesis: Can It Be Tested?” and Kirchner, “The Gaia Hypothesis: Fact, Theory, and Wishful Thinking.”
punctuated equilibrium makes it clear that there are phases present in Earth’s geohistory that have been favorable for some life, and not others. What is refuse and compost for one becomes the next life-system’s primary need (say, in the case of oxygen). Indeed, it remains to be seen if some middle-ground between, a co-evolutionary Gaia, may be more scientifically viable and there remains much debate.

This fundamental shift in scientific narrative, that the environment was not inert, seems to be the crux of why Gaia has been important. That Gaia, like the Anthropocene, like ecology, mandates that we combine our disciplines of science with the others. More importantly, we will understand the distinction between the institution and narratives of Science and the practice of doing science, and the methodological differences. This is similarly the same reason the neo-Darwinists and evolutionary biologists seemed so upset; that the environment was another, active and changing variable in the formation of evolutionary theory.

Lovelock’s Gaia hypothesis shares much in common with the same issues that ecology contends. The science that has been commonly practiced, the dominant paradigm, does not work the same way when the complexities of many types of interactions must be considered simultaneously and dynamically. Lovelock seems to have been searching for some organicist middle ground with this in mind, which is why it found so much use in Earth systems science, climate change science, and modeling with the other biogeochemical sciences above—disciplines most accepting of the ecological outlooks concurrently developed.

Holism, and the System of the World

How do we then make sense of a systemic view of the world? Earth systems science, climate change science, and the scientific models that have produced them are convincing and increasingly trusted in the scientific, peer-reviewed community. In *Debating Gaia*, Stephen Schneider offers:

The importance of whole-system studies alone is sufficient to justify looking beyond the narrow disciplines of biology, climatology, geophysics, chemistry, and so forth, in what has come to be called the ‘global change’ [sic] movement. Clearly, more scientists should insist that the organic and inorganic parts of the planet be viewed as coupled systems that can be studied at various
levels of aggregation.75

Other scientists like Schwartzman have called for increased organicist interpretations, complex adaptive systemics, and emergentist perspectives of the Gaia hypothesis to help understand their descriptive potential.76 David Abram writes in Scientists on Gaia, “of a science that seeks not to control nature but to communicate with nature. Experimentation might come to be recognized, once again, as a discipline or art of communication between the scientist and that which he or she studies77.” This implies a great deal of cross-over between Science and other disciplines in the humanities and social sciences. And while it is clear that the implication of involving other art-forms may be helpful, the methodology of systems that can aid this interdisciplinary work is not clear. This seems to be part of what Lovelock was intuiting from his own research on Gaia. He tried summing this up with a geophysical biomimesis approach, viewing the world as a superorganism body, but the theory, as we have seen, is difficult to balance.

This whole-system examination seems to also conjure a holistic view of Gaia that the organicist and holistic camps would support, to suggest everything in nature is living, connected, and considered as a whole. It is easy to find evidence for this in the dictionary. Merriam Webster Dictionary Online,78 one of the first sites reached by a Google search for the term “holistic” registers the following quote as an example of holistic:

The Gaia hypothesis is certainly top-down and holistic, and it’s now generally accepted … Organisms have not just adapted to different physical environments; they also modify and improve the environment for their own good—just like people.79

We are somewhat confirmed in the validity or appropriateness of this inquiry if not the widespread inclination towards a holistic Gaia. Why then is the Gaia hypothesis challenged so much by a perspective of science that externalizes and reduces the

76 Schwartzman, “From the Gaia Hypothesis to a Theory of the Evolving Self-organizing Biosphere.”
77 Schneider, Boston, and American Geophysical Union, Scientists on Gaia.
79 Also, if other organisms were just like people, would we have the same problems of the Anthropocene? What makes humans exceptional in creating this problem? Quote from Chaffin, “Whole-Earth Mentor.”
environment’s activity? What else might the concept of holism, as associated with the Gaia hypothesis, challenge or mislead? Could this be the only time people question or understand anything about Gaia or holism again?\textsuperscript{80} How does this notion of a whole-Earth-system work? This seems to be in the same territory of “strong Gaia” again, a controlling cybernetic system.

While the notion of holism is to take social constellations of beings into consideration as a whole, the act of objectifying, supposing unity of a system when parts within that system are both obviously not unified or not obviously networked, the totalizing force of making-a-whole—objectification—can have problematic effects.

If we conceive of a wholeness, delineate something to be an object, how do we know it to be whole? We can suggest a demarcation, empiricize its connectivity, and somehow track the various connections, however subtle or diffuse. The problem always remains: how do we know we have seen all the interactions? The complexity of many objects seems endless if you get into the full reality of it to the quantum level, and yet there remains a compelling individuation between some entities, at certain scales, and particular experiences and processes delimited by time. Boundaries can be put in place, but if there are boundaries, if there are imposed limitations on an object, then who does that objectification, where does it exist outside of our socio-semiotic delimitations? And, again, how would one know or prove it?

These questions seem to remain and hinge upon whether the unknown unknowns that cannot be sensed, cannot be contacted, but cannot even be described and articulated as being present (much like microbial theory before Pasteur) can constitute an ontological prevention to knowing and the ability to articulate any other useful extent of knowledge. If we cannot articulate the whole, even at the level of complexity we are aware but cannot usefully make sense of, can that ideation of the whole serve us truths that are useful?

I would argue that, along with objectification in language, some sense of whole

\textsuperscript{80} Whether this is a defensible position for a dictionary entry to include I will leave for another discussion. Eugene P. Odum may be a useful citation in holism, but I would argue that the reference to better articles about Gaia and holism could be found, even with the pedagogical and ecological history of Eugene Odum.
is unavoidable and will constantly delude us. And yet, objectification without careful articulation of the particulars and the situations will lead to compounded falsehood. Not necessarily utter falsehood, but away from the kinds of objective truths that some Scientists have claimed. The complexity present in situations also likely will never be satisfying enough to remove all forms of uncertainty and subjectivity. Qualified and situated knowledge constructions, delimitation of the knowledge, and the balance of educated guesses and the limits of the models produced are important.

Often this is done and exemplifies the intent of good practices in science: public, replicable, and inclusive of the many actors in the network of activity made visible. Included in that list should also be how it is communicated and made public, the economic, legal, and further factors that complicate the practices of science. Still though, we must also make room for and recognize ambiguities and undefined space in all situations, working towards showing the political and value judgements that can be articulated in those situations. Whose voices and whose benefit and erasure entagle those knowledge constructions, the ethics and values placed and implied in those representations, and other associated and similar examinations are necessary.

In holism, systems thinking, and Lovelock’s cybernetic system of a living planet in Gaia, we see a general recognition of the problems in an overly narrow or individualized view of science. From our discussion of ecology above as well, we must understand how to relate to organisms in relationships.

A common sense of holism intends to take on the ideas of extreme specialized silos and present science in terms of systems thinking and analysis—in essence, to overcome the reductionism within the practice of science. Holism considers a broad system of interactions we can know from science as a whole. But how is this functionally different than objectifying that system as one unique thing—even if we allow some subjectivity of that thing? This is a concept of prefiguring the object. Even if there is some data to support the system that supposedly describes the object, the assumption of a whole then ignores the entities within it or its other abilities once that object is identified, and properties that change the object’s nature can cause it to be a placeholder of unknown ability.
We do this all the time already in our objectifications, which is the same issue with giving more of those entities we have previously objectified subjectivity, for while we may refer to them as the same thing, they may not be. They may have changed. This is only magnified when complex life systems at the scale of a planet are similarly made whole in a holistic view. This is the problem Lovelock’s Gaia faced in being associated as a superorganism, whether or not he was careful about presenting that point throughout his work.

Barbara Muraca has written about the problems of ecological superorganisms:

The materialistic-mechanic theory of nature, with all its reductionism, encounters insurmountable difficulties when it tries to describe life in its dynamic and unpredictable complexity. … Both the holistic and the individualistic tendencies are still alive in current ecological science and shape the ongoing struggle within many environmental theories. It is very important to keep in mind this historical polarization and its risks when one calls for a holistic framework in opposition to the reductionistic tendency of contemporary science.81

To say another way, what the Gaia hypothesis called for was a better means of composing the social networks of entities in the world while simultaneously avoiding the problems of prefiguring Gaia as an already unified whole82—which it also clearly was not. Most systems perspectives, of which Gaia is described by, describe a cybernetic and mechanistic system of interactions. Lovelock and many scientists around him were a part of this mechanistically minded camp. The laws of nature must be obeyed in such a way as to produce the activities of the life forms of the world. But, again, we come upon the objectification of entities that should not be objectified.

Lovelock was not the first to suggest notions of a superorganism, and may have borrowed the term from Clements.83 By a similar token, there have been previous detractors to the holistic notion of superorganisms. Gleason showed there was no stable scientific proof of superorganisms, and even definitions of species are malleable enough to be unstable.84 However, we can see activity of cells building to multi-cellular creatures, and larger ones still that humans comprise. Surely something holistic seems

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82 An idea borrowed from Latour below.
84 Besides considering taxonomic reorganization from time to time when new historical lineages become clearer.
to happen with humans, and at least the emergentist notions of systems seem to hold.

The problem with superorganisms, and the holistic notion that states that “wholes are greater than the sum of their parts” rests on what is meant by “greater,” by, for and serving whom or what? If we are working in a greater ecological framework as holism suggests, what properties does the system maximize to satisfy a concept of “greater?”

One of the ramifications of this maximization of the whole over the parts is that it has the tendency to then place value on the whole over the parts. As above, we also mistake the object for the subject. These processes thus make a totality of the whole even while it may not necessarily be intended. Therefore, as Latour points out below, holism totalizes problematically. How to navigate the totalitarian regimes of these entities, then, is part of what we must understand how to do better.

Think of the totalitarian regimes present in the human body. The immune system is rather authoritarian towards many organisms entering the human body—and for good effect, if not also reason. The carnage associated with even the most minor illness sloughs countless millions of cells for the benefit of a stable macro-organism. Further horrors are wreaked by one iconoclast cancer that goes unchecked; one cell threatens the entire system because of a cellular covering mislabeled, damage in the DNA code of enforced cell death, or some other cellular agency run amok.85

Gaia, the whole of the Earth, represented by a controlling cybernetic system would be disastrous and dystopian beyond belief. That it would determine life and death for any organism if it benefited the whole of the planet is the problem with a strong Gaia hypothesis. It is a rather good thing we do not have Gaia as teleologically and cybernetically installed.

The most difficult aspect in reconciling these viewpoints, the mechanistic, the systemic, and the hylozoic, is that they all privilege a perspective that is important—at least to their proponents. The individual must be studied, but cannot be studied without its relationships. However, even with relationships understood, we cannot

85 A further discussion of dispositifs, the entities that enforce system unity and cohesion over the disintegration of those systems, would be of great further discussion. There is not space for it here, but I recommend Foucault, Derrida, and Sloterdijk in their discussion of dispositifs.
totalize and make even those relationships whole prematurely, as these concretizations and objectifications may not be stable. Other possible explanations for these views also exist, but if we cannot ontologically make a framework for them, they continue to be unreachable and unusable.

Further holistic notions in the hylozoic camp look for further integrations of providence or spirit, other external explanations outside of necessarily empirical evidences. Without a framework to reach them that is compatible with practices of science, they remain empirically unverifiable unknown unknowns. Thus, it becomes difficult to defend the hylozoic camp perspectives in light of the other two that strive towards the difficulty of balance between individualism and holism.

Another important issue of a superorganism that bears relevance for our continued discussion is how it invites such criticisms of teleology. Distinctions of teleology explained by philosophy are mixed up with the same in theological discussion. A finer point of distinction of teleology and its translation between disciplines is required and less often made. This brings up continued issues of Gaia as a figure of mother nature that the evolutionary biologists and materialist scientists were so adamant against. When we describe things in terms of holism, the teleology of that organism similarly becomes totalized, and the problems of a strong Gaia return. But it is also clear that organisms like humans and large animals, even small multi-cellular organism, display many traits of teleology and they could be considered superorganisms by some degree of that sense. So, there must be a point that the systematic description breaks down. And yet, there remains an unfulfilled description of Gaia’s teleological aspects that Lovelock is trying to describe that holism still poorly articulates.

While other discussions of systems theory bear relevance, the complexity of that discussion alone would also take considerable effort. A fair amount of complexity and debate surround what kind and how to perform more adequate systematic analysis, which theories are best suited to approach this process, and how to validate these procedures. Thus, the conundrum of which systems theory to use remains.

This is one of the important reasons Kuhns book is relevant, that The Structure of
Scientific Revolutions opened the gate for extending the domain of sociology of science to engage in ‘sociology of scientific knowledge’, to explain the content of science in sociological terms. Following Kuhn’s lead, science studies took ‘a social turn’. This work was further continued by Bruno Latour below.

The Gaia hypothesis, like the Anthropocene and ecology, recognizes and requires that we understand how to situate our science and encourages looking at combining registers of Science and Society, Nature and Culture. In the next chapter, we will examine the distinction between the institution of Science, the narratives and epistemology of Science, the ontology and practice of doing science, and other complex philosophical considerations.

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86 Vries, Bruno Latour, §2.0.
methods

When the adversary appears, identifies—
there we can see the self, entrenched, encountered, enmeshed
without awareness of more than fight and flight. Inside, outside.

The valences are all we have to work with, techniques to move and sense what we cannot know but project knowledge and centeredness, give and make room so that there is always a home to return to.

We construct that space from the slack, the ease, weaving each thread, woven, subterranean, slick and slimy, to some bedrock, physicality cast aside, delve to an alchemy and transfiguration for which side it’s on.

Opposing the mountain is unwise, best roll up, or down, or around, surf and glide to the valley and effortlessness, the smallest redirection itself being notable, laudable, saves lives, avoids life-and-death.

The beginning is a terrible place to think you are, but we must trick ourselves to try; we must always begin again lest we find ourselves in the past or the future, a place we cannot be. There is balance only in thinking the end is where the beginning is.

Lest we kick the brick out that we are standing on — to crumble the watchtower—which has been the goal all along.

35 "And seeing the snail, which every where doth roam, Carrying his owne house still, still is at home.” —John Donne, from “To Sir Henry Wotton” (1572-1631)


TWO: “YES, I SAID I’D HAVE TO THINK ABOUT IT DIDN’T I?”

To better trace a more complex understanding of Gaia with Science and Society, I have found great traction by turning to the science, technology and society studies (STS), network analysis, and anthropological approaches to the Sciences with Bruno Latour. Latour and Isabelle Stengers are particularly notable in inspiring each other’s work and use of Gaia. Latour has also made a long career of examining science, technology, ecology, politics, law, religion, and other disciplines from a philosophical and anthropological view. His use of and argument for a provocative view of Gaia can describe and become synonymous with how we deal with the Anthropocene.

Latour writes extensively about holism in Facing Gaia: “It is because there is no engineer at work, no divine clockmaker, that a holistic conception of Gaia cannot be sustained.”

Latour tweets:

The great originality of Lovelock-Margulis’ Gaia is to place the question of the whole at the centre of attention, against the surreptitious use of the Whole hidden in the notions of order, function, organism or fitness. At last a non providential Gaia.

The irony of critiques of Gaia is that they accuse Lovelock-Margulis of imposing a providential order on the whole [E]arth while L-M are the ones who destroy the providence by asking afresh the question of how to hold the system together without a preestablished order.

These tweets help to reprise what Latour comes to see in Lovelock’s Gaia—a questioning of how to establish a system without prefiguring and objectifying the whole, which is clearly discontinuous and quasi-connected at important and numerous

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90 In homage to Deep Thought, the computer that took seven and a half million years to think about the answer to Life, the Universe, and Everything. Pray it does not take us that long to figure out a response to the Anthropocene, or that we would place such faith in [only] a computer, or that [only] a computer ever could. Adams, “Fit the Fourth,” The Hitchhiker’s Guide to the Galaxy: The Original Radio Scripts. See also, Adams, The Ultimate Hitchhiker’s Guide to the Galaxy.

91 Latour, Facing Gaia, 96. See also: Latour, “Why Gaia is not a God of Totality” for more specific reasons to reject the Modernist & Toby Tyrrell reading of Gaia.


points in the so-called system. With Latour’s perspectives we may gain better tools to understand what Lovelock may have been trying to articulate and how the other voices in the camps of Gaian reception might be better understood.

Facing Gaia reprises much of the work of Bruno Latour and is reworked from his series of Gifford Lectures given on “natural religion,” a prestigious lecture invitation given at the University of Edinburgh. These lectures have been famous for featuring the likes of William James, Alfred North Whitehead, and Hannah Arendt (all noted here as influences for Latour as well). Gaia, to Latour, is a provocative consideration in many senses, even a possible answer or description of the face of the Anthropocene. To understand why, I will attempt to sketch enough of Latour’s perspectives for the present need.

Latour presents a compelling argument as to how this notion of Providence, an outside actor upon the scene of the world, commonly God, has never quite been eliminated in the Sciences. Latour seeks a more secular understanding so that the role of theism may be better couched, and he is fairly clear that he is searching for an explanation of a secular vision of the world so that others may corroborate their views without direct epistemological conflict. He characterizes Science revolting against the epistemologies of Religion, but argues that Science may not have severed that link quite as easily as those scientists and prevailing epistemological narratives thought. While God may not be in the making of the universe, in externalizing and neutering the force of “nature” as an unmanifest invocation, a supplication to the Laws of Nature or Laws of Evolution commits the same orientation towards a sense of Providence.

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94 Numerous discussions of systems theory and their continuities is beyond the bounds of this discussion. See for a start on how to begin to navigate the various theories of systems. See: Ison, *Systems Practice: How to Act*, 2017, 32.
95 Latour, *Facing Gaia*.
96 For this section, I draw heavily upon the background of Vries, *Bruno Latour*, as well as summary from my readings of the individual texts below, and summaries of sections of *Facing Gaia*. While I hope to remain faithful to their translation, there is no possible, reductive way I can accurately translate the entire territory of Latour’s perspective here; hopefully it will be sufficient.
97 Again, Science here refers to a Modern view of the practices of sciences, replete with a constructed and epistemological view of how knowledge is constructed, that Nature is thus external to a Culture that can view it objectively. Not all scientists or practices of science reproduce this version—as I will discuss. See Appendix: Glossary for more discussion and reference.
The above tweets refer to his notion of Providence. “The comparison to the muddle of Gaia reveals the merciless struggle for life for what it is: a domesticated and rationalized form of natural religion.”

*Facing Gaia* reconsiders Latour’s establishing work with Steve Woolgar in *Laboratory Life* and further with the Salk Institute in *The Pasteurization of France* of sociology of science studies. The Salk Institute is the contemporary lineage of French scientist Louis Pasteur, famous for discovering microbial theory. With an anthropology of science lens, Latour articulates the difference between what scientists actually do and what Science, the institutional and social practice of science, narrates differently. Science does a lot of ‘other things’ that never make it into their reports. Scientists tinker with instruments, make metaphors to conceptualize experiments, do lots of experiments that fail, and fiddle with the instrument again to gain control of its output. Then they write reports with reference to that work to construct a logical narrative of Science. When this is done without acknowledgment and record to the tinkering and false-results, that work becomes positivistic. Positivistic in this sense is providing the positive results that lead to “scientific discovery” and “truths” while ignoring the other avenues that do not show the produce of that same truth statement; these “facts” deemed irrelevant are part of the science, but left out of the picture of production, and done so with some justification and necessity, though not always clearly.

The recognition and discovery process of these ‘other things’ that scientists do becomes Latour’s “ontological turn,” the literal viewing of actual practices that shows where the social constructions of Science depart from the “objectivity” of research produced by the complex lineage of scientific tracing, inscriptions, instrumentation, and externalization of reference work. This Scientific knowledge production is important, but it is also impossible to completely extract those “discoveries” from the social and institutional work that has allowed them to be thus

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99 Latour, *Laboratory Life*.
100 Latour, *The Pasteurization of France*.
101 This should be playing out from the introduction from Kuhn of “the social turn” in the sciences. Lots of critical theory likes to make these ‘turns.’ We will see more shortly. *Facing* is one of those other turns.
enunciated. Thus, the work and the discovery are highly imbricated—and if that work is imbricated with the social, then the discoveries must be as well. Further difficulty then comes in how the reports of those discoveries, cleaned to show only the epistemologically relevant facts that were selected and found to be fitting with both the observations and the socially influenced environment within which they were made. Scientists performing the work of Science may indeed be disinterested and behave as objectively as possible, but they are not robots, and the Social construction of those institutions and a host of other considerations do not make all of the enterprise of Science wholly objective. There are further narratives of how the new discoveries of science implicate and change, which peers and institutions decide that the science is sufficiently benchmarked as being acceptable, which studies become funded, and which become publicly followed and gain notoriety. These efforts go a long way to produce many successful “discoveries,” but this does not mean that it was the only way, the most “correct” way, or that those discoveries are still not embedded in further social processes of discovery and other factors that allow a potential for new discovery. This further suggests that those discoveries must contend with scrutiny, criticisms, and a host of socio-political implications which I will approach further below, though is largely outside the scope of this endeavor. There is also then a construction from those discoveries of the narrative of scientific worldview, returning to constructing and referencing the Laws of Nature, the editing of the epistemological view from Science.

Said another way, Latour makes clear that the imbrication and interweaving of these modes of knowledge production from their enactment and thought construction is indistinguishable. So-called “objective facts” of science can only be objective because their production has been painstakingly scrutinized\textsuperscript{102} to be thusly—and are inexorably situated in a socialized process. The selection and further institutionalization of directions of science is fundamental to what knowledge becomes propagated, what lineages of thought are examined, how that becomes funded and represented, how that loops back on the propagation of knowledge, and what further research becomes possible. This also has implications down to the very levels of language reproduction,

\textsuperscript{102} Latour has mentioned “purified” at times.
semiotics and ontological possibility—what science gets to be.

As example of this viewpoint: while microbes have existed before their description and study by Pasteur, the transfer of microbial theory towards other microbial communities and life activity could not have been possible before the description of these activities as microbes. Other biological activity could not be called biota without first describing them in one particular situation. Thus we see a reapplication of Kuhn’s scientific paradigms: microbial theory can now revise and deepen science’s perspective and allow new areas of insight and propagation of possibility—into realities that were never possible though always present. But similarly, this is not totalized with complete knowledge—each microbial community, indeed the very soil beneath us, while usually teeming with vast life, remains a mystery as to the actual lives that are there—many of which remain un-studied. This is the apparent power of such ontological improvements and the neglected aspects of positivism and epistemological totalization.

In short, Gerard de Vries, reviewing Latour’s many works, summaries for us:

To know reality, scientists have to intervene, manipulate and change reality. Doing science means being engaged in both epistemological and ontological work. To observe phenomena and to register facts, reality has first to be made visible. This also shows some of how a Platonic, externalized reality cannot be known except through the very real interaction, and thus change or manipulation, of that reality. All those changes come from definition, communication, transferal, and translation—all human social layers of semiotic description as well. The imbrication seems solid.

In *We Have Never Been Modern* (NBM), Latour expounds on the notion of the Social and the Natural by suggesting both are inexorably linked, imbricated into

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103 Latour has often been criticized for how he expressed this idea, a kind of chicken and the egg problem. The main point is that ontological knowledge informs what we may know by linguistic and ontological selection degree (as with Kuhn), not that microbes never existed before their discovery by Pasteur (though, indeed, we could not have ever articulated this, and thus the theory-language must precede our ability to speak of it to some degree). See Harman, *Prince of Networks*, for further commentary.

104 Vries, *Bruno Latour*.

105 A great word, literally bricked in. To remove a brick would to diminish and granularize the whole of whatever attempted bifurcation of space there was.
hybrids of Nature/Culture. The separation of the two into clearly delineated zones of categories is the notion of Modernism that he so regularly reprises. NMB expands that imbrication to the rest of “modern history.” Latour’s notion of Modernity derives primarily from a Cartesian construction of a mechanistic Nature, and a separate, human Society or Culture we have discussed previously. With the added categories of Ruse, this modernity tends to bifurcate between the practice of Science observing a mechanistic and reduced Nature, and the subjectivities of society being present in social domains, religion, and the anthropos. However, as the organicist, ecological, and Gaian perspectives suggest, there are societies present in many different networks if those subjects of the environment become active and participatory, and not an inert environmental stage.

Latour sets out in *Reassembling the Social* a way of tracing these hybrids to bring the analysis and act of network constituting—making Societies—into greater clarity. For this he proposes Actor Network Theory (ANT). ANT elucidates and traces the steps of how actors or actants affect each other as a series of connections, a network. Indeed the very tracing of these activities gives us perspectives and new theories to work with: ANT “makes the theories it describes.” When that tracing and network analysis of actors becomes clearer, it becomes impossible to clearly categorize any larger constituted grouping as merely Nature or Culture.

The important work that ANT accomplishes is by its very nomenclature, though less so as a predictive theory as a methodological practice. Networks, social constitutions, or any particular kind of actant must reproduce its network actively to remain a network and/or an actant. This application includes any kind or scale, human, non-human, or even conceptual (like Society) entities as actants. Thus if an actant has a sufficiently traced network, even if it is potentially stable in its conformation, it may be necessary to retrace the network to examine the network for changes. Sufficiently complex actants may require retracing every time their network is to be examined for activity, and indeed, will find that their complexity itself prevents any stable sense of

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106 Latour, *We Have Never Been Modern.*
what the actant is sufficiently capable of. It is a criticism for ANT in general that it may be impossible to have sufficient boundaries to ever complete a network, but that ANT can describe sufficiently some actants that become useful and may provide novel perspective on those networks to still be worthwhile.

Analysis of the network between actors or actants, entities that have effects, is to bring into coordination the entities that the practice of science interacts with to establish these reproducible events as scientific facts. In other words, these are the subjects that are interacting with other subjects, transforming and translating yet other subjects between the tracing of the practice of that network analysis. From our previous discussion of Darwinian evolution above, and the critiques that Lovelock’s Gaia hypothesis introduces, Latour continues with ANT to confirm that Nature is not just an externalized environment to be studied. The microbes in the Salk Institute and those that Louis Pasteur had interacted with to produce his theory are not inert matters. This was the “discovery” of microbial theory, that there was microbe life creating and acting on still yet other materials that could be acted upon and react.110

This should begin to sound a similar in tone to Lovelock’s Gaia hypothesis. Lovelock and Margulis also give the microbial lifeforms of Gaia agency in a world filled with other agents. Those other agents could be a sort of environment, better called ecology, but the network would have to be constructed and their activities mapped just as thoroughly as the interactions between the isolated actant and the so-called-actant-environment. ANT then allows Latour an important methodological contribution in bridging the same kind of gaps between the individual science and the social network of those subjects. No longer is it necessary to assume a human society, but other entities, in-fact any other network of agents, then becomes a social relationship. The Nature/Culture hybrids becomes navigable through this novel network. The key, and very important activity, is in retracing that network to show exactly what those connections and translations and mediations mean for the entities in

109 Other useful network connections include construction, but Latour prefers, even moreso, instaturation. It is a complicated semiotic minefield, but see Gerrard de Vries Bruno Latour for more.
110 Air-quotes for “discovery” should elicit the nod to Kuhn and the discovery process he further discusses there. Latour as well in Facing Gaia, et al.
the network.

As might be expected, the implications of these networks becomes complex fairly quickly. Tracing the network of actors typically produces countless other actors, known or not, that interact with that network. Those actors have yet other connections to other networks and attachments to yet others. These other attached actors then force other activities and become ontologically pinning and forcing for other actors. But, and this is also key, this cannot be known necessarily without the tracing of the network—the tracing of any network defining a new network (whether or not it can hold being a network to trace). Those attachments and their resultant forces must be found out by the analysis of the network.

Latour’s ANT methodology intends to overcome the problems within presumptuously objectifying and making wholes before the connections can be orientated and situated. Kinds of wholes and agents can be articulated, but without sufficient articulation of that connection and activity, holistic totalities betray their mark. What is not clear, however, is whether Latour’s methodology of ANT importantly addresses other problems.

What the Modern split accomplished, with its siloing of an external nature and human societies was to neuter, to disassociate, the same subjective qualities of what science strove to understand. Indeed, many modern scientists, in believing the possibility of that objectivity, went so far as to believe themselves incapable of being scrutinized by other forms of (social) science. Latour succeeds in not only performing a sociology of the impacts of scientific thought but also on the production and process of that scientific thought and the scientists themselves. Thus again, we see the imbrication and hybridization of the Moderns attempt at an externalization of Nature, on which science is done, and Culture, which is the realm only of human subjective purview.

Latour continues to carefully show how a nonmodern or amodern\textsuperscript{111} view of

\textsuperscript{111} I will attempt to be consistent, but I believe these terms are interchangeable on the whole. Latour has seemed to prefer amodern in \textit{We Have Never Been Modern}. Post-modernity is a distinct difference; see Appendix: Glossary.
reality must therefore also combine the registers of ecology not only as scientific endeavor but as cultural as well. This becomes Latour’s step into the *Politics of Nature,* where the political and ecological can be analyzed and conjoined. Politics for Latour is always a play of power, how actors and subjects understand their constraints and manage their potentially disparate interests. In a greater sense, politics can also be seen as mediating many aspects of network connections, be they well traced, un-connected, or quasi-unknown-connected entities. The negotiations and various qualities of those negotiations for various entities are difficult and complex, depending on how well they can come to a kind of agreement, or not.

In a Modern world, and in Latour’s terms, “nature cannot unify the polity.” If people and nature are separate, the laws of nature supplied by Science cannot apply to people, or, at least, people will bear those laws no moral or social standing if they are not directly implicated in the Culture of humans. Modern Politics imagines a controlled political space, a populace ruled by human and laws of state, never imagining that outside factors (like Nature) could challenge the hierarchy that it believes true could be questioned (or, say, even representationally democratic in a further political ecological situation). When ANT is applied, amodernity must contend with the other non-human elements, beings, and processes never intended in its modern rule. There is no Natural connotation of a Law of Nature that actually restrains humans in Culture. Modernity has allowed for humans and the polity to be separate from nature exactly in order to not be restrained by it. This is why Latourian political ecologies are so important. And, as we will see, this separation is one of the major sources for the creation of the Anthropocene and creates the negligence of modern processes, externalization of pollution, exacerbates failure of political structures, etc. etc.

Latour’s political ecology becomes important for a view on Gaia in that the other entities within Gaia are given political interest accordant to their constitutions. Latour gives us an example: while the political “will” or effect of a carbon dioxide atom

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may not hold much weight in the parliament of France, the collective weight of their activity does act upon the atmosphere of the entire world by mere distribution of that power, and thus also France. However, to negotiate with the powers of carbon dioxide, as they are not collectivized in a way parliamentary state governments recognize, they are given little voice at that table; translation and further effort must be made to see how their ecology may be brought the French parliament, how delegates and dignitaries might speak for them, and indeed how the other scientific instrumentation and research that has gone into giving them some communicative power. Science then can provide evidence to their voice, their action, their agency—but only if that agency is made visible in political spheres. Scientists have extracted themselves, because of their Modernity, from the political sphere.

**RE: AIME**

Latour’s work at the Salk Institute looked at understanding what scientists actually did to produce their “discoveries.” Using an analysis with ANT and seeing how scientific “discoveries” were produced, Latour articulates this as the knowledge passed through the network of documentation, translation, transcription, and the technological transfer of data. Watching which bits of data or experimentation may or may not be passed through, what was preserved, what objective knowledge was retained, Latour calls this passed-through element the network’s establishment, and in the case of science, the passing through of the referent of the observation of distant activity. Microbial action could be shown because copious observational data was corroborated by many scientists, over many attempts, and even if not formally peer reviewed in the ideal practices of science, reviewed nonetheless in socialization practices within Science (and even if only individually). The reference to those external entities was preserved, even in the face and influence of the social processes (group dynamics, institutional structures, financing, bureaucracy, etc.), transcription errors, continual refinement, and fiddling and mucking about with microscopes and instrumentation.
What Latour does in *An Inquiry into Modes of Existence* (AIME)\textsuperscript{115} is to take this same process of network transferal, apply them to the other Modern institutions, and describe each one by what they institute and pass through their systems. It establishes what each network does and why it is useful. Each of these proposed Modes of Existence then has: a unique being to institute, a determination of network felicity and infelicity conditions, a description of the hiatus or the way the network fails, and the alteration these Modes effect on others. For example, networks of some forms of academics, research, and science pass through the reference of distant entities to form constants through those transformations; the legal system passes, through cases, examinations, proceedings, and other actions, the establishment of the bearers of safety through some continuity of action and alibi, etc.

Following the network analysis of a reassembled and retraced social structure of an amodern reality, Latour presents a framework wherein all the previously Modern disciplines and descriptions can be compared on equal grounds and show their benefit in the hybridity of an amodern world. This allows for Science, Politics, Art, Law, and quasi-subjects and quasi-objects\textsuperscript{116} of all disciplines to have a starting point on how we might approach Modern notions of understanding reality with all these perspectives in an interactive network. This allows for a more transdisciplinary understanding; the benefits of the “Modern” modes of knowledge production can be brought forward without being beholden to a notion of their isolation, uniqueness, or supremacy. Latour is also adamant that his inquiry is far from complete and requires further refinement and description, but, in representing a career of analyzing Modernity, worthy of investigation. While a full analysis and integration with AIME is beyond the scope of the thesis here, some of the work here may help to continue improvement on that project.

What is of paramount relevance to my discussion here, on Gaia and the present work of this thesis, is how Latour explains the role of Religion and Nature in his

\textsuperscript{115} Latour, *An Inquiry into Modes of Existence*.

\textsuperscript{116} Both are “quasi-” because of their un-clear and assumed hybridity depending on their descriptive network and how they are approached.
AIME framework. Specifically, Religion is noteworthy as functioning as a network to pass through the installation of presence, the conditions that do this installation, and the entities that bear presence.\(^{117}\) This has been one of the primary motivations of this thesis. Latour presents a compelling framework with the potential of putting Science and Religion back into terms of similar interest in attempting to understand mysteries and verify questions of the world and cosmos.

\textit{Nature-1 vs Religion-1, The Old Constitution of Modernity}

From the discussion so far, I have already defined enough of the information presented in \textit{Facing Gaia} to establish, if roughly, the terms Latour uses to distinguish the so-called Natural Religions of Modernity that constitute Nature-1 and Religion-1, the Modern notions of Science and the Church.\(^{118}\)

Much of Latour’s intent in bringing up the history and relationship between Religion and Science comes from a historical context of ideas of Society, of which Latour picks up from (and pick on) Thomas Hobbes’ notion of the Leviathan.\(^{119}\) This may beg the question of why a question of religion in society comes up at all, especially in this Modern age of scientific rationalism—which is Latour’s point. For this inquiry, I am, as with Latour,\(^{120}\) in agreement that leaving behind the religious question of contemporary epistemology might be convenient (if impossible). The scientists could do their work and the religious could have their views, and separate-but-equal Modernity could continue. But the Anthropocene, as well as Gaia, demands that these views not be separate because denying the science of climate change is just as problematic as denying the political activity and the widespread influence Religion continues to have. Indeed, present-day events are nothing if not demonstrative of how

\(^{117}\) While presence may imply a ‘presence of God’ specifically, it is not clear that this is intended in AIME, and the full discussion of that is outside the space for this discussion. However, we will come to answering some of these questions about how Latour is interested in a more secular viewpoint with AIME and with Gaia. Latour does get into further discussion in \textit{Facing Gaia} about issues brought up by Lynn White Jr.’s indictment of Christian epistemology as responsible for environmental degradation: Latour, \textit{Facing Gaia}, 210; Vries, \textit{Bruno Latour}.

\(^{118}\) These denotions of Nature-1 and Religion-1 also refer to the cosmogram charts found in Appendix: Tables.

\(^{119}\) Which is extended and discussed in \textit{Facing Gaia}, particularly chapter 4.

\(^{120}\) Latour, \textit{Facing Gaia}, 147, on Hobbes.
the “problem” of religion has not gone away, and if anything, have only exacerbated itself as scientists have tried to simply do away with Religion’s appeal. It is partially thus that Latour’s description of both Science and Religion are more similar than different; their fates and epistemologies twined more than realized.

Latour describes the influence of Religion in the Enlightenment as contributing to the epistemological background of Science. This is not a notion of religion in common use, Religion as social institution, but one that focuses on the practices of religion. The term’s use here is borrowed from Michael Serres, looking toward the original meanings of the Latin root, religare: to attach.121 Thus, even if there is not some kind of theistic or mystical connotation, the practices of religion establish what any entities recognize as being attached to—whatever their particular views of metaphysics and ultimate authority/ies.

Latour makes this move to begin to show how Science is almost just as beholden to the epistemological issues that Science claims it rejected with Religion.

This is what makes the book Facing Gaia [sic] so difficult to read: it mixes the registers of science, politics and theology to explore how the notion of preestablished order has made impossible to recover the originality of Gaia theory. Yet it’s indispensable to mix them.122

The above tweets also relate to this epistemological notion in Religion, that of God, and translates that more generally to any form of Providence.123 This is the same Providence of which entities might attach themselves as part of their practices. These practices, in turn, establish the kinds of entities given subjectivity, recognition, and agency.

Let us agree that we are going to compare different peoples, each one convoked by a different entity that defines, orders, classifies, composes, divides up—in short, distributes—different types of agency in different ways, each according to its cosmology.124

To more fully make a comparison between the two, Latour uses comparison charts125

121 Ibid., 152.
123 See Appendix: Glossary for more reference.
124 Latour, Facing Gaia, 151. Other guiding questions that form the constitution of those cosmologies are in the Appendix: Tables.
125 Which he also traces back to similar usage of translation dictionaries and comparative religion.
of cosmologies to fully describe how the aspects of comparison of different forms of
religion, indeed how a Natural Religion and the Religion of Society, are similarly
constructed. The term cosmogram is borrowed from John Tresch, Latour traces the
definitions of assembled groups, these capitalized institutions, and these social
constructions of groups. Each group has several aspects that comprise its alliances and
constitutive categories. I do not have the space here to completely reconstruct all of
that argument in Facing Gaia, but bring forth a few of those arguments relevant to our
discussion.

Thus, instead of conceiving of Religion as merely a theistic and premodern view
of reality, we can define the qualities and characteristics of that group and compare
them to other groups that might look very similar. We can find out reasons people are
committed to a religion, and by extension, why any peoples can be committed to a
particular epistemology. This attachment of groups to a particular cosmogram allows
us to understand who we are dealing with, what those groups actually entail, and the
scope of that belief. This also allows us to understand those perspectives as active
social re-constructions rather than prefigured groups and networks. This is not trivial
work and requires copious methods of making visible the network of their
constitutions.

In this way, Latour builds a convincing argument for Science as a counter-
revolution to Religion-1, the Christian Church, and Catholicism (from his personal
and historical sense of Western Religion and where the scientific revolution took
place). Enlightenment Science has a long lineage stretching back to Renaissance
ideals, inquiry inside and outside the Church, as well as further Modernist notions

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126 Tresch, "Cosmogram." The full details of Latour’s use of cosmograms are lengthy and detailed and
beyond the scope of this work. I think the relevant understanding of constitution will suffice and the
simplified forms Latour uses post Facing Gaia work well enough for most of the argument here.

127 Those cosmograms and comparison tables that Latour uses are reproduced in the Appendix: Tables.

128 Similarly, Religion-1, the Christian Church, is also a counter-revolution to pre-modern senses of
religions, paganism, and other practices not considered part of the mainstream Culture. See Latour,
Facing Gaia, further for that argument, mostly ch. 4.
from Descartes, Bacon and others in the Modernist promoting camp. However, Latour suggests that in counter-revolution, as with many revolutions, the resistance and reversal of the previous paradigm also tends to replicate most of the same tendencies of that counter-revolution, unless the revolution is very specific. In counter-revolt against the Church, Science has only opposed Religion on a limited set of epistemological grounds and not wholly in opposition since they also transfer a sense of Providence; instead of a God ordering reality, it is instead Nature, Natural Laws, and a single Universe governed by those laws.

This is the argument in *Facing Gaia*; Latour focuses on Nature-1 and Religion-1 for obvious reasons in reference to the Gifford Lecture intent. But he mirrors some of the form from his AIME project as how to convene various entities, those claiming to be Modern or those realizing that they have never been modern. This aids in work that might want recognize each other to make “risky diplomacy” possible between Science and Religion, Nature and Culture. This suggests how they are not as epistemologically opposed when their fully accounted activity is compared on ontological grounds. At least, since they are not doing the same thing in that they perform different ontological work, they can only oppose each other on epistemological grounds. This is not necessarily from the same standpoint of both working in a reality that they must share or that they have overlapping methods and domains of truth production.

Latour is clear that he is searching for an explanation of a secular vision of the world, or at least a secular description of how to come to the table of comparing those views. But is there any distinction between the theistic providence of a religious God and that of invoking a Providence of Gaia, laws of Nature, or laws of Evolution? What must science do to restore its intent in building knowledge that is not guided by Providence or similar notions it aimed at avoiding? Latour tweets again to illustrate:

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129 A further inquiry into the disparate voices of the Enlightenment is also in order for this discussion, but beyond the scope here. However, see Hanlon, “Steven Pinker’s New Book on the Enlightenment Is a Huge Hit,” on how some of that discussion could evolve.

130 There is significant discussion on how well this works. See the below section of Criticizing Latour.

The goal is not so much to ‘restore’ the authority of science as to give it a ground that … is no longer linked … [to] the search for absolute truth (hence the wrong idea we live in a ‘post-truth’ moment).132

The Moderns’ belief in an ultimate truth, a findable theory of everything, a coherent unitive Laws of physics and of Nature, is as akin to belief in a Providential being like God. If science has shown us nothing else, it is that truth is constantly evolving, and that science multiplies the entities, complexities, and questions of reality more than it solves them. While those descriptions are improved, reality and other entities do not always stay consistent either, even if they are explainable in their constraints. The construction of a clarity about the world that can be known is always situated somehow, given either the known or unknown limits to that knowledge: delimited constants. Those truths and knowledges that are validated with diverse and intricate technologies extending our view also take considerable societal and non-human labor. Thus, Latour says:

We see that the term “nature” does not define what is assembled in practice, any more than the term “religion” qualifies the type of people, rites, and attachments proper to these practices. … There is no natural religion, and one cannot continue to invoke Nature in the hope of resolving conflicts between peoples whose interests are so clearly divergent.133

The Providence Science was so interested in avoiding replicated itself in the “laws of nature.” Laws must be obeyed, otherwise there must be some system within which punishment and justice must be held to account. But if the Anthropos and Society do not have to abide by the Laws of Nature, as they abide by the laws of Society, then Natural Laws may be ignored to everyone within Society—which creates a bit of a paradox. As Latour explains, “By fighting Religion, Science has lost its connection with itself; by fighting Science, Religion has lost track of its most valuable asset.”134

Latour brings this argument around to account for how Lovelock’s Gaia is poorly received and mechanistically configured. Abandoning Modern Science, Latour defines a hybridized reality we inhabit, replete with many entities and agents, alive and active, not in one synchronous time, but the process of linking those synchronicities

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133 Latour, Facing Gaia, 178. See also, Appendix: Table 5.3.
134 Ibid., 174.
and ecologies. This is not a singular, scientific view of ecology, but the playing out of all those ecologies while simultaneously challenging them not as complete or even particularly stable. There are constant discontinuities of the system that must be recognized even as the system is traced and retraced, since no temporality will allow for snapshots that can be made to reliably refer.

In being so dismissive of the Gaia hypothesis, indeed of hylozoic thought and animism in general, it may better be borne out that Science was indeed more like its predecessor, Religion, in disallowing creative perspectives and epistemologies (being more Inquisition than inquisitive). By imagining the world a globe, we become godlike ourselves in perspective. The network complexities reduced without compare, the map mistaken for the territory. The world is definitely not a globe. We reproduce the problems of Modernity by doing this without significant qualification. But, more simply, the environment externalized in Nature-1 is full of activity and responsiveness that Lovelock was keen to give a voice. Latour chides, “That the Earth may react to our actions bothers today’s [Modern] intellectual as the autonomy of matter once bothered the supporters of the established order!”

Remember, however, that Latour has suggested we have never been Modern; that split, claimed, never was reached. It is an utopian ideal. Indeed, the fact of Modernity being ever-transgressed or never-achieved returns us to his ontological turn. Scientists and Religion followers alike have never been separate in their domains—their activities being blended if not also imbricated. Thus, the antithesis of Nature/Religion-1 is not only Nature/Religion-2, but a Latourian Gaia.

_Nature-2, or, We Have Never Only Done Science_

In order to develop a more accurate vision of the scientific worldview, we believe that it is important to show the gaps separating the many different instruments and the legions of skilled engineers and scientists. They are those who would need to assemble different viewpoints in order to guide the observer from galaxies to atomic particles.

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135 Latour, _Facing Gaia_, 188.
Latour’s answer to Modern Science is shown in the transition towards ecology. The AIME project acknowledges some of the knowledge built with a sense of Modernity, but attempts to situate the modes of Modernity such that others might understand those specific roles in relationship to others making an amodern approach as well. In ecology, there is a better recognition that this Modern ideal is sundered, the many entities and actants involved producing sensed data that is imperfect, modeled, and situated in conditions and confidence intervals. As we saw in the transition of Gaia, Lovelock knew something was wrong in the over-materialization of science and the reductionism the academy often brought to bear on his Gaia hypothesis. However, without the further knowledge of what to do about that inconsistency in redistributing agency to other entities formerly externalized to an inanimate world, that animation was not qualified and given the space needed to show it still within a scientific perspective. That perspective can now be couched in its epistemology without losing the important practices of what makes science also powerful as a methodology, a way of knowledge-building and establishing constants.

How does this AIME project propose to also address the complexity and reach that Science and globalization seems to have attempted to tackle?

Everything today is supposed to be global, but in fact no one has ever had a truly global view. You always see locally, from a situated place, through specific instruments. Better to take the localized perspective into account if we wish to reorient ourselves. To do so, we need to become aware of the many gaps that, in practice, separate the successive images that give a “global view” once pieced together.

Systems and networks within science become defined, their limitations made known, and the explanatory stories that they may make are not extended further by citing Laws of Nature that may not apply when there has not been the science performed to establish situations that would be supportive. Situating science within a framework helps but does not extend the vision past what can be referentially established. Situating also avoids problematic views from nowhere. This localizes the global—where the science actually takes place. This is a method that avoids fallacies of

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137 This sense of ecology is more generalized than a naturalistic or scientific approach to ecology as our previous discussion and amodernity suggest, and aligns to the seminal articulation in Guattari, *The Three Ecologies*. See also Hörl and Burton, *General Ecology*.

138 Ibid., 6.
Modernity.

So how is Religion also implicated? Latour again summarizes:

The moderns may have learned to break free from the shackles of religion, and yet they find themselves in the midst of new religious wars. They remain unsure of what “secular” means. Are they still too religious to situate themselves on this Earth? Or are they not religious enough? It is difficult to domesticate the energy of religion as well as that of politics. By putting the two together, you may unleash great violence! We seem to find it difficult to be really mundane: that is, attentive to the Earth. 139

But ecology, and the aligned practices of this new constitution of Gaia, that make kin with other entities, other societies practicing other disciplines, have yet to effectively convince many in academia, let alone Modern Society (for lack of a better term), to understand how this new flavor and practice of science can be articulated and practiced differently. The science of ecology and Modern science seem too conflated. Thus, the many ecologies that could be described become challenged by citing their uncertainties, slammed in a public sphere because they are not understood in a way that Modern society recognizes with sufficient authority and confidence to decree the Laws of Nature Society is used to hearing from Science. Current Politics refuses to fully recognize this new science because it only recognizes the Laws of Modern Science, still attached to its Modern political hegemony, one ineffective towards dealing with the Anthropocene.

A Snail View

I propose that a different viewpoint will help us proceed. We have seen the problems of the bird’s eye view, a view from nowhere, situated entirely too epistemologically to be of much use in putting the world back together. It is a view too distant and made with complex broad strokes, too flitting to take the time to focus-in, or to be grounded. Or, at least, we have had enough of this viewpoint, and it has contributed and done little to help the Anthropocene.

I propose a snail view will better help us move forward in the Anthropocene. This view from the ground is similarly in alignment with Latour’s new constitution,

139 Idid., 51.
representing a connected and grounded, spiral looping, and reiterative path close to
the ground of being. It helps avoid a view from nowhere and other ungrounded views
that dissociate from locality and overly externalize, unify, and break connections with
our ecological understanding and kin. It blurs at the edges of our sight,\textsuperscript{140} avoiding the
reactionary and epistemological gap-filling that the mind provides, encouraging us to
question those edges as our network reaches its traced limit, as we question and stick
to the very next step of our path. It helps embody a slow and plodding view of what
both science and religion do in Latour’s new constitution, and a way of practicing and
facing a localized Gaia.

The intrusion of the snail is another kind of art, the kinds of possibilities
multiplied by Latour’s recommendations.\textsuperscript{141} Where modernity extends outward, hailing
the term of the Moderns, “plus ultra,”—go forth, the snail view accomplishes a
localization by hailing, “plus intra”\textsuperscript{142}—go within—something snails are keenly suited
to doing.

If this is some smaller, situated taste of what science can be in our world, what
then happens to Modern Religion, the overanimated space of a God ruled Creation?
What becomes of Religion’s role now that Nature and Culture are recognized in play
together, are impossible to separate—never have been separate except for our
demarcation?

\textbf{Facing Latour’s Gaia}

Returning to where we left Ruse’s articulations of Lovelock’s Gaia, the
epistemological camps in viewing Gaia, it is easier to see what Latour was arguing in
invoking Gaia. Latour claims:

\begin{quote}
Lovelock’s problem is new: how to speak about the Earth without taking it to be an already
composed whole, without adding to it a coherence that it lacks, and yet without deanimating it
by representing the organisms that keep the thin film of the critical zones alive as mere inert
and passive passengers on a physiochemical system?\textsuperscript{143}
\end{quote}

\textsuperscript{140} Snail eyesight is simple and fairly poor compared to our own, but the scalar message seems apt.
\textsuperscript{141} Latour, \textit{Facing Gaia}, 257.
\textsuperscript{142} Ibid., 291.
\textsuperscript{143} Latour, \textit{Facing Gaia}, 86.
Latour hits on the problem of condemning Lovelock; we need to appreciate how unprecedented this problem is, since, to speak of Nature, Lovelock has at his disposal only a scientific language rooted in the deanimating principles of Modern science and the implied metaphysics inherited from Galileo. In examining Lovelock’s Gaia further, Latour encourages us to see how worldwide systems constantly break down. The body politic and the Earth systems we rely upon for our climate change data are riddled with holes, and the riddles that we face to fill them have devastating and problematic answers. Latour accounts for how Lovelock’s Gaia is incomplete, and Latour’s helps show an active and alive world, but one that cannot be fully known—not only because science is incomplete and limited by complexity, but also because the networks hybridize in ways that discover more complexities than they satiate.

Latour’s Gaia, the reality we must face, is that the many systems we have conceived of are not whole, nor would we really want them to be. A cybernetic system would not be particularly desirable, nor do we know what that whole would look like—and we come upon the problem of a pre-figured whole again. A hierarchical-cybernetic system, for that is the system described as such (besides a complex and incomplete one defined as such) indicates levels of action and control that would be devastating if the politics currently in power were to control them. We see some of the danger of geoengineering here.

Or, indeed, if those systems were controlled by some greater Gaian Providence, as Latour suggests—a real godhead, secular and defined by “natural” principles—we do not currently observe the inclusion of humans and non-humans (their equality somehow achieved) as active participants in that cybernetic Gaian system. Political concerns for all those entities remain. It would be control without participation, no real political participation, the eco-fascism never desired by those purporting the vision of Lovelock’s Gaia—or not the system we said it was.

This is the Latourian Gaia we must face. The anti-system of systems, the political ecology of “worlding”, re-making the world anew. In this Gaia, “[Peoples]

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144 Ibid., 87.
145 Latour primarily borrows this from Donna Haraway.
no longer feel they are living under a Globe, but in the middle of relations that they have to compose one by one; attempts to return to other preconfigurations serve them no better than to postpone political and ecological reformation. This process similarly comprises Gaia, the notion of a planetary, imbricated, anti-system that constitutes the edge spaces that we inhabit with a myriad of other entities and eco-political actors. And this is why it is important to return to practices, the ontological viewing of groups, lest Latour’s adage, “Your entities do not convoke us at all.” remains divisive and confusing. Different epistemologies will allow the distribution and recognition of entities differently. Examining with ANT, AIME and a network of actants allows us to reformulate how to make visible those entities and convocation possibilities. Latour argues that those living in view of Gaia, the Earthbounded, then are those available to make those possibilities:

The Earthbound have to trace and retrace these [geohistorical and constitutive] loops endlessly by all available means, as if the old distinctions among scientific instrumentation, the emergence of a public, and the political arts, and indeed the definition of civic space were in the process of disappearing.

This is not only a call for a kind of political activism, but an ecology of political activism that is grounded on this planet and yearns to work with others that live here. It calls for the enunciation of these political ecologies to everyone’s lips. If we have been lulled to inaction or silenced by injustice, the solution continues to sound the same: we must face it, and thus face Gaia.

Gaia cannot be a political control system, for that would attempt to reproduce the same Modern split of State without the knowledge of Earth systems. Gaia intends to set us on this planet, the Earthbounded, free from the states of either political or natural control. “Gaia is not only external, but also internal; not universal, but local; neither overanimated nor deanimated; unquestionably, it remains totally controversial. Gaia is probably other Earths, other Globes, invoked by another people.” But how do we invoke it respectfully, this ecological meeting space we also embody? How do

146 Latour, Facing Gaia, 182.
147 Ibid., 276.
148 Ibid., 282.
149 Ibid., 183.
we convene and invoke Gaia respectfully?

These are Latour’s questions and mirror my own. Even with his greater intent, their political action remains fairly continental, perhaps even limited by his own epistemologies and anthropology. He has played with ecological parliaments but it seems not to go far enough. However, his forthcoming work, *Down to Earth*, seems to suggest further avenues to renew the political activity needed in living with the Anthropocene, Cthulhucenes, and various troubled futures, events and eras to come.

**Religion-2, or We Have Never Been Whole**

Magical, religious, theological, or otherwise overanimated distant powers of the universe are the trouble with Religion-1 (and indeed Nature-1). As I have mentioned how Nature-2 is characterized in Latour’s new constitution, Religion-2 is similarly altered from its predecessor Religion-1 and congruent with identifying how we can work with Latour’s Gaia in mind.

*Facing Gaia* covers much more of the detail and eschatological reasoning and criticism Latour bends towards the problem of a Gnostic view of Religion-1. I have not the background of theology to comment more on that. However, in a snail’s view we can better understand the basic gist of what a mode of Religion congruent with the practices and ecologies of a Nature-2 would look like.

If gods are not externalized, mysteries not prefigured, and the unknown approached in the present, the practical tools of both science and religion may become available to us. Only localized appearances and the multiplicities of gods and mysteries remain. What is of utmost discussion is how to make sense of the practices and the epistemological backgrounds that then constantly interweave and color those activities. This results in a kind of recognition of animation within a multiverse of perspectives and views, practices, and negotiated ecologies—and whether those negotiations are clear.

I return to Gerrard de Vries’ reading of Latour’s work: “The experience of love

\footnote{Not yet published at the time of this writing, its table of contents and reviews suggest as such.}
is the empirical grounding for [the AIME Mode of Religion].

Love can only ever really be a felt experience, desirable to be felt again, but never replicable without change and work, and even then, arguably never truly the same. Prefigured love, like prefigured worlds, people, or societies is not the love desired or intended. Religion then is also a method of getting out of certain kinds of prefiguration. Vries continues:

[Religion] a mode of existence with a ‘key’ that directs us in exactly the opposite direction than [Science]. No, religious speech does not refer to some remote entity, ‘God’ … but it makes something, a person, love, present; it directs us not backwards, but forwards, to renewal, to the ‘end of times’.  

While I think our discussion of what love means cannot be accomplished here either, many forms and expressions—practices—of love and its associations exist, notably compassion, generosity, gratitude, selflessness, and altruism. What will be difficult to see and track is how this definition of love, as a basis of religion, then becomes an epistemological tenet opposed to the ontological practice.

And here we come somewhat full circle, snailing our way through the “perilous slippage” of prematurely globalizing connections into a totality. Just as Nature-2 cannot be globalized but made localized by its network, Religion-2 cannot externalize the animation to anyone else but beings such localized—if unknown and mysterious. For this project to work, there is no externalized totalization. As we make the world, as we make the gods, we construct these visions and objects. There may be things beyond human knowledge and articulation and without our access—but we cannot know them but through the localized experience of them, through our trusted tools, and through the presence of being.

A distribution of power, connected through the same connections we see within the tracings of systems and networks seems viable to fulfill the epistemological framework. These epistemologies, mythologies, faiths, must contend with each other

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151 Vries, *Bruno Latour*, §6.3; Vries uses more specific AIME terminology unnecessary here.

152 Refer here as in the referential practice of doing science from above, as in AIME.


155 Reality is forever turtles all the way down, requiring them to be contacted to be established as present, until we reach the end of our abilities, methods, and instruments to contact further.
now—no longer beholden to the epistemological constraints of being outside of “one-
true religion.” Latour offers a way to move around the Modern mode of Religion by
considering: “The terrestrial is neither profane nor archaic nor pagan nor material nor
secular; it is just what is still out ahead of us, like an Earth that is in effect new[.]
…one of the possible injunctions of Gaia.”

The metamorphic zone of Gaia awaits our participation, a difficult zone to play
in, but one that, to re-discover what our presence with each other, establishing kinship,
might provide an antidote to our negligences and disconnections. Latour triangulates
Gaia between the old, so-called pre-modern world, traditions of mixed methodologies
before specialization and Enlightenment codification,157 claimed Modernity and Nature
and Culture, and against the impossibility of a globalized utopian Modernity that
cannot possibly keep them separate. This third-way establishes a new middle ground,
one on the ground. Clearly seeing our world is not conservative or atavistic, not
utopian and aggrandizing, but grounded, curious, and open to the reality experienced
and experienced by other entities.

This return to the practice of remaking the world, worlding,158 requires careful
examination of those practices, techniques and tools. “‘Taking care of techniques,’
that’s the new motto.”159 Let us focus on practices. It seems easier and potent to be
present in practices—epistemologies are networks of reference and memory, always
old views—not necessarily wrong, but past and future are inexistent.

Techniques are supposed to be objective, material and fully mastered, since we produce them. However, they turn out to be mischievous, full of unexpected twists and certainly without a
master.160

If we reset our compasses towards this new magnetic pole – the [E]arth – we might attempt a
new triangulation to map out where we stand and decide what is worth defending. New

157 And even then, clearly defining the pre-modern and Enlightenment may require significant and
problematic examination. See again Hanlon, “Steven Pinker’s New Book on the Enlightenment Is a
Huge Hit.”
158 Donna Haraway asks: “I am going to argue for this worlding in an interrogative way that asks, Is this
“us,” is this a “we” that we will cast our lot with? Or not?” Haraway, *Manifestly Haraway*, 236.
160 Ibid., 64.
territories are just as different from the old land as they are from the now-outdated globe.\footnote{Ibid., 69.}

“IT IS NOW YOUR TURN TO TRY TO RESET YOURSELF.”\footnote{Ibid., 71.} This is the task of embodying Gaia. This is a search for a middle way—we know better what extremes to avoid, but do we know how to find a center that must accommodate the others here? Is this snail’s perspective more effective, seeing “from the newly emergent and still somewhat mysterious [E]arth?”\footnote{Ibid., 71.} We will explore in the next chapter practices that emphasize how that re-orientation process may work.

\textit{Latour’s Limitations}

As Latour has criticized many, many also criticize his works. His many books are often dense and filled with creative, oblique strategies and methods of communication and argumentation, layers of metaphor and historical contexts, complex philosophy, as well as a wry French wit and sense of humor. As above, I recommend Gerard de Vries’ and Graham Harman’s contributions to survey and critique Latour’s many works and idiosyncratic scholarship.

One of the motivations of this thesis was also to take what I have found to be tremendously helpful perspectives on Science, Society, and Modernity and translate them from the “Latourian” into more practical modes of engagement and practice. This is what Latour himself seems to try and do, and yet it is a challenging endeavor. As previously mentioned, I have had to deviate from a completely veracious rendition and have done my best to riff closely enough to his intent and aim it in new directions. I have been at least a sympathetic reader.

Other critics and reviews I have read of Latour seem not to understand or closely read Latour’s work to get close enough to the intent. Indeed, many of Latour’s concepts seem to rely upon an amount of irreducibility that he argues is present.

Even so, Latour’s work is further criticized by those who do read him well, find

\footnote{See Harman, \textit{Prince of Networks: Bruno Latour and Metaphysics}, and for examples of Latour’s reiterative incorporation of criticism, especially ch. 6.}
gaps in his reasoning, and urge important areas of improvement. Often in response, Latour is curiously enigmatic in revising and improving his work from such criticisms, and, as viewed by Harman and Vries above, tracking some of Latour’s changes in perspective in further developed works. This does not leave Latour off the hook, per se, but Latour actively pursues an empirical philosophy that engenders a circumspect level of revision. I liken this to the pursuit of science as well, as well as his amodern approach to his anthropological examination of the sciences and religion and all the other disciplines.

That said, his anthropological approaches, like ANT, are further worthy of examination. They do seem to stem from a largely Eurocentric viewpoint—indeed, anthropology in general is worthy of criticism and careful employment having been poorly employed as a means of colonial objectification for so long. The French traditions of academic eruditeness and discourse seem present if not also opaque to my understanding and critique. For example, Federico Luisetti cites Latour’s use of political animism, the activity I have referred to throughout this document, as problematic from a cross-cultural point of view. This seems a potent inquiry, not least because Luisetti’s admonitions about Latour’s re-westernizing and Eurocentrism seem apt, but also because I find Luisetti’s reading to be less accurate or helpful—at times both critical and theoretically aligned, but often difficult to tell when. As Harman suggests in his above work, one can be a much different reader depending on how one wants to read a text and how aligned one wants to be.

Some of Latour’s defense on this point is intended to be critique his own culture, especially as it relates to the globalization of economies that have been largely colonial in their own right. Whether Latour accomplishes a self-effacing colonial analysis of non-modernity would be worthy of study. While academia hails from predominantly Eurocentric modes of knowledge production, examining a Eurocentric view in globalized economies from a history of geo-colonialism, imperialism, and general racism would be important. Latour aims at putting the “home” in order from

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166 Further examples in Harman, Prince of Networks, 119.
the Eurocentric view to make headway on how to contact other collectives that have been seen in history. However, this reorientation may still seem to privilege a Eurocentric view, and Latour is perhaps too ontologically situated to be able to be outside of it effectively as well.

For example, Luisetti mentions another aspect brought up consistently about Latour’s insistence on anthropological modes of inquiry—that they are still too Eurocentric, continental, and clothed in the same essential Modernity that has problematized many practices of anthropology and science. Suman Seth similarly criticizes Latour’s earlier anthropological forays as still rooted in the Modernic colonialism that exacerbates the Anthropocene. Latour does seem to be cognizant of these important criticisms in the present work of Facing Gaia, but perhaps less-so in previous works; Latour’s work with Dipesh Chakrabarty, Déborah Danowski, and Eduardo Viveiros de Castro seems to point in that direction. Latour claims he attempts to set the European house in better order to better accommodate a world that must recognize rather than colonize, make space for Gaia for Westerners especially, and invite participation, critique, and practice that yields improvement.

This is mostly to say that a careful decolonial perspective of Latour’s work must be further investigated and can start with some of the above sources. While I do not have the space here to fully explore all of the other criticisms and potential implications to Latour’s work in Facing Gaia, I will cover some specific instances connected to the next chapter in how other ways of practicing science and Gaia may be achieved.

McKenzie Wark helps us further read Latour, Isabelle Stengers, and others to consider the difficulties in understanding of the intermediary zone of Gaia: a place, somewhere “inhuman” (Wark’s term), that gets past the epistemological subjectivism and metaphysical conundrum of scientism (and others) to work towards some kind of ontological groundedness. This is why Latour’s progress towards a “climate regime”


is the new political ecology that comprises some sense of global politics and global nature in a new way. This is what facing Gaia means in another’s terms.

One difficulty, as Wark and others point out, is the sheer amount of history concerning the use of “nature.” Overcoming that inertia is a considerable hurdle and whether it can or need be overcome. Another consideration is Latour’s sense of the political and if it is also similarly robust or needs to be expanded in terminology and concept beyond merely the exercise of power. Others have also critiqued it, as Wark has, as lacking the discussion of labor and the work of translation within the networks that Latour’s methods create.169

Another difficulty is that of the situatedness of Latour’s Gaia itself, couched in the French philosophical modes of anthropology from which Latour is seated (as above critics point out). Wark reiterates the Eurocentric position, calling also for a kind of re-indigeneity, and even calls to arms toward territorialization, that seems to gloss over important considerations of colonialism and its Eurocentrism. This similarly aligns with Viveiros de Castro and Danowski and their sense of the ‘looping’, “ceaselessly re-becomming-indigenous” aspect from their Brazilian point of view.

Wark therefore seems to reduce Latour's suggestions to territorializations and localizations, both of which still importantly ignore the labor needed to enact this process of facing Gaia. This pluralistic vision with Latour’s Gaia rather suggests a return to a premodern cosmogram, still stuck in counter-revolution and Modernity, rather than some new, third-solution that is more novel as suggested by Latour. Still, problems of Latour’s, while pointing at politics, offers few actual methodologies that seem exemplary of a means not rooted in parliamentary systems Latour is trying to argue past. Still too is absent a critique of markets, economics, and class warfare that seems to satisfy many critics, though some aspect of Latour’s interest of this redress seems, to me, present throughout the re-analysis of any network’s redescription using Latour’s methods.170 Wark apparently agrees with this:

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169 I think Latour mentions that ANT should include the actors of labor in their description, and further mentions, if nowhere else, that the self-satirical aspect of frictionless Double-Click systems that are the “goal” of Modernity point out this erasure of labor. See also Malm, The Progress of this Storm.

170 In one sense, many of the critics themselves are asking for Modernist modes of explanation that
Latour challenges the sovereignty of modern mode of existence [sic], but in doing so tries to make another one sovereign. He appears to subsume the sciences within a ground that gives priority to the anthropological, but the indigenous or the colonized never rise above the footnotes.  

We will see in the next chapter how I critique Latour’s sense of enemy and adversary, and the invocation of the state of war that he places us in toward the making of the Earthbounded and Gaia.  

While I can at least partially agree that these various entities are likely fighting for their lives, even that positioning prevents some amount of good progress towards reconciliation that could be achieved and remains desirable.  

Wark also helps us segue, if critically, into the final chapter of this thesis, one of understanding better this intersubjectivity implied in facing Gaia and Latour’s arguments.

The role of inhuman mediation is eliminated in favor of a politics limited to the intersubjective. The political is in turn governed by a quite particular and restricted sense of the religious, one that is all about what binds and not about the unbound sense of the numinous. All of which is a bit disappointing. The work in which Latour most explicitly addresses the Anthropocene turns out to be his least useful work for thinking about it.

But how do we understand the numinous? Is not this sense of numinous and the religious a compelling question to address even now, in the Anthropocene? This is that ineffable space that Latour leaves off in his discussion. With the introduction in the next chapter of contemplative studies, we may get to see how some of this sense of the religious can be further articulated to be much more open beyond Latour’s clearer Western and Christian sense of religious “binding.” However, I don’t think it is clear enough from Facing Gaia what Latour’s further sense of Religion, past Gaia, entails, and there seems an intentional, open space that Wark fails to give credit. By examining the further developments of what Latour aimed for at his notion of Religion-2 and Gaia, we can get at this “unbound sense of the numinous” that Wark seems to need in order to further appreciate the potential of a future Gaian answer to the Anthropocene.

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**RESULTS FOR INTERPRETATION**

&

**TRANSLATION OF RESULTS**

are we breathing still
do we have a home
is there suffering
  before us,
  behind us,
  to our left,
  to our right,
  above us,
  below us,
  within us,
  without us?

Is there patience enough,
and time to nap—
is the house burning, must we run?

Is it fun? Will they play, or must they pay? Where do we run to that we will not burn? Is it already burnt there? Can we grow something from it?
THREE: “GOOD. ARE YOU SITTING COMFORTABLY?”

It is towards the antagonism of attention and its reinstitution that I turn the remainder of this work.

Bruno Latour calls for the opposite of negligence, a turn towards an ontological understanding, going-inward (“plus intra”), retracing knowledge of the world anew, and framing his articulation Religion as the transference and institution of presence. Latour turns to his actor network theory (ANT) and inquiry of the modes of existence (AIME), cognizant of the probable impossibility and potential impropriety of mapping such a large field by himself. Even with the associated hegemony of colonialism and his flavor of anthropology, we should consider how humanity, academia, and unrecognized peoples institute knowledge production.

If the Anthropocene is an enemy, then we are part of the enemy, or at least must consider how we have participated with negligence. But, as Latour has pointed out, that construction of Society, even those directly opposed to or never wanting the arrival of the Anthropocene’s production is not easy, a given, or unproblematically prefigured. How we consider ourselves is also complex, and understanding the embedded network of our vast social interaction (broadly, ecologically, with all entities and agents) is a key understanding. I align my argument against a unified, rational expression of one right way to be alive on Earth.

Colleagues of Latour help bring some further dimension to the same calls.

Isabelle Stengers is adamant about modernity’s hostility to paying attention, the need to sift through destroyed practices and collective knowledges, and the need for a “cosmopolitical slowing down.” This would counteract modernity’s adherence to

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175 There is a further examination of the attention economy and its relationship to other economies and ecologies that would bear a great deal of fruit, but I will have to leave that for another time.

colonial practices of wealth and resource exploitation and its objectification and subjugation of those entities and peoples most affected by this so called Anthropocene.

Donna Haraway articulates it as “staying with the trouble,” and to make kin with the other entities we are identifying.\(^{177}\) Haraway’s other modicum, “becoming with,” encourages and identifies our embeddedness in and with a world of other non-human entities. She defies the solipsistic exceptionalism that modernity suggested. We shall see more about how staying with trouble aligns so well.

Déborah Danowski and Eduardo Viveiros de Castro call for a “ceaseless rebecoming-indigenous” aligned with Latour’s Earthbound ontological turn towards practices, living not in the traditional past or a utopian (and unattainable) progressive globalization (based on the ideals of modernity).\(^{178}\)

Almost all of them align with this amodern, non-modern, have-never-been-modern, view of Latour’s Gaia, urging the retracing of previously conceived wholes or globes that are more apparent and situated. Important distinctions between each articulation of Gaia remain.\(^{179}\) All of these registers provide for an opening up and reweaving of modernically separated domains of life. The political, religious, scientific, economic, critical, rhetorical, and other perspectives and methods, of course, can be networked together. But the time it takes to do all of those works, even while they have been independently developed, takes immense amounts of time and effort. More importantly, however, are these methods, while multiplying themselves in this description, remain just as undervalued and underdeveloped as this metamorphic zone.\(^{180}\) As these involutionary registers align, we aim ourselves at looking at reality created in the present to overcome the issues— seemingly insurmountable and external—for they have been neglected the most. This is why a snail’s view, one of slow presence to address these networks, is important.

It is for these many reasons that I will examine the role of contemplative studies

\(^{177}\) Haraway and Wolfe, *Manifestly Haraway*. This notion of staying with the trouble is a further point of examination in contemplative practices as a form of tantra.

\(^{178}\) Danowski and Viveros de Castro, *The Ends of the World*.

\(^{179}\) Ibid. Danowski and Viveros de Castro provide some useful commentary between *Facing Gaia*, Stengers, and the critiques and subtle differences of these perspectives, though I will leave much of that minutiae for later.

\(^{180}\) To borrow Latour’s term for the place where entities meet and interact, one of the faces of Gaia.
as the kind of important, praxical, exemplary, and transdisciplinary work for which these thinkers have demonstrated and invoked. The important question of how we accomplish this involutionary examination is how the construction of “we”, how we understand the complex ecology inhabiting with and being an Earth, is of such prime importance that idealistic globalizations and language have left us often bereft. Indeed, a plurality of attempts, initiatives, creativities, and movements toward practice and political bravery seems necessary. So how do we do it?

As much as I am encouraged and enlivened by philosophical discussion, am enticed by complex explanations and yardages of verbiage from French philosophers, even these tonalities, thought patterns, and internal networking can only go so far to overcome their own creation and reach other venues. There are other registers that seem lost on them too. The accessibility (even awareness) of this discourse seems low and registers poorly with many populations.\(^{181}\)

It is unclear whether further translations of this work of Gaia and attempts to reach other ears is ideal. However, the translation and association of this work are the kind of endeavors that a turn towards contemplative studies may accomplish. Understanding and providing practices for the Anthropocene is the aim here, and further versions and attempts at that awareness can fill gaps of understanding where other attempts and modes do not connect. Here then, I hope to show how the examination of contemplative studies initiatives and practices will aid this endeavor, especially as they relate to academic pedagogy and institutions, and how they can be one of those many avenues and important inquiries to understand Latour’s Gaia, show some aspects of the AIME project, and address the particularity of the Anthropocene.

Contemplative studies has focused recently on the “intersubjective turn,” a turn towards recognizing not only our own subjectivities of practice, but how that network and feedback loop specifically works. I propose we turn that direction, and take the fairly new field of contemplative studies with us as we go. It is a field I believe is conceived largely in deference to modernity and attempts to subvert the modernic and disciplinary construction of education and academia. However, I think too that

\(^{181}\) Snailed research pending.
contemplative studies, to do so well, should consider the implications of the previous work of this thesis, those philosophical considerations, voices, and critiques. This becomes an alignment with the ontological turn, a return to practices and localized vision contemplative studies espouses.

I hope to be able to show the alignment of a description of contemplative studies with Latour’s ontological pluralism. I also want to examine how new practices might be able to broadly address current narratives and epistemological conflicts Latour identifies with Science and Religion. Latour’s articulation of the new constitution of Nature-2, Religion-2, and Gaia offer potent theory, but the inertia towards changing those narratives seems greater than the theory and posed practices can easily accomplish.

What then can contemplative studies offer to a Latourian Gaia? What can Latour offer to contemplative studies? In this translation between the amodern discussion, the general ecologizing of our contemporary understanding, how do these two different viewpoints see each other? I think the alignment can show some amount of their hybridity, but both have important situational modifications. What else gets left out, what else should be left out, and who gets to understand or make that decision?

I will attempt to bring into that discussion an analysis of some of those contemplative studies, the burgeoning field in academia and its articulation at least, and give some examples from the practices in Aikido, mindfulness, meditation, and study with which I have been most engaged. This could not possibly be an exhaustive inquiry, but I think it will suffice to support the thesis I suggest and some of the further areas of inquiry, criticism, and future praxical possibility. I hope to take this snail’s view of Gaia along for the ride and understand how contemplative studies and their forebears have been just as problematically orientated at times, and how, by continuing to review and return to our practices, we can avoid both the old lands to which we cannot return, and the impossible future utopian lands that are becoming

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182 A further examination of postmodern deconstructions, similar in veins of object orientated ontology, new materialism, and ANT would be of use. See also Dodson, “The Objects Within.”
destroyed by the Anthropocene.

The snail view proposed earlier then becomes a call for understanding Gaia in Latourian terms, in the new constitution of Nature and Religion Two, understanding what views can be in focus and what practices must be attended to, while we retrace our understanding. This slow-going, deliberative work aligns with contemplative studies, and allows us to understand how to “become with” them without problematically appropriating them. The snail view twists and turns, stays grounded, goes inward, and goes with to make contact and kin.

Contemplative Studies

First we must have a working definition and nomenclature of contemplative studies, practices, and pedagogies. While there is a lot of interoperability between these concepts, there are important and subtle differences between them that may bear further consideration. There is some good consensus on these terms generally, but the application of a discerning analysis of terminology may complicate these views. I draw heavily on Lewis Komjathy’s “Contemplative Studies FAQ” as an excellent overview of contemplative studies and refer the reader to that document for examination. Further descriptions in the introductions of many of citations provides additional guidance to work from as well.

Contemplative studies is a broad academic umbrella for the academic pursuit of philosophical and religious traditions, and not limited to its inspiration from Eastern traditions and lineages. Contemplative pedagogies refer to the way these practices and studies are taught, transmitted, and translated to other practitioners, primarily in

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183 Komjathy, “Contemplative Studies: Frequently Asked Questions (FAQ).”
184 Others that were notably considered: Barbezat and Bush, Contemplative Practices in Higher Education; Eaton, Hughes, and MacGregor, Contemplative Approaches to Sustainability in Higher Education; Ferrer, Participation and the Mystery; Gunnlaugson, Contemplative Learning and Inquiry across Disciplines; Gunnlaugson, et al., The Intersubjective Turn in Contemplative Education; Komjathy, Introducing Contemplative Studies; Lin and Oxford, Transformative Eco-Education for Human and Planetary Survival; Owen-Smith, The Contemplative Mind in the Scholarship of Teaching and Learning; Zajonc, “Contemplative Pedagogy;” Badiner, ed. Dharma Gaia; Capra, The Web of Life; Devereux, et al., Earthmind).
185 The continued intention of capitalization reprises the potential for untraced collections of entities and epistemologies.
academic settings and “classrooms,” but also sometimes in the lineages and traditions from which they may be drawn. A more exhaustive examination of lineage-specific pedagogy and the differences in contemplative studies would be helpful, and much of that can be found in the literature cited here.

The “contemplative” aspect of contemplative studies is definitionally worthy of questioning. Gunnlaugson offers that, “Traditionally, contemplatives were masterful at observing their experience, capable also of observing and interpreting signs and patterns distilled from contemplative engagement in the natural world.” How we are “reading the world” can be considered a contemplative endeavor, especially as that experience becomes focused on subtle perceptions and towards consciousness. While there is still plenty within these pages to accrue debate and criticism, there is some agreement that the sense of “contemplation” here draws from many sources:

To date, scholar-practitioners have taken inspiration for the investigation of contemplation from the world wisdom traditions (Buddhist, Vedantic, Taoist, Quaker, Christian, Sufi, ancient Greek, etc.) as well as perspectives in new branches of scientific thought (i.e., neurophenomenology, cognitive science, etc.), social sciences and the humanities (positive psychology, perennial philosophy, art studies, environmental studies, ethics and moral education), business (learning organizations, leadership studies), among others—each advocating approaches to teaching and learning that affirm the significance of cultivating individual and collective forms of enhanced intelligence, wisdom and well being with our students through contemplative ways of knowing.

Komjathy distills the key aspects of contemplative studies into aspects of “practice commitment, critical subjectivity, and character development,” with a special note towards critical inter-subjectivity. Practices indeed can take many forms, first, second, and third person modalities being commonly explored. First-person modalities typically involve solitary practices with emphasis on the internality of experience, such as many kinds of mindfulness, meditation, journaling, yoga, T’ai Chi, etc. (as a very short list). Second-person modalities involve interactive and relational activity, dialectics, kin making, and other intersubjective practices; I shall explore aikido as one of these modes further below. Third-person modalities may involve observational

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187 Ibid., 3. Emphasis in original.
188 Ibid., 4. Further examination of Latour’s cross-critique of *gnosis* and religious epistomology from an *Facing Gaia* and the ANT tracing of that perspective would be important in future work.
189 Komjathy, “Contemplative Studies FAQ.”
activities and stricter subject/object distinctions, and may constitute a version of modern forms as well as amodern forms from the previous chapters’ discussion. Further complications of epistemological and ontological frameworks around these practices further complexify these simple definitions of which much further discourse could cover.

I will do my best to navigate the panoply of practices and traditions from which contemplative studies draws both its moniker and intent. I have dabbled with many of these practices and traditions myself, though I will attempt to focus on those which I have the most experience, as they will provide the most sensitive depth of analysis. My general repertoire includes training in yoga (hatha, bhakti, and mantra), Buddhism (from Theravada and Tibetan traditions), Aikido (including its foundations of Budō warriorship, Shintoism, and minor Vajrayana Buddhism sects), and eclectic neo-paganism and Druidry revival traditions. I am also widely read in a number of related authors and seminal texts contemplative studies often works with.

The advent of contemplative studies as a field in higher education and consideration is fairly recent. In addition to the books mentioned earlier, important authors to seek out are recommended. Harold Roth suggested contemplative studies as a new field in higher education\textsuperscript{190} in 2006, though the idea had been floating around in various fields, neuroscience, psychology, and religious studies well before that. Arthur Zajonc was also one of the forerunners of calling upon academia to induct contemplative studies. Mirabai Bush, Daniel Barbezat, Parker J. Palmer, Paul Gibbs and many other authors have contributed to the field already. Gunnlaugson and others have edited and collected many of these notable projects and research.\textsuperscript{191}

As contemplative studies is still fairly new as an academic discipline, it strives to work with many traditions simultaneously, and intends to find common ground rooted in practices rather than doctrine. Komjathy again explains, “Contemplative practice, in turn, refers to various approaches, disciplines and methods for developing

\begin{footnotesize}
\begin{enumerate}
\item Roth, “Contemplative Studies: Prospects for a New Field.”
\item Gunnlaugson, Contemplative Learning and Inquiry across Disciplines; Gunnlaugson, et al., The Intersubjective Turn in Contemplative Education
\end{enumerate}
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attentiveness, awareness, compassion, concentration, presence, wisdom, and the like. But how that common ground and extraction from doctrine can be achieved, as our previous philosophical discussion would bear relevance, is not entirely clear.

With the introduction of a field to academia, consideration of how to teach that field with evidence-based pedagogies becomes important. This is the role of contemplative pedagogies, and it becomes as synonymous as the practices themselves to a larger degree. The methods of transmission of that practice are not trivial, the outcomes often subtle or difficult to articulate quickly, if even known. Traditions of transmissions exist, and often form the same epistemological background to the tradition as the ontological content could show. While I will discuss some of that here with Latour’s perspectives helping some of those aspects, the deeper distinctions of practice and pedagogy would take considerable work to elicit with those other sources.

How contemplative studies differs from already present philosophy and religion departments in academia is a key distinction. The academic discussion of the history, philosophy, and comparisons of religions and perspectives is still ongoing. However, the modus of contemplative studies aims at bringing that academic perspective in balance with other constructions of knowledge, embodiment, and a focus on direct experience, as an ontological methodology. Many of these contemplative studies documents also note a focus in academic comparative religion on Western religious perspectives, and particularly Christianity, while simultaneously noting a fairly strong preference in contemplative studies towards Buddhism. Notably, interweaving how to understand consciousness studies from other disciplines, the mental ecologies that seem more pressing than ever in an information and technologically experienced world, as well as other parallel studies in psychedelic research from psychotherapy and neurology, blend as well. There is similar emphasis on finding better practices that address modernic forms of stress and dysfunction within academia that may help pedagogy and institutions be more resilient and responsive to Anthropocenic changes. Indeed, one of the major goals in contemplative studies is to bring a recognition of

193 As well as the scholarship of teaching and learning, of course.
compassion and holistic care into the realm of academic needs.

While I hope to suggest that consciousness can better be understood by this examination, and others have mentioned its possibility, I cannot possibly hope to touch on how consciousness eludes so many methods of inquiry, science and otherwise, even as we continue to strive toward understanding it. Though it seems neurobiology and complex network explication leads us closer and closer, the first-person experience of this scholarship has been woefully lacking in most academic study and has found new purchase in contemplative studies initiatives. Further, it is because of the propensity for the sensation of consciousness seemingly tied to the distinction of time segmentation and the ability of our brains to process extremely rich complex computational presence that the appearance or object of consciousness seems so compelling. If reality is in fact only knowable by retracing the networks of our perceptive and descriptive forces, extended through reliable systems, or not, then it stands to wonder if there are other useful, combined modes of inspection that allow us to gain headway into understanding the mysteries of our cosmoologies and realities. Indeed, the imbrication of modes of existence that rely on reference and presence, seems rather true. This path of inquiry is also too large to contain here, though I recommend Michael Pollan’s recent work in How to Change Your Mind.

Many contemplative practices are encountered or are presented as originating in the first-person modalities. This also includes inquiries as to how to know the self, how to understand and gain insight about the mind-body connection (indeed, exploring the sensation of their perceived separateness), and how to gain depth of focus from the apparent distractions of mind and body. The development of personal encounter still seems key in starting this inquiry.

Meditation and mindfulness as contemplative practices puts practitioners into contact with their own subjectivity and their own explanation of behavior and thought, but we would not expect to see the bottom of that well completely. Meditation and its epistemological history helps clarify the subjective experience for practitioners. Part of this, of course, relies on the subject’s ability to self-direct and respond to teaching.

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194 Pollan, How to Change Your Mind, and other cross-examinations with post-humanities theorists.
instructions, and while there may yet be explanations within the background and epistemology of the subject to gain insight through specific practice, that there is insight and seldom an end to both practice and insight, suggests it generates benefit and sensitivity to that hybridity to mind and body.

Ken Wilber is of particular note in his writings on Western and Eastern traditions, and several large works of his speak to complex and integrative systems theories that bridge many aspects of ecology, spirituality, and other gaps of which Latour speaks.\(^{195}\) Wilber’s integral theory conceptualizes the interiority and exteriority of subjectivity with that of personal and collective perspectives. This four-quadrant approach is given further successive levels of development that allow for a spiraling out of iterative and recursive developments.

Wilber and others have also made significant the development of holons in describing the granularity of their systems. Holons are subject-objects that are complexified and simultaneously parts and wholes, and they seem to most closely approach the orientation that Latour has articulated with quasi-subjects and quasi-objects. Holonic theory recognizes that quasi-subject-objects and holons are made of smaller constituents, but may at some point have further emergent properties of their system that we can track to a new interactional or developmental level of identification and activity. Holonic theory seems viable to cross with Latour’s ANT and the notions of actants. However, other aspects of Wilber’s integral system, while working in many transdisciplinary modes, has also seemed problematic, given the deeper discussions of holistic thinking. There are problematically strict hierarchies in Wilber’s work that must be navigated to be comparable with Latour’s projects. And integral theory has additional criticisms, sometimes along the same Western, modern self-centric, and colonial approaches as Latour.

However, as our discussion has led us this far, it is difficult to see how merely a solipsistic view of the self can lead to much further improvement in our understanding of the world and the other subjects within it. Thus, the second-person modalities of contemplative studies and the intersubjective practices, those that include relationships

\(^{195}\) Wilber, *Sex, Ecology, Spirituality*, and many others.
to other people, are often the most important practices of these contemplative studies—at least the most important for us to examine here in a networked sense of how our relationships are constructed and improved.

How a common ground and practice becomes transferable and sharable becomes an important point of the present inquiry. There is also great consideration not to inadvertently neuter, appropriate, or strip those traditional practices from associated and integrated doctrines and their narratives, epistemologies, and ontological orientations. In short, traditions are situated, and their practices are situated, and to “extract” or appropriate them in contemplative studies has come under great scrutiny and conflict.

The above articulation of examining contemplative studies helps bring some clarity to Latour’s sense of what returning to practices means. Latour has not suggested that we can separate ourselves from our epistemologies, indeed, that would be a move of the Moderns. But, in trying to compare definitions of religion, self, and teaching and practice, focusing on how we practice and our cosmograms allow us useful discussion in establishing and proceeding in that political and ecological work. It gives different entities and collectives methods for convoking; they bring their beliefs with them, not that their beliefs are somehow stripped from them or ignored.

I have tried to look for a clear understanding of how Latour even approaches a sense of self or a networked approach to the duality sensed within mind-body and self-society bifurcations. I believe other studies of his approach this, as quasi-subjects and quasi-objects may compromise this sense of self, but I have yet to find a deeper analysis fitting for this discussion. Nonetheless, an ANT approach to personhood would be welcome analysis, and the present ANT methods are applicable to showing how the boundaries of body, psyche, and self are thoroughly hybridized. Latour does reclaim “aesthetic” in the original Greek term form of “perceive” and in “be concerned” with that perceptiveness. Contemplative practices aims at this reclamation and

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practice quite a bit.

Thus, there are many reasons to suspect why contemplative studies may be fraught with challenges to both understanding as a “discipline”, without first understanding the inherent challenge to modernity and the academic institutional framework. I believe this inquiry can align with the amodernic and transdisciplinary work that has been suggested by Latour’s AIME project. That linkage and translation has been the goal of this thesis as well. For example, Gunnlaugson, Sarath, Scott, and Bai again explain:

Emerging from this range of considerations is what might be called a transdisciplinary praxis of contemplation: an integration of the theoretical understandings of contemplation and its roles in a (post)modern, secular, and pluralistic society and the experimental, experiential practice of contemplative methodologies developed out [of] the rigorous and scholarly interplay of various historical contemplative traditions, contemporary scientific research, the arts and humanities, health sciences, and organizational management and leadership. It seems reasonable that addressing the usefulness and issues of contemplative education in a transdisciplinary fashion allows for broader and more diverse epistemic perspectives; at the same time, a transdisciplinary approach offers greater possibilities for enriching the field of contemplative education.\textsuperscript{198}

From this we begin to see how Latour’s perspectives, methods, and descriptions may further align towards the same goals that operate in various contemplative studies and practices: routes for tracing a Latourian- and AIME-based non/a-modernity; the application of Latour’s Gaia and pluralistic modes of interaction; an accent for a call to political ecologies and involvement in anthropological studies; and the examination of which cosmogram or Mode of Existence(s) may be operating.

In other words, can we actually separate and usefully reconstruct the network between epistemological understandings of how the ecology and network of which contemplative practices perform and the ontological basis of their practice? Is there something that contemplative studies offers to critique modernity that can be better translated with a Latourian Gaia? Can Latour’s frameworks of ANT and AIME prove to be its own formation of theory, its network redefining a new potential epistemology itself?

Many contemplative and wisdom traditions have tended towards philosophies

\hspace{1em} 198 Gunnlaugson, et al., \textit{Contemplative Learning and Inquiry Across Disciplines}, 5.
that end up describing nondualism and holism. From our previous discussion of the categories that Michael Ruse outlined for receptions of Gaia, we see many of the same issues of mechanistic and individualistic philosophies, organicist perspectives, complicated by holistic rhetorics and the theistic and hylozoic views and practices that include more explicit discussion of spirit and deity of some kind. Therefore, our previous discussion of the holism of systems, cosmograms, and Gaia will bear upon this discussion of contemplative practices and pedagogies.

This snail’s view slowly plods through the analysis and alignment with contemplative studies.

*Mistaking the Tree for the World*

Trees have long been used for metaphors of networked collectives and realities taken as a whole. These trees encourage examination outwardly and inwardly, apparent and hidden, and represent many transferences and translations. The tree itself seems to be a singular being, though, as we know better from ecology now, to separate the tree from the forest, the rhizomes, the mineral, the atmosphere, and the copious lifeforms in symbiosis on and within its supposed boundary, would be a violence not only to the life of the tree but the very notion of the truth we strive towards.
Figure 4: The Tree of Contemplative Practices, contemplativemind.org

199 Duerr and Bergman, “The Tree of Contemplative Practices,”
The roots of this world tree may stand in stead for an understanding of the lineages and connectivity of all contemplative practices, but how are these connections and groupings actually composed? How do the roots of communication, connection and awareness “encompass and transcend differences in the religious traditions” with so little complication? How does a movement practice get put in “movement” and a creative practice in “creative?” What keeps one practice of movement, say aikido, from yoga—both deeply rooted in meditative practice and awareness training—or that the same goals of meditation or mantra exist for both but are absent from this representation. This Tree seems a problematic view-from-nowhere, situated and yet prefigured, a bird’s eye view of how things might connect and relate but without the explication of how it got there. By further extension, without the knowledge of its construction, the erasure of its construction leads this view to seem forced and colonized—unclear of how the categorizations and subtypes became selected beyond their surfaces.

Therefore, this Tree of Contemplative Practices seems to also betray the very embodiment and transdisciplinarity that contemplative studies has aimed, and represents only a potentially misleading attempt at the networked understanding and forced holistic opportunity that contemplative studies attempts to espouse in its mission. While we do know that the tree is articulated from the missions of the Center for Contemplative Mind in Society and its mirror in higher education, I could find no readily available, public, and direct reference to the working group, the process, or how this tree was decided upon, constructed, or formed that would address my concerns and the potential appropriation. All this is to say, with much due respect as well to the initiative towards these contemplative studies, if we do not improve our representations of the work contemplative studies initiatives espouse, if they cannot be made public, explicit, and visible, we cannot retrace them or rely upon them, and they

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200 Ibid.
amount to undermining the mission of helping us understand each other on ontological grounds.\textsuperscript{202}

Similar to the distinctions and cosmological tables Latour made between Nature and Religion, we must articulate and observe the difference between the epistemologies and ontologies. Thus, the contemplative practices and pedagogies seen in this Tree must be networked and relationships reconstructed to remove more of the obscurations this Tree presents. A primary means of connecting contemplative practices with Latour’s perspectives is by relating on the level of practice. This, of course, must be further traced carefully, just as the Earthbounded—and a snail’s viewpoint—intends to show.

I could find little reference to any Latourian modes of epistemic and ontologic analysis in the contemplative studies literature I had time to survey. Further discussion of postmodern and transdisciplinary discourse exists; for example, Gunnlaugson et al. mention Hadot- and Foucault-inspired postmodernity (at least post-Cartesian), the postmodern work with Wilber, and in the convergence of contemplative studies as an academic foray.\textsuperscript{205} This could align again with Latour and others’ amodernity, even if it is not picked up widely by the field.

More importantly, the discussion of Gaia and holism presented previously is applicable. This lends us some purchase as to why the Gaia hypothesis and its general invocation becomes important to critiquing contemplative studies. We run into a similar problem with the contemplative Tree as we do with uses of Gaia in hylozoic and spiritualistic camps sometimes associated with contemplative studies. Many traditions and articulations of Gaia continue as an Earth Mother or Goddess figure,\textsuperscript{204} are even translated back toward Gaia from other traditions, aligning with varieties of hylozoic optimism and avoiding the original Grecian complications and implications.

\textsuperscript{202} At its website, there are invitations to investigate further the practices on the Tree, as well as further blank trees one can then ‘rewrite’ the coordination of practices—but the critique of process for the one presented remains.

\textsuperscript{205} See Gunnlaugson, et al., Comtemplative Learning and Inquiry Across Disciplines, pg. 1 and ch. 21.

\textsuperscript{204} “Earth Mother” is a broad stroke and difficult to fully define towards collecting many of those accounts of Earth Mother and Goddess figures in alignment with the hylozoic camp depicted. Some are within Ruse, The Gaia Hypothesis; Joseph, Gaia.; and Turney, Lovelock and Gaia: Signs of Life.
These prefigured, beneficent Earth Mother Gaias seem to look the other way on human, non-human, and further environmental suffering when so many other activities that could be attributed to this notion of Gaia are ignored and overlooked. Some of these invocations in contemplative studies’ contexts strive to reconnect to this hylozoic Gaia through a variety of practices and views, while continuing to recapitulate many of the same problems and prefigurations of globalizations and “Natural gods” of which Latour was critical. We are still left with naturalistic gods and a Gaia that is still difficult to invoke when approaching other entities that wish to be included (when they already may feel trod on by the same). This problematizes the secularistic intent of the contemplative studies initiatives.

Joanna Macy and her work in the Great Turning and The Work that Reconnects has been an inspiring voice in contemplative studies and practices. She brings practical Buddhist-inspired workshops and contemplative pedagogies that embrace intersectional issues about the environment. However, they problematically engage with issues presented by an amodernist construction of Latour, and a full treatment would need considerable further work. Some of Macy’s activities approach overlap with Latour’s workshops and forays into a Parliament of Things and those presented in Facing Gaia. Macy’s workshops embrace and convoke with animals and other entities in a workshop to build those kin-making activities. I find the Gaia workshop meditations and others within Coming Back to Life to be thoroughly rooted in a pastiche of epistemologies and hylozoic camp material that reifies a benevolent and idealistic Mother Nature figure rather than a provocative Gaia. Macy’s methods seem to take little heed of how to approach those epistemologies critically, however well intentioned, and fails to make contact for the diversity of those perspectives in a politically just communion. That these activities, workshops, and practices can be helpful in encouraging those perceptive orientations is quite likely true, and not without great merit even, but if that is all—if Gaia is left in the intellectual

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205 Latour, “Why Gaia is not a God of Totality.”
206 This allocation should not necessarily automatically include here other variants of Gaia and “Earth Mother” figures often lumped into the Gaia moniker from other cultures and traditions. However, a full explication of that occurrence also could proceed.
207 Macy et al., Coming Back to Life, and other works.
recapitulation without the severity of her apparent wrath and the destruction of the planet in the Anthropocene—these practices may eventually harm, or indeed fail to recognize, what is actually happening by relying on those prefigurations and idealism.

As with Latour’s Gaia, there can be an understanding that the whole should not be prefigured. Even if we assume this tree-network exists in some form, even as far as to make the categorical limbs come together, the point of having a network is to be able to retrace if necessary, to loop upon itself, to make an empirical study of the works, cross link and directly encounter their relationships. Thus, the Tree fails to become the super-supportive and organizational tool that this presentation would have it be.

Having picked on that sufficiently, and with as much due respect to the endeavor, is there another formation that would be adequate? I harken to think a rearticulation of every philosophical and religious tradition that is considered part of the tree might be re-networked, but what an undertaking that would be. Reprising Komjathy’s distillation of the key aspects of contemplative studies involving “practice commitment, critical subjectivity, and character development,” with a special note towards critical inter-subjectivity, can these aspects be critiqued from an ANT point of view? Perhaps more broadly, how do we approach systems like any tree, real or imagined, with a system or network that strives to make it holistic?

I think we need contemplative ecologies that can show this work much more explicitly, which I think would likely serve better than a notion of holism and continuous connection. Understanding the breaking points and discontinuities is not a dyadic value judgement—it’s a part of what we can agree is found in reality. We clearly cannot go back to traditional (i.e. pre-modern) systems, or see their potential interrelationships with other practices and epistemologies without considerable work. Neither can we simply go forward to say we have seen how all these epistemologies are all interconnected (i.e. the Modern prefiguration), or it’s only a matter of time before we understand how they are all one, without being extremely explicit about their interconnection, who makes those interconnections, for whom and in what ways. Thus, Latour’s Gaia, or the process of that metamorphic zone, becomes a potent space to work within in understanding how these practices and closely held epistemic views
must actively strive to do the political ecological work to find out exactly what kind of tree represents them well.

This is a reason why Latour’s Gaia can be seen in the endeavor to ground our experiences. The snails cannot see this tree from the ground of practice.

*The Aikido Turn*

To give a more extended example of the snail’s view of contemplative studies, and as mentioned previously, let us crawl along the ontologies that build these second-person, intersubjective experiences. The most experience I have with these intersubjective practices is with the practice of aikido.

Aikido is a martial art developed in pre-WWII era Japan by Morihei Ueshiba, often referred to as great teacher, or O-Sensei, by practitioners.\(^\text{208}\) Combining several forms and lineages of Japanese martial arts, Budō and warriorship, particularly drawing from Daitō-ryū Aiki-jūjutsu, as well as weapons forms of the sword, short staff and spear, Ueshiba gained great prowess among contemporary Japanese martial artists. After a long bout with one such colleague-challenger, he had an enlightenment experience that further compelled him to propel the martial art into an art centered on peace, reconciliation, and personal and spiritual development. While the practice of aikido does help practitioners become practical and competent martial artists and warriors, ready for the vicissitudes of life-and-death, its deeper meaning and teachings strive to embody this reconciliation and harmony amongst practitioners and their actions in the world. Indeed, this core teaching is what gives warriors a better advantage to their warriorship. As such, it is a martial art that does not promote internal competition—as a martial arts institution or for its practitioners. There are no competitive matches or bouts,\(^\text{209}\) it won’t become an Olympic sport, and the founder

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\(^{209}\) Within most aikido dojo and organizations at least; some have done otherwise, but it was avoided by the founder and most practitioners.
eschewed ranking even of members—though ranking has become a practicality to its
day-to-day practice.

Dojo practice spaces are often considered formalized combat zones, treated with
respect and a view towards the seriousness of life and death. They are also often
considered sacred spaces for similar above reasons. Respect is further extended to the
Teaching sensei and their lineage, and sensitivity of that practice brought to the various
levels of new and old students. Many dojos typically show a picture of O-Sensei, or
display aikido-related Japanese calligraphy at the front of the room and shomen to
honor the history and extension of this lineage.

Practice proceeds with a series of traditional and modified warm-ups, and
practice times are typically centered around the demonstration of a technique by the
dojo’s teaching sensei or certified teachers. The teacher will typically demonstrate a
repeatable exercise, movement form, or specific technique, or series of techniques,
around a specific pedagogical point. Keen awareness and observation of the technique
is encouraged. Practice of the observed form is almost always done in partners, one
person, the tori or nage, the thrower and applier of the technique, and an uke, or
attacker, faller, and receiver of the technique. Roles are switched equally during
practice. The sensei or teacher often observes practice, critiquing and participating as
necessary to ensure that students are understanding and progressing in learning the
technique and the principles of aikido. Safety and well-being of the students is
maintained and observed as to the particular needs of the students. As many of the
techniques of aikido involve strikes, wrist locks, falling, and tumbling, additional
training and warm-up for this physical practice must be accommodated and eventually
learned as well. Most dojos have some kind of tatami, canvas, or foam wrestling style
mats to allow falling and ukemi to take place with minimal threat and injury. One of
the important points of practice is not only understanding the techniques that may
throw an attacker, but also how important it is to be responsive to, or fall with, that
attack. More on this below.

Aikido practices emphasize many of the same principles of meditation as other
Eastern dharma practices. Particularly, nonresistance and effortlessness, beginners’
mind, and responsiveness to the present moment are consistent themes of practice. The opposition of aggressive force necessitates recapitulation of that aggression; however, if one does not counter-react to the aggression or violence, but connects and redirects that aggressive intent or energy to a third option, the practitioner of aikido might find that both parties are relatively unharmed, the attack neutralized, and a position for both parties re-found. The application of that redirection becomes the waza or techniques of aikido. However it is important to realize that the techniques are merely the form and expression of those more fundamental teachings. Practitioners train to attain the “spirit of aikido,” the passing through of that harmonization process, be it called ki, life force energy, good technique, or merely peace, and allow for effective redirection of that energy away from harm. This reconciliation process is the harmonization, or aiki, of the name aikido. Aikido is practiced as a traditional Japanese art form, like many Japanese arts that claim the dō in their name. Like the Tao of Chinese philosophical lineages, dō embodies a sense of lifetime philosophical practice, the refinement of momentary awareness and expression of life. Thus, the name of aikido is quite literally translated as the art, path or way, especially of a lifetime, of harmony, reconciliation, and peace.

My personal tracing through aikido has drawn from several different sources: practice in the U.S., practice in Japan, as well as specific lineages within Aikido. The Birankai lineage of Kazuo Chiba, sensei, that I am currently practicing emphasizes five pillars of aikido practice: centeredness, connectedness, wholeness, liveliness, openness. Chiba further details important aspects of psycho-spiritual development, the dialectic nature of martial arts, the hybridity and play within the duality of conflict and harmony, alignment with Sun Tzu’s The Art of War, and the heart-to-heart

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210 A further epistemological translation table between lineages, intent, and pedagogy of ki would be useful to trace.
211 合∥: literally translated as joining/unifying spirit/energy; other reciprocal and unitive connotations exist with these kanji as well.
212 道∥: Japanese calligraphy (shodo), tea ceremony (chado), and many martial arts (karatedo, kendo, etc.) often share this same “dō” in their name (the simplified, anglicized words used here). Various levels of adherence to tradition and what those traditions are are a part of the lineage tracing and evolution of the art.
213 Chiba, “The Study and Refinement of Martial Awareness.”
transmission that must occur in lengthy aikido attainment. Other epistemological aspects of course are also implied and explicated.

Aikido is also influenced by Japanese culture and several obscure religious and philosophical traditions. The neo-Shintoistic Ōmoto sect is a version of shintoism, a part of widespread Japanese culture that has also hybridized to a greater degree with Buddhism.\(^\text{214}\) That sect’s influence was most responsible for including considerations of the attacker as well as the attacked—that influence extended from its utopian vision for humanity. There is similarly some indication that Ueshiba had aligned with a Shingon sect of Tantric Buddhism as well.\(^\text{215}\) Many practitioners of aikido are encouraged towards meditation in some form or another, and many are also Japanese Zen practitioners and ordained or lay monks. Practitioners of aikido, besides being encouraged to meditate, are typically encouraged to extend practice beyond the mat as much as possible. This includes mindfulness practices, awareness of surroundings, respect for unknown persons and entities, non-striving attitude in the world, constant readiness, relaxed approach, connection and effortlessness for whatever life-and-death situation may arise.

Aikido is then the art that brings forth this embodiment of non-striving connection. It stresses the partner work of understanding and modifying each encounter for the purposes and values of the practitioner and the opponent to remain viable and healthy. This can only be done if the purposes and values of both parties remain changeable and flexible to some extent; the reconciliation process allows for a great deal of dynamism. Resistance in one direction or response may create an opening, weakness, or blindspot to an attack elsewhere that an astute attacker could then use to their advantage.

We can see in Aikido traits not often present in the assumption of other martial arts. If a martial art requires an opponent be cast as an enemy, their deterrence paramount, we often cast them as other, or outside of regard, and allow ourselves to

\(^{214}\) Wagner, *AiKiDô*.

\(^{215}\) Ibid. Further analysis of the dharmic and tantric alignment in aikido would be worthy of further study, and further developed in Wagner, *AiKiDô*. 
harm them beyond necessity. Indeed, even summing up an opponent as an “opponent” may strive to create violence rather than diffuse and connect with an individual in dire straits.216 Extending respect to an opponent recognizes a deeper truth that the origin of violence is often violence, and that continuing violence will rarely stop the violence, merely displace to other systems, violences, and oppressions. Even if an opponent is trying hard to take health away from the practitioner, if the aikido practitioner understands that both parties may yet succeed together, the application of techniques and the practice of aikido is what is necessary for both parties to retain a greater amount of well-being and health. “To injure an opponent is to injure yourself. To control aggression without inflicting injury is the Art of Peace.”217

![Figure 5: Irimi & Tenkan: Entering and Turning in Aikido](image)

This turn toward peace is but one of the many ‘turns’ available in a critical examination of contemplative studies’ viewpoints. There are several notions of the aikido turn. There is a technique, as the figure above depicts in the use of *tenkan*. There

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217 Ueshiba and Stevens, *The Art of Peace*. 
is also further alignment that happens from any technique, and many aikido techniques rely on same proportion of turning. There are also the principals of sphericity and spirality.\textsuperscript{218}

As a practitioner of Aikido, I find that aikido is an embodiment practice that seems paralleled in the complex transdisciplinary ecological work we undertake. Rhetorical forms of \textit{metis},\textsuperscript{219} tacit knowledges, and further discussions of embodiment practices could be much explored. Of direct value is the work of Barry Kroll and his pedagogical experiments with Aikido as rhetoric.\textsuperscript{220} There is rhetoric in confronting and eliding Gaia; problems of rhetoric in politics and science are obvious, therefore rhetoric remains an important humanities consideration, practice, and tool for increased Anthropocene response.

I can really only show you here the impossibility of showing you this technique. Even if I explained to you at length the importance of every small movement, there would be a feeling missing that may end up not being the technique, though you had danced in the same space as it. Indeed, \textit{irimi tenkan} can only be truly experienced if practiced with a partner, their influence considered and integrated into the movement itself.

I might as well write you a snail.

This is part of what Barry Kroll shows in his classwork, moving the chairs out of the way, practicing aikido in order to get at what it might be like to align with an opponent or a reader.\textsuperscript{221} In further practice, it is of importance that both attacker and practitioner, \textit{tori/nage} and \textit{uke}, strive towards connection in order to practice aikido. Those with the better connection, greater centeredness, and superior technique may prevail in maintaining their health and center in the process. But beyond notions of winning and losing, if both continue to practice in this way, the process will also lead towards a reconciliation and understanding that will allow a new and unique solution.

I also wish to make clear here that the aikido “turn” here is the fundamental

\textsuperscript{218} Westbrook and Ratti. \textit{Aikido and the Dynamic Sphere}.

\textsuperscript{219} Metis and other forms of physical rhetoric are explored elsewhere and in Hawhee, \textit{Bodily Arts: Rhetoric and Athletico in Ancient Greece}, c/o Ehren Pflugfelder for the source.

\textsuperscript{220} Kroll, \textit{The Open Hand: Arguing as an Art of Peace}.

\textsuperscript{221} Ibid.
practice of the awareness of connection. Many forms of aikido practice, physically, mentally, and otherwise, rely upon the quality of connectedness the practitioner can employ. Connectedness is a representation of the sensitivity and allows various kinds of reversals, awareness of openings, and opportunities for better positioning. It is the primary conduit to discernment of the momentary and dynamic nature of an ecology of response. This is the key ontological practice of sensing the network and retracing—moment to moment—its structure. I liken this to the ontological discovery and retracing of ANT-like networks. Responsiveness in connection is similarly key.

Centeredness is a measure of personal refinement and focus, and equally important and for long-term efficacy. This is a view of personal unity or holism, but because this refinement process is never complete, there should be no prefigured unity in this articulation. If centeredness was already something to be had or not, there would be no need to do the work that aikido allows in attaining better centeredness.

Aikido, like most language, like so many things, is a living language of technique. No two practitioners are alike, but like so many practices, the reproduction of fidelity and what becomes transferred, often the essence of aikido, is what is most important. This is what sensei and training embodies. Indeed, the techniques themselves are only the means to achieve this sense of ki, this rather ineffable art form, the presence of living by budō, the presence of interacting and loving the enemy. Techniques must be always curtailed to the situations at hand, especially in a real combat situation—but often they are mistaken for what people see as a martial art, what they expect to see as combat.

This is why it takes decades to train into the full lineage of most of these techniques. The countless years and hours of practice to fail and make mistakes, inscribes upon the practitioner a better methodology. One curtailed by their teacher, who did the same before them, and theirs before them, etc. etc. This lineage builds the network, writing, the trail, the sutra, and the very essence of how we have come to know these ecologies of practice—failure and success intertwined. Indeed, this work is never finished, as “Those who are enlightened never stop forging themselves.”

However, Ueshiba and many aikido practitioners and writers carry forth a great deal of description of the notions of unity, wholeness, and holism that I have criticized from the previous philosophical discussion and have also been criticized further in contemplative studies literature. I still am striving to understand how to balance those constructed networks and the prefigured ones, understand which described wholes are reliable, and recognize which are too ephemeral and disconnected to a viewpoint that always seems as grounded as intended.

Westbrook and Ratti state, in one of the most widely known, oft cited, and near textbooks of aikido, “[The] East … began with the idea of unity accepted a priori.” I might even argue that this a priori understanding of unity, arguably holism, is just as present in the West as well, but couched in forms of religion rather than the subtext of Modernity. Further, they say:

> In Asia too, however, it is only a matter of time before there will be a move toward blending the original and largely unexamined totality with the newly acquired tradition of analysis—gravitating, as in the West, toward a higher and more consciously constructed unity.

While this quote provides some interesting remark towards blending traditions, it too seems to privilege the advance of Western knowledge construction. I also seem to hear Latour pointing at this, “only a matter of time,” like the call of the Moderns, the inevitability of a grand unification theory, utopia, and a call to some higher order prefigured and imposed from some higher Providence. Indeed, this can show the Providence intended in aikido, which makes it all the more important to understand how to approach its epistemology.

I think it could be clear that a sentiment, sense, and experience of unity seems very desirable. This experience may be the same as those who have experienced some sense of the non-dual awareness of various levels of meditation or after practices of many traditions (aikido included). The feeling of connection and inclusion seems to be forever in the background of inspiring these traditions, inspiring religions and spiritualities as well, but the actual description of what that wholeness or unity might mean is still beyond my understanding of these practices. It seems something masters

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223 Westbrook and Ratti, *Aikido and the Dynamic Sphere*.
224 Ibid., italic emphasis mine.
and experts claim is available, that they have found, and that one should keep practicing to attain eventually. It is troubling that what is described about these experiences seems difficult to adequately and reliably attain and make contact with considering the philosophical path we have currently traveled.

This unitive vision is similarly problematic, with statements like, "In the Art of Peace, we aim to see everything at once, taking in the entire field of vision in a single glance." This paradoxical intention is almost exactly the opposite of what might be understood as a situated view of anything, and seems to embed the situated view in a view-from-nowhere. In a practical sense, I can relate and understand the need for momentary glances to gain cursory awareness toward assessing a combative situation quickly for optimal responsiveness and piquing awareness. But the sense that this quote seems to point to is a unitive and god-like point of view that seems problematically ungrounded, especially for a notion of the depth of situations aikido practitioners in a wider world should appreciate.

Further confounding statements are also present: "A good mixture is 70 percent faith and 30 percent science. Faith in the Art of Peace will allow you to understand the intricacies of modern science." This is not a teaching I can really begin to understand in any contexts of science, modernity, or faith—regardless of a Latourian or AIME framework. Latour may help add some additional perspective on totalizing views, and one that bridges toward some continuity of practice:

The issue is neither to add a “poetic dimension” … nor to obtain a more totalizing view. The issue is that of exploring whether one can ignore the frame altogether and literally move “sideways,” instead of keeping with the traditional face-to-face of object and subject, and to move, literally, with the flow.

While some of this is taken slightly out of context, the orientations and description of flow works well for describing what aikido does. By non-opposing an opponent, not objectifying them as only attacker-needing-to-be-stopped, room for their subjectivity, however they came to violence or aggression, can be couched in techniques so long as

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225 Ueshiba and Stevens, *The Art of Peace*, 100.
the practitioner is able to skillfully navigate and connect with their attacker. Thus, they flow with the attack, step-aside the line of initiation, but remain close and connected, a different frame from the original intent to harm—a different path from the option of harm. And since this can be done in other frameworks beyond the physical—since we can also see (or at least retrace) how the physical ecologies are hybridized to the mental ecologies and further social ecologies in a further larger network—this practice and ontological orientation becomes a potent practice for further unknown futures in the Anthropocene.

One of the poignant criticisms I have about Facing Gaia and other aspects of Latour’s articulation is towards understanding the Moderns as adversaries in a state of constant war. Latour says we must understand and identify who our enemies are, the recognition of who is causing climate changes and the Anthropocene. To identify the adversary, the enemy, or at least the antagonist, implies a fight at least. Whether Latour states this as explicitly or identifies what venue of that fight is unclear, but that is the sense I get. I do think he intends much of it, and it is clear that many humans, non-humans, and environments are suffering in many integrated ways from the Anthropocene.

I think the pluralistic worldview he suggests is intended as a remedy to the cataclysmic and described apocalyptic options of the Anthropocene at large, and so hybridized violences are implied. But still, there seems to be a return to the rhetoric of enemy and fighting, and if not by Latour, by plenty of other people. For example, Pierre Montebello writes about the Earth and war: “The Inquiry [AIME] wages total war against every one of these institutional and domain-based appropriations. … Thus we embark upon an initial war, the war of nuances.” Indeed, I do not claim to fully understand and be able to translate Latour and others’ view of this war and the implied violence against Modern modes of existence. However, even as an aikido warrior prepared to face war and strife, I am reminded of Ueshiba, that, “An attack is proof

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228 With an important nod here to Guattari, The Three Ecologies.
229 Particularly this is present in Latour, Facing Gaia, ch 7, and see also Montebello, “Earth and War in the Inquiry,” from Latour and Leclercq, Reset Modernity!, 295.
230 Montebello, Ibid.
that one is out of control.” I think we suspected there was no agent of control, no higher order in charge—and certainly not us if the Anthropocene is true. This lack of control reads for me as a Modern sense of control, the result of trying to control too much, and failing with the result of creating the Anthropocene.

In this sense of fighting for the planet that Latour indicates, Stengers’ “coming barbarity”, and hosts of other unforeseen catastrophes, my major complaint and critique is the same ontological prefiguration that citing war might engender. If we set ourselves up for war, even philosophically, without the understanding of what kind of conflict that will be or could be, by not guiding those warriors that may be fighting and less prepared, we do those individuals great disservice and harm—which was never the point of either Latour or aikido. Montebello does come around to the point of AIME again, stating that “intercollective, transdisciplinary ontology that takes all the attachments of other collectives into considerations, thus regenerating a positive response to a diverse Earth, a plurivocal cosmos,” will save us. But prefiguring war, conflict, and those combatants without direct contact seems unwise and against the goals of this practice.

Latour quotes Lynn Margulis about what our ideas of control might imply: “Our self-inflated moral imperative to guide a wayward Earth or heal our sick planet is evidence of our immense capacity for self-delusion. Rather we need to protect us from ourselves,” and responds with, “the first thing to do, so as ‘to protect us from ourselves’, is not to take Gaia as a God of Totality.” So how must we protect ourselves from ourselves? And if I have already demonstrated some of how to not take Gaia as a “God of Totality”, where does that leave us? We need better rhetoric and understanding of how to view the self and what fighting can be—and why aikido is a potent practice for this situation.

Latour encourages innovation and care, unified at long last. “How can we love our techniques, really love them?” Latour calls for the same kind of self-refinement, recentering on the Earth, present in Aikido too. A new line of attack, one out of the

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way of the Moderns’.

It is now your turn to try to reset yourself. Suppose you start the triangulation not from the line going from land to globe but from a different angle – from the newly emergent and still somewhat mysterious [E]arth? How would you decide what you cherish most in your attachments to the land? Who and what would you consider your friends and your enemies to be?\footnote{234}

Indeed, what Latour calls for is to fight those that would not be Earthbounded, those that are trying to escape (in the form of Modernity, groundlessness, business-as-usual, another planet, and perfect horizon), or otherwise postpone the issue, by exacerbating it, by relying on future technology to ‘fix’ the problems that Modernity created. Modernity seems to explain and be overlapped with the problems we have with authoritarianism, colonialist heritage, and the continued and increased visibility and actions of racism and exploitation of any and every duality made aware to human culture. Ignoring this Modernity continues in ignoring the plight of anything not privileged enough to be considered in the dominant forms of human culture as well, and minorities, the environment, and its denizens and entities are why we’re having this conversation as they are still the first to bear the brunt of that extinctathon.\footnote{235} It is the resort of Modernity to exacerbate those dualities and try to press ever forward and ignore these problematic bifurcations. Said another way, Latour suggests:

It is because religion and politics have the potential to unleash enormous energy that we have to be so careful when mixing the two. … It now seems even more difficult to resist the violence of iconoclastic passions, at a time when we must learn how to take care of the [E]arth by uniting the energy of both politics and religion.\footnote{236}

I think at its heart, Aikido continues and strives towards its transdisciplinary ideal, but further refinement of its organization, rhetoric, description, and philosophy may yet need to continue. Indeed, fighting without fighting, cutting without cutting, and embracing the paradoxes of duality while becoming more grounded, centered, situated, and responsive are ways that a more Gaian wary sense of aikido may be practiced. Indeed, Aikido done well makes kin and embodies the ideals of Haraway,\footnote{234 \textit{Ibid.}, 71.}
\footnote{235 Borrowed poetically from Atwood, \textit{Oryx and Crake}.}
\footnote{236 Latour, \textit{Reset Modernity! field book}, 58.}
who states, “All of us who care about recuperation, partial connections, and resurgence
must learn to live and die well in the entanglements of the tentacular without always
seeking to cut and bind everything in our way.”\textsuperscript{237} It is in this sensitivity to practices
that Aikido shows its benefit, allows for the plurality and health of those voices, and
becomes an important tool to consider further. The founder again reminds us:

\begin{quote}
The real Art of Peace is not to sacrifice a single one of your warriors to defeat an enemy.
Vanquish your foes by always keeping yourself in a safe and unassailable position; then no one
will suffer any losses. The Way of a Warrior, the Art of Politics, is to stop trouble before it
starts. It consists in defeating your adversaries spiritually by making them realize the folly of
their actions. The Way of a Warrior is to establish harmony.\textsuperscript{238}
\end{quote}

\textbf{Refuge: Transdisciplinarity, Academia and Decolonizing Contemplative Pedagogy}

In Buddhism, there exists teachings and practices of taking “refuge”. This
refuge acknowledges the sense that the clear avenue and right actions to take (even in
a Buddhist framework) are not always apparent or available. In this context, this
recognizes knowledge that the Anthropocene is here, the barbarity and nightmares
happening now as we move through this event and reorientation to, hopefully, new
groundedness and/or further catastrophe. When there are few options left, what can
we take refuge in during this present cataclysm of the Anthropocene? The three jewels
give us important touchstones with which to work.

In basic, these jewels are the Buddha, the Sangha, and the Dharma.\textsuperscript{239} My
interpretation of this teaching is that the Buddha, the enlightened one, inspires refuge
for knowing that liberation from suffering and whatever that enlightenment is, exists
and is attainable. The Sangha is a group of similar practitioners, with the knowledge
that all beings and entities are working towards happiness and harmony and that we
are not in this endeavor alone. The Dharma is translated as various kinds of wisdom,
that there exist ways of knowing reality and truths, even subjectively, that these truths
have meaning and relationship, and that there are skillful means to embody these

\textsuperscript{237} Haraway, Manifestly Haraway, 295.

\textsuperscript{238} Ueshiba and Stevens, The Art of Peace, 156.

\textsuperscript{239} I will do my best to represent the three jewels as best I can, but further explanations and
understanding of their intent is warranted.
endeavors. Said another way: know that enlightenment can be done and has been done, but that you have to do it for yourself, and it will always need repeating; work with others—don’t work alone—everyone is working; refine your tools, talents, and practices, they are important and have many formless forms.

The notion of continual effort seems to align with Latour as well: “If there is one thing that does not fit the description of techniques, it is mastery.” Latour’s return to practices and the work of renetworking also points towards my greatest understanding of the Buddhist notion of prajñā, the wisdom of direct experience—that experience, whatever experience, especially failure, is the best teacher because the direct experience is always richer than experiences delivered through any other medium. The trial of new ideas, re-examining the networks of knowledge and being again and again, becomes the highest teaching—where there is no longer mastery, but experimentation.

241 Specifically, I refer to bhavana-maya panna from Theravadan schools, but the other wisdoms and prajñā are similarly included and may refer to other virtues of Buddhist practice. See “Prajñā (Buddhism),” Wikipedia.
242 Those other mediums representing a kind of reductionism and figuration by other obscured networks.
Figure 6: Shakyamuni Buddha giving the Bhumisparsha Mudra

245 Wimberly, "Literally Cultivating Peace."
A further connection to the Earthbounded view of Latour’s exists with the Bhumisparsha Mudra. This mudra, or yogic hand-gesture, was given as witness to the Buddha’s full enlightenment and the Buddha’s final refuge. This mudra was used to recognize the Earth as a witness to his reality of overcoming illusion. If the Earth was real and could be contacted and sensed—even when confronted with the entirety of the great illusionary demon form of Mara—then he could see through that illusion and situate his view of himself and true reality. This is a view of an Earthbounded perspective, that even the great Enlightenment of the Buddha was grounded in the reality of this Earth, and this seems telling of the importance of this practice.

Combining these many perspectives and registers of religion, spirituality, and philosophy, I see an importance for academia to help the process of addressing the Anthropocene, to take refuge in Earthboundedness, and move towards these situated knowledges and practices to better prepare students and faculty for the changes of the Anthropocene. I see here in this a methodology and epistemological reviewing that can better approach what His Holiness the XIVth Dalai Lama calls for in *The Universe in a Single Atom*\textsuperscript{244} approaching further integration and transdisciplinarity in academia, science, consciousness studies, and human wellbeing.

Further critique of higher education and its benefit from this discussion seem apparent. Numerous examples of the toxicity of capitalism, modernism, and colonial hegemony exist in academia today. Indeed, beyond being challenging, academia can be traumatic, the pace of “modern” life and the progression of society invoked to greater degree in inciting everyone in that system to sacrifice peace, wellbeing, and mindfulness.\textsuperscript{245} This is one of the greater reasons for contemplative studies initiatives; their studies find that contemplation and any sense of holistic well being are not being met (to say nothing of the role of interdisciplinary practices and frameworks being of benefit).

Marie Eaton et al., the writers of *Contemplative Approaches to Sustainability in*...
Higher Education, establish the groundwork for the necessary inclusion of contemplative studies in higher education andragogy and its relationship to sustainability work. We must go further than just showing the impending doom of what modernity and the externalized waste of civilization has wrought on personal and collective psyche, even for the well-off and “woke.” It also involves teaching towards integrated and responsive students, empowering them to address their workplace, academia, and society.

Beth Berila’s book *Integrating Mindfulness into Anti-Oppression Pedagogy* makes a similar case for the usefulness of careful introduction of contemplative practices into important intersectional issues of higher education andragogy. Critical pedagogies of gender and race are routinely called for in classrooms and curriculums, but actually getting at those depths of close, critical, and meaningful work is still challenging. Berila argues that mindfulness practices can engage with greater depth these important cultural and political examinations. This is a great starting point for how to better practice contemplative studies and pedagogies going forward. Berila suggests:

> By integrating contemplative practices into the classroom, we offer students tools they can continue to draw on long after the semester ends to sustain this clarity in their values and to maintain a connection with their better selves.

This furthers the path to social justice, and thus also environmental justice.

However, with both Eaton and Berila, while political implications are heavily introduced into the latter, the deeper and radical transformations introduced by Latour’s arguments in *Facing Gaia* are not integrated into greater institutional transformations and implications for praxis that contemplative studies can help to bring to the institution.

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246 Eaton, et al. eds., *Contemplative Approaches to Sustainability in Higher Education.*

247 A recent book, from the National Academies Press, also calls for similar interdisciplinary and humanities inclusion, but was published too recently for inclusion at present. It also bears tree metaphor analysis from the previous discussion. See Skorton and Bear, eds., *The Integration of the Humanities and Arts with Science, Engineering, and Medicine in Higher Education Images: Branches from the Same Tree.*

248 Berila, *Integrating Mindfulness into Anti-Oppression Pedagogy: Social Justice in Higher Education*. While I have tried to use more instances of andragogy to express adult human education, pedagogy often prevails as the go-to term for the scholarship of teaching and learning.

249 Ibid., 155.
We must continue to critique globalized views that prefigure or do not adequately trace their origins (even if no ultimate source is ever found). As Andrzejewski’s social and environmental justice text suggests:

A global perspective increases awareness of the interconnections between all forms of suffering and liberation, and compels us to move beyond a self-centered, single-issue, or national focus to consider what is good for all, what is necessary for survival and recovery of the planet, and how our treatment of other species matters.\(^\text{250}\) Then we must ask what kind of global perspective it is and where it is from; who is the planet recovered for; how is self-centeredness actually avoided in practice; who will teach us; what is good for all when the All is so diverse? I agree that this sentiment is important and orientated in the right direction, but we must keep refining and reframing its unexamined gaps. It too is un-unified.

In trying to understand how to do better science, other views, entities, and collectives—including the discounted perspectives of various other peoples and entities erased by colonization: indigenous knowledges and Traditional Ecological Knowledges (TEK)—should be recognized. The work of Robin Wall Kimmerer is particularly good at blending and showing the kind of indigenous view, grounded on the Earth, respectful and considerate of the many entities and reciprocities that life asks for here, and a vision of TEK and science that is compelling and possible.\(^\text{251}\) I believe it could align well with Danowski and Viveiros de Castro’s intention for re-indigenization, but that agreement is not achieved yet. Further restorative justices and spaces at the table for indigenous, unheard, and otherwise colonized voices must still be made—widely and in academia. Without progress on that reciprocity and recognition, we are not undoing the effects of Modernity or facing the Anthropocene.

My call to a snail’s view and the snail’s pace of that work must extend further, as much as it can remain similarly grounded and Earthbounded. The restorative justice of our attention is a part of that. We can approach entities in all our relationships with greater attentiveness and introspection, and learn from them better by restoring that connection to those beings, be they land, animal, mineral, human, and unknown. We

\(^{250}\) Andrzejewski, Baltodano and Symcox, eds., *Social Justice, Peace, and Environmental Education.*

\(^{251}\) Kimmerer, *Braiding Sweetgrass.*
can imagine new peoples, new entities, instead of trying to remake the world in a more desirable image. This is understanding what facing Gaia means, as Gaia, however she is called, is coming to show this Modern view of the globe as smashed—never viable, and we will need all the kin we can to move with, make contact, and take refuge with her. Isabelle Stengers suggests that these things and more may help us:

None of this will appease Gaia, but might help with a less barbaric future. Naming Gaia, confronting stupidity, paying attention, honoring divergences, creating artifices might be a recipe or an algorithm … for mitigating the barbarism to come.\(^{252}\)

\(^{252}\) Wark, *General Intellect*, quoting Isabelle Stengers.
The tao, the eternal tao,
—if you had but one taste—
can only point you
at the very beads
that must be
counted.

Walk with my foot-tongue and your sense will know that I speak—of greater pastures where the cow has been and the moss is sweet.

253 Ginny, “Snail Song.” Hanami, or Japanese cherry blossom viewing, has inspired my katatsumurimi, or snail viewing, as a practice of seeing and aligning with the snail’s view. The Japanese text here refers to a children’s song in Japan about snails. One translation suggests:

Snail, snail, your head, where did it go?
Pull out your antennae, pull out your spear,
pull out your head.
Snail, snail, your head, where did it go?
Pull out your antennae, pull out your spear,
pull out your eyeballs.

See also: 動く絵本, “かたつむり,” YouTube, 2015.
https://youtu.be/Ew4F9RB9e7I.
CONCLUSION: “I HAVE NO IDEA. IT MERELY PLEASING ME TO BEHAVE IN A CERTAIN WAY TO WHAT APPEARS TO BE A…”  

What I have tried to transmit through these pages, especially in a Latourian sense, is a different viewpoint. This snail’s view accomplishes something that transgresses our current practices and beliefs: of what a thesis should be, of how academia, science, and religion should be, of how being and belief should be reproached, reapproached, retraced, and recomposed.  

The advent of the Anthropocene, Cthulhucenes, and the hopeful transformation of the Capitalocene shows us the disparity and despair, displacement and denigration, on our planet with how current Modern practices have left many collectives and entities bereft of the benefits of Modernity’s claims. Apocalypse is not inevitable, nor even probable in the totality of its immediacy or destruction; as Ursula Le Guin reminds us, “its power seems inescapable—but then, so did the divine right of kings.”  

This snail view passed through the inspirations of Gaia, from Lovelock, and an inclination to intuition in questioning the reductionism of forms of science and academia. The hypothesis-theory’s reception, its reiteration and resistance towards defeat, even after fifty or so years, makes the view of Earth as a living organism resilient.  

But not without caveat and caution.  

There are problems with wholes and parts, within language and belief, in how we compose our vital communication, and how we view and enact and simply be in the world. These are imperfect and improprietous tools—language, symbols, science—and indispensable all the same.  

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If we have separated and objectified, sliced through a Gordian knot we knew not how or when, it is likely we have never been without this peril at the doorstep. This spectre of duality and negligence, the fallacy of memory, the compel of feeling and freedom, is a constant companion.

Latour and others bring methods of retracing those steps, given a hope, towards some solution that will bring us, home and hearth, together. But not as it was—there never were—and not as it should be, for that will not accommodate those that are actually here.

Is there hope for our modern minds, addled with smartphones and smartbombs?

Will our hybridized nature/cultures make room for the hungry, the many, the displaced and destroyed machinations of this Anthropocene?

A reorientation is needed, a return to practices, contemplative and pedagogical. We must touch the Earth, if for no other reason that it was important at times to do so, but mostly because it reminds us of our house. And we have taken poorer care of it than we should. We must see our ecologies everywhere, the power they have and demand to be endorsed, honored, and engaged. These are voices of our ancestors, colonizer and colonized, that must be reconciled—a treaty long abandoned and ignored with our families, brethren, and compatriots.

Taking the slow road, the contemplative measure, even if it cannot be easily named and understood, is worthy and generous of effort invested. By spending time with the gaps, we span the gaps; by focusing on the heart, there is healing done. Not all gaps can or should be filled, but their awareness, their voice and visibility made, is a service, a reciprocity, and a necessity. It prepares us for death and life and death and life and what gaps there are between.

We loop and spiral, slog and dance; inward we go to be out, here, now, dancing, slogging, drudging, and mucking.

If you see any planets go snailing by—be reminded of the mirror—of the matters and multitudes inside each and everyone.

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SNAIL TIME

Please take the time not to step on the snails not because it matters for the snails (though it matters for that one) but because your steps will be careful, and you need not learn or add to the cringe of killing and of absentmindedness.

The steps you can take mirror the snails’ shimmering, glistening, coruscating swirls that could fill unrelentingly the chapters of a dance manual never finished.

Please don’t step on the snails, we are fragile and take a long time to move anywhere and when you look for us, keep your eye on us, for we only move slowly while you watch —and then are gone under verge and moss and mud, for we are tiny, and some of us race, trace a pavement only sprites could use, and just as ephemeral in the rain.

Our glide guides as glue, we are always the smallest creatures holding the world together, and we have been here longer, contacted with this ground, and you will miss us in the quickness of your gait.

But you must see us as everyone ever stepped on; though we have shells, they are thin protections—remember our power together—dancing— is more invulnerable.

And like the old poet said, we climb but slowly, slowly, the same sacred mountain as you do.

259 かたつぶりそろそろ登れ富士の山
katatsuburi soro-soro nobore fuji no yama
- 小林 一茶 (Kobayashi Issa)

258 Published in Prism, Spring 2018, OSU etc.
259 Translations vary. notable are: R.H. Blyth, Matthew Gollub, Kai Falkman, & haikuguy.com.
we glide on surfaces, the limits of tentacles, only burrow so deep, we can only be.

Figure 7: Snail

BIBLIOGRAPHY


NASA Johnson Space Center. “Blue Marble.”


https://doi.org/10.1007/978-3-658-10166-4.


http://www.chronicle.com/article/Graduate-School-Should-Be/245028.


APPENDICES
Please see Latour, *Politics of Nature*, pg. 237, for a more complete description of his terms of art and use there, of which most of these are directly borrowed. As with all such complex terminology and theory, I have attempted to use these terms consistently unless otherwise noted in the text—but even that is difficult at times. Thank you for your effort.

**Actor Network Theory (ANT):** A methodology of Bruno Latour and Steve Woolgar to reassemble and retrace the coordination of entities, actors, and actants that can have effect on each other. Each new orientation and tracing of a network then redefines and presents a new theory as to whatever the network comprises. This could be as simple as the network of atoms that constitute a hammer, or as complex as a human, a Fortune 500 company, a continent, etc.

**actors, actants, and entities:** These terms are largely interchangeable. Actors or actants are any process or object that may cause an effect to any other process or effect. Entities can sometimes be assumed to living actants—human or non—but especially in the discussion of Gaia, entities of atoms, stones, bugs, humans, and well-traced ecologies and biomes may all count as actants or entities. The construction of that network or relationship of effect is key.

**Institutions:** Most nouns that are capitalized that you might not expect to be capitalized are nonetheless treated as proper nouns in this way, and are thus some kind of institution. Moderns and Modernity is an institution of many networks, entities and actants, and habitual patterns of some consistent sense (or at least for the purposes of argument). Nature, Culture, Science, Religion, Providence, Gaia,

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are all important institutions that must be examined and reexamined in order to continue their presence.

**amodern, non-modern, and post-modern (and their -isms):** A-modernity and non-modernity refer to Latour’s sense in *We Have Never Been Modern* that the Modernist bifurcation of Nature/Culture never truly occurred, and thus “we” cannot even be post-modern. Postmodernity is a critical discourse community examining often similar theories, but from slightly different perspectives on modernity (see Derrida, Deleuze, Guattari, and Foucault for much more). Postmodern and modern can also refer to time periods and art periods, or merely the contemporary and present-day, which are avoided here as much as possible.

**Constitution:** A constitution here is a much broader sense of what makes up a thing (see “subjects and objects” below). Constitutions can describe a kind of institution, a network, or a system that distributes and codifies the kinds of entities and activities that are considered included in that collective. These constitutions determine and define how people and things are defined for that collective, what subject and object are, the network structures that may be possible, and what can be inside and outside of those institutions. Science, Religion, Law and Politics all have distinct constitutions that may define and categorize their collectivity and their activity in different ways, especially as relevant to a discussion of Latour’s theories here.

**Nature and nature:** Primarily, the instituted form of Nature as an epistemology of understanding the world through observational and externalizing Science is used here. To Naturalize, as Latour puts it, is to make external, deanimated, and ignore or paralyze the politics from a situation. Small 'n' “nature” can still be used to give the sense of something’s original character, but often, even that, when further examined, ends up being a complex construction requiring retracing and recapitulation. This lends to a rather tricky minefield of discussing reality and its
understanding and construction, which is much of the point.

**Science and science:** In some parallel to Nature/nature, Science is the institution, people, construction of knowledge, and participation of those practicing the techniques and methods employed by the sciences toward knowledge production. Big “S” Science must eschew political matters in order to unify Nature in such a way as to make it a form of Providence and ultimate, unquestionable truth.

**subjects and objects:** In a Latourian context, subjects are typically the role of humans in a Modern context, objects anything non-human remaining. But as the hybridity of reality, indeed any ecological system, seems to suggest, many actants and entities have subjectivity unrecognized and depoliticized. In Latourian ANT and AIME frameworks, subject-object hybrids become “quasi-” depending on how a network or institution can be examined to be treating them as subject or object while still recognizing the potential and likelihood of their subjectivities, activity, and further constitutional status.
TABLES: “SCIENCE HAS ACHIEVED SOME WONDERFUL THINGS OF COURSE, BUT I’D FAR RATHER BE HAPPY THAN RIGHT ANY DAY.”

Cosmographic Relations: Nature & Religion

Questions on defining cosmograms of social groups:

- By what *supreme authority* do they believe they have been convoked?
- What limit do they give their *people*?
- What *territory* do they believe they are inhabiting?
- In what *epoch* are they confident they are living?
- What *principle* of organization distributes agency (a principle that [Latour] shall call its *cosmogram*)?

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### Cosmograms

<table>
<thead>
<tr>
<th>“Natural” religions</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Science</td>
<td>Religion</td>
</tr>
<tr>
<td>Nature-1 (People of Nature) (epistemological)</td>
<td>Religion-1 (People of Creation) (counter religion-1)</td>
</tr>
<tr>
<td>Diety(^{264})</td>
<td>Laws of nature</td>
</tr>
<tr>
<td>Cosmogram</td>
<td>External</td>
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<tr>
<td></td>
<td>Unified</td>
</tr>
<tr>
<td></td>
<td>Deanimated</td>
</tr>
<tr>
<td></td>
<td>Indisputable</td>
</tr>
<tr>
<td>People</td>
<td>Everyone</td>
</tr>
<tr>
<td>Ground</td>
<td>Off the ground</td>
</tr>
<tr>
<td>Epoch</td>
<td>Radical break (blind cause)</td>
</tr>
</tbody>
</table>

Table 1: “Natural” Religions, from *Facing Gaia*, Table 5.2\(^{265}\)

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\(^{264}\) Diety here represents that to which each mode of existence will give unquestionable authority.

<table>
<thead>
<tr>
<th>Terrestrialization</th>
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<tbody>
<tr>
<td>Science</td>
<td>Religion</td>
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<tr>
<td>Nature-2</td>
<td>Religion-2</td>
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<tr>
<td>(People of Nature)</td>
<td>(People of Creation)</td>
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<td>(anthropological, critical)</td>
<td>(counter religion-2)</td>
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<table>
<thead>
<tr>
<th>Diety</th>
<th>Multiverse</th>
<th>God of ends / ends of God</th>
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<td>Cosmogram</td>
<td>Internal</td>
<td>Local</td>
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<tr>
<td></td>
<td>Multiple</td>
<td>Multiple</td>
</tr>
<tr>
<td></td>
<td>Animated</td>
<td>Animated</td>
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<tr>
<td></td>
<td>Controversial</td>
<td>Interpreted</td>
</tr>
<tr>
<td>People</td>
<td>Scientists</td>
<td>Church</td>
</tr>
<tr>
<td>Ground</td>
<td>Attached to networks</td>
<td>Embodied</td>
</tr>
<tr>
<td>Epoch</td>
<td>Multiple temporality</td>
<td>Reprise</td>
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Table 2: Terrestrialization, from *Facing Gaia*, Table 5.5

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<td><strong>Counter-Religion one</strong></td>
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<td><strong>Deity</strong>&lt;br&gt;Laws of nature</td>
<td>Ordering God</td>
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<td><strong>Cosmogram</strong>&lt;br&gt;External&lt;br&gt;Unified&lt;br&gt;Deanimated&lt;br&gt;Indisputable</td>
<td>External&lt;br&gt;Unified&lt;br&gt;Overanimated&lt;br&gt;Indisputable</td>
</tr>
<tr>
<td><strong>People</strong>&lt;br&gt;Everyone</td>
<td>Everyone</td>
</tr>
<tr>
<td><strong>Ground</strong>&lt;br&gt;Off the ground</td>
<td>From another world</td>
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<td><strong>Epoch</strong>&lt;br&gt;Radical break</td>
<td>Radical break</td>
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</table>

Table 3: Comparison Chart, from *Facing Gaia*, Table 5.4

\[^{267}\text{Latour, Facing Gaia, 181.}\]