

Introduction

What a fool believes is that the rock will actually ground you. Elements-as-fundamentals trigger beginnings, catalyze arrangements that resist totality, open never-ending archives, labyrinthine libraries of the not-quite-read.

—Cohen and Duckert, “Eleven Principles of the Elements”

Air fills the thorax; ten liquids circulate through the vessels and pores; fire sets the heart, the genitals and the brain ablaze; the humus models the human. How can we live without or against the four elements, without thinking like them, without turning toward them, into them, through them, for them, with them?

—Serres, *Biogea*

October 2019. After working with and against the city of San Anselmo through a two-year building permit process, the home renovation was finally underway. The contractors had just started their work. They had demolished our deck, opened up the old master bedroom to the elements, and started to build the wooden frame that would soon support the new addition. I felt a sense of relief and purpose: this addition would give much-needed privacy to overseas guests staying for a number of weeks at our home, and it would give our daughter the private bedroom that she had so long wanted. But this sense of relief and optimism was clouded by news of a fire burning acre after acre north of us in Sonoma,¹ a fire that sent dangerous amounts of smoke wafting into our air. Winds picked up, and, as a precautionary measure to sparking more fires amid extreme

drought conditions, the Pacific Gas and Electric Company (hereafter PG&E) announced it would cut off power. Our home was partially demolished and now powerless. The air quality index turned from orange to red. The carpenter could no longer use his power tools, so he stopped coming. The elementary school closed.

I recall one distinct scene of that time. We had just fled to San Francisco to exchange the smoke and skeletal remains of our powerless home for a breath of clean air and the comfort of a friend's apartment. But even there, at the playground in Golden Gate Park, a sense of being unsettled was inescapable:

Does the air know walls? I asked myself as the smoke from the fire thickened the air
and filtered the early rays of sunlight, the cypress trees turning opaque.
The lightness of children's play now intermingled with labored breathing.
The Golden Gate shutting on futures for play, breath, life.

Ultimately, the Kincadee fire burned about 77,758 acres and destroyed 374 (residential and commercial) structures.² Our own home was never in the direct path of the fire, and, after the temporary stay at our friends' home, we were able to return safely to our home, which, by then, had regained power.

By the conventional account, we came out fine. I did not lose anything in particular. Our home renovation was even able to continue as it had before. It was a stark contrast to all those who did lose their homes and who would never be able to rebuild. Nonetheless, something didn't return to normal for me. I felt a profound sense of loss and disorientation, made even more unsettling given that I was *fine*. A series of questions constantly ran through my mind: Why is it that PG&E's electric wires are not more fire-resistant and can even *start fires*,³ and how can it be that a wealthy state such as California has so poorly invested in its infrastructure that the only way out of a crisis is to cut power and close schools? Why do schools not have the wherewithal to support their students, to grant them shelter and to continue to provide learning in fire-resistant buildings? How can I carve out a future for my family in a time and place where trust in the environment and the infrastructure that orients lives (power grids, schools, etc.) is collapsing?

As my current self looks back upon the sense of loss and disorientation I felt then, in 2019, and all the questions it invoked, I realize

that my inability to grasp the source of loss at that time led me on the course of writing this book. For, reflecting upon this experience of loss, I started to uncover and write about a kind of loss that lies beyond that of discrete things, beyond the loss of the animals, plants, homes, and other structures that were ablaze.

During my research, I began to understand that such discrete and individual losses are actually part of, and enabled by, a background structure. To illustrate what I mean: in megafires as I experienced them, losses of property or endangerment of species affected by megafires (such as the long-toed salamander) capture our attention from the scale and gravity of the loss. But what remains outside the usual purview of our attention and cultural consciousness is the broader context within which such megafires have come into being and can instigate loss. In the case of Californian megafires, we could point at the larger social-ecological constellation that has included factors such as fire suppression, industrialization and the rise of industrial fire, and property regimes associated with human liberty. As the world presented itself through smoky air, a powerless home, and shuttered homes, it also, upon reflection, offered a deeper disclosure of what is usually hidden, namely those broader social-ecological parameters within which we have come to orient ourselves toward and in which we call ourselves “at home.”

Thus, what I have realized in writing this book is that the loss I experienced in 2019 was not oriented around discrete things being lost but had to do with shifts to these broader social-ecological constellations, to my sense of meaning-making in the world, and with the incremental inability of my cognitive and affective habitus to grasp the world and find intelligible and sentient orientation in it. It is my claim throughout the course of this book that only when we adapt and sharpen humanity’s cognitive and affective habitus can we gain traction on current and future upheavals and thereby carve out, with trust, trajectories that build sustainable futures.



The structural social-ecological parameters within which humans have come to orient themselves in the world is what I call, in this book, *the elemental*. And it is this, in combination with the felt sense of loss just described, that gives this book its title. As a scholar and writer trained

in ancient philosophy and twentieth-/twenty-first-century continental and environmental philosophy, I have found that the theme of *the elemental*—particularly the elements of water, fire, air, and earth—can offer both synthetic clarity and material consolidation to accessing and explaining both the social-ecological structuring of the world (including its ontogenetic possibilities) and the felt sense of loss in times of anthropogenic climate change.

The three words of the book's title, *Beyond Elemental Loss*, are meant to give voice to the three main aims of this book. First, I want to fashion my own account of the *elemental* from what have been historically known as the classical "elements" (derived from the Latin *elementum*, as translation of the Greek *stoicheion*⁴) that have been sites of thinking from ancient to contemporary philosophy. Second, I want to argue that the unsettling felt loss experienced as part of contextual shifts, and as currently experienced in times of anthropogenic climate change, is a result of our incrementally increasing inability to cognitively or affectively render intelligible the shifts happening to these social-ecological parameters that structure the world. The sense of loss that is experienced gets at the core of who we are as habitual beings and is thus nothing but fundamental and thus *elementary*. Third, I argue that by adapting and sharpening humanity's cognitive and affective habitus through what I call "elemental trust," we can enable more sustainable futures and, thus, move *beyond* elemental loss.

When I speak of the elemental, I use it as a concept inherited from ancient Greek thought (and particularly the Presocratics) that finds renewal in twentieth- and twenty-first-century continental thinkers such as Bachelard, Sallis, and Irigaray. The appeal of the elements of water, fire, air, and earth is that they entail both very particular aspects—for instance, air is this *particular breath* I am taking—and that they are involved in co-constituting the broader world or *kosmos* we participate in—for instance, air is always a shared part of a common atmosphere co-inhabited and co-constituted by other beings. As I engage in this tradition of thought, I want to argue that the elements are not fixed, ahistorical natural entities, as scholars such as John Sallis have argued.⁵ Rather, in my view, anthropogenic climate change is making it clear that ecological constellations are also social-historical constellations and are subject to change. Said otherwise, for me *the elemental is a social-ecological constellation that is holding and generative of many forms of beings: it is both subject to diachronic flux—enabling historical transformation—and*

open to synchronic interaction and co-creation. I maintain that there is value in following the traditional understanding of the elements as synthetic crystallization points of our material world and to thinking of the elements in terms of four distinct and yet interconnected ways: water, fire, air, and earth. Simultaneously, however, I am reconceiving of the elemental as an ecological constellation entailing and enabling the ontogenesis of a heterogeneity of organic and inorganic beings, arguing that this constellation is subject to social and historical changes and intervention. Since it combines both so-called ecological and social factors, I conceive of the elemental as a social-ecological constellation.

In writing about the elemental, I appeal to the classic Western tradition that holds up the four elements of water, fire, air, and earth, which allows me to engage with the historical trajectory along which the elemental has traveled, along which we may discern infinitesimal changes in our relationship. However, I also appeal to other traditions (e.g., the Californian indigenous Miwok, or indigenous song and dance from the Caribbean island of Curaçao), as I am not maintaining a classificatory Western system of the elements but build out my own sense of the elemental with the goal of having the elemental speak toward our own contemporary moment. Precisely because the elemental holds the capacity to think through the co-emergence of beings at the level of the constellation or sphere, is it well suited to move us away from thinking of loss in term of individuated beings toward conceiving of loss in terms of infinitesimal and diachronic changes involving transformed relational constellations.

Accordingly, what I argue for in this book is that the elemental—as an ontogenetic and temporalizing ecological constellation—has been undergoing gradual and infinitesimal changes, due to human influences, and those changes have been mostly invisible to human perception until now. However, ultimately, these gradual changes have had a profound impact on the way the world presents itself to us, for instance, in the current form of massive species extinction, acidification of oceans, and climate emergencies such as flash flooding, extreme droughts, and so forth. These kinds of radical and drastic environmental changes are not the main subject of my argument on loss; however, I argue that these kinds of changes can, ultimately, be understood against the backdrop of incremental changes to the flux space of the elemental. Understanding this backdrop does not deny the need for specific climate action or other climate initiatives but redirects our focus toward the broader interface

within which we live, and the abilities we as humans have to intervene and change our habitus within the elemental. Since this book crosses a wide range of lived experiences and tracks our relationship to the elemental over time, it offers a broader look that may precisely enable and inform a new habitus and, with that, may uncover new potentials for climate politics and affective engagement.

Thus, contemporary climate crises can be understood as consequences of changes to the conditions of the possibility of social-ecological co-emergence, that is, shifts of the elemental ontogenetic constellation. And it is due to our inability to relate to this “new normal” social-ecological presentation of the world with our usual cognitive or affective habitus that we find ourselves suffering from feelings of loss and disorientation. The final step in my argument in this book is to argue for the importance of transforming elemental loss into elemental change. In order to bring about such transformation, we need a solid epistemological grasp on the conditions of appearance and expression of the elemental. Only when we understand the various aspects of the elemental (its natural-scientific aspects, its social-historical dimensions, its narrative reconstruction in mythology and ideology, its lived phenomenology, etc.) can a sense of trust in the elemental be reinstated. It is my argument that reinstalling trust can set in motion the transformation from elemental loss to elemental change. Ultimately, I claim, we need to adapt and sharpen humanity’s cognitive and affective habitus to carve out future trajectories embedded in trust, especially in light of current and oncoming climate upheaval.

FORMULATING A THEORY OF INFINITESIMAL LOSS SUITED FOR TIMES OF CLIMATE CHANGE

Philosophical theories of loss are traditionally formulated around individuated beings. Starting with Plato’s *Phaedo*, we find a well-known philosophical articulation of loss that ponders loss in terms of the loss of the person Socrates. The *Crito* tries to give various names to the loss—what would be lost in Socrates’s death is a friend, a father, a philosopher, and a teacher. From Plato on, we find more articulations of loss, similarly thematizing loss in terms of individual beings (e.g., in St. Augustine’s *Confessions*, where he mourns the loss of his mother Monica).

In twentieth- and twenty-first-century continental thought, such thinking of loss in terms of discrete entities remains strong. For instance,

Martin Heidegger's *Being and Time* addresses loss in terms of our own death, a death, however, that is fundamentally one's own and in relationship to which one may seize upon one's own innermost possibilities.⁶ However, we also find in this same twentieth- and twenty-first-century continental thought other thinkers who stress the relational and contextual nature of loss. For instance, Hannah Arendt, in *The Human Condition*, builds upon, yet thoroughly reinvents, Heidegger's concept of being-in-the-world, by socializing it and diagnosing its dissipation in mass society: "The world like every in-between, relates and separates men at the same time. The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, *but the fact that the world between them has lost its power to gather them together, to relate and to separate them.*"⁷ As Arendt has it, modernity underpins the experience of the *fraying of* connections of the public world, dismantling the power of gathering, leading to loss in the sense of world. On a more interpersonal level, Levinas argues that we are always haunted by the loss and death of the other, and that such loss shows a commitment to a very specific, individuated other whom we lose—another with a truly human face, vulnerability, and claim for respect.⁸ Another thinker worth mentioning in this regard is Martin Buber, who sees the world as lived between human beings as a relational world, established by the I-Thou;⁹ the loss of loved ones thus implies the loss of such relationality.

In their work on loss, Judith Butler builds upon these ideas of relational loss as articulated by thinkers such as Buber, Arendt, and Levinas, arguing that loss confronts us with a relational sense of being that precedes and goes beyond individuality. Butler writes: "Perhaps what I have lost 'in' you, that for which I have no ready vocabulary, is a relationality that is neither myself nor you, but the tie by which those terms are differentiated and related."¹⁰ Rather than thinking of loss in terms of individuation, loss here is formulated in terms of severed ties preceding the formation of our identities. Butler, in this formulation of grief, also returns to Freud's analyses of mourning, who, in his later writings, came to realize that mourning *can and should* include a living desire to restore the lost object, such that the "essential" task of mourning actually should be the inclusion (or "incorporation") of the lost object.¹¹ This implies that Freud, in his evolving theory of grief, came to acknowledge the enduring

(“infinite”) presence of loss and the acknowledgment of traces of loss that continue to undermine an autonomous sense of the present self.

However, it is my argument that current crises such as the climate crisis and the Covid-19 crisis challenge existing formulations of loss, even when they are inclusive of Butler’s formulation of loss as involving the loss of a relationality preceding individual bonds. To focus first on Covid-19: While Covid-19 has caused the deaths of millions, the pandemic showed that loss does not just pertain to the loss of *one* being, beings, or their relationality. Suddenly, amid the lockdowns, entire lifestyles changed. Old habits broke and were lost, and entire communities dissolved. Moreover, certain communities proved more vulnerable than others based on social-economic, gender, and racial realities and accumulated vulnerabilities that had been built, slowly and incrementally, over time.¹²

In *What World Is This?* Butler grapples with understanding these shifts, seeking to understand them in terms of “world” and possibly a “common world” where the tragic, following Scheler, is occasioned by events but cannot be reduced to an event, and where grief is not singular but is understood in terms of an “atmosphere,” which tells us something about the world itself.¹³ Covid-19, thus, as Butler words it, makes us feel a “looming world of loss.”¹⁴ This also resonates in the work of psychologist Pauline Boss. Covid-19, she argues, has confronted us with a form of ambiguous loss that did not just include loss at the level of the individual or the family but extended to “a local community, or the global community.”¹⁵ Thus, the pandemic underlined the presence of ambiguous losses, which, in Boss’s words, “are ubiquitous but rarely acknowledged because they are difficult to see, even by those of us experiencing them.”¹⁶

If we turn to the climate crisis, which, scientists argue, is correlated with the rise of pandemics such as the Covid-19 pandemic,¹⁷ a comparable and arguably even more poignant claim about the prevalence and meaning of ambiguous loss can be made. While it is certainly the case that anthropogenic climate change is currently threatening the loss of at least 26,500 species, and that climate-change-induced phenomena, such as excessive heat, have caused, in 2022 alone, the loss of lives of fifteen thousand people,¹⁸ the experience of loss seems not only larger than even the sum of those parts but also qualitatively different. Having been trained to think of reality as the sum of all individuated parts has meant we find ourselves *unfit* to address an existential ecological crisis of loss that seems to go beyond the sum of such parts. Donna Haraway, in *Staying with the*

Trouble, glosses this issue this way: “What happens when the best biologies of the twenty-first century cannot do their job with bounded individuals plus contexts, when organism plus environments, or genes plus whatever they need, no longer sustain the overflowing richness of biological knowledges, if they ever did?”¹⁹ Neither in life, as Haraway argues, nor in loss then, as I argue, does the focus on individuation-cum-context uncover the fundamental dynamics of ecological communities. This, then, has been one of the driving forces to start this project. Over and against the notion of individuated loss, I propose the notion of *ambiguous, elemental loss*—that is, *felt loss that does not emerge as (a) a synchronous event, or (b) as pertaining to one individuated being, but that, instead, involves (c) infinitesimal and diachronic changes that, over time, come to change the conditions of the possibility of the elemental.*

Inspired by cultural theorist Lauren Berlant’s thinking on the slow, incremental, and day-to-day changes that lead to “slow death,”²⁰ I seek to show that a well-rounded account of ephemeral environmental loss needs to pay attention to its temporal, historical conditions. This has implications for grief. Where a singular event involving loss may jolt us into an abrupt sense of grief that centers the subject, unfolding from a synchronic snapshot of time, the meaning of grief alters when such grief traces minute historical changes building up diachronically, one at a time, with changes ultimately affecting not just one subject but many, finally translating to and informing a sense of elemental loss. It is in this regard that I find Glenn Albrecht’s notion of *solastalgia* helpful in terms of thematizing the kind of (slow) grief that elemental loss brings about. The term “solastalgia” is formed from two roots: solace and desolation. The Latin suffix *algia* is added to designate pain.²¹ Albrecht defines solastalgia as “the homesickness you have when you are still at home.”²² This new form of mourning is “connected to negatively perceived and felt changes to a home environment, changes that one is powerless to prevent.”²³ For Albrecht, “solastalgia defines the existential, lived experience of the loss of value in the present as manifest in a feeling of disorientation, of being undermined by forces that destroy the potential for solace to be derived from the home environment.”²⁴

With this, we enter into the question of how to formulate an epistemology that can track such infinitesimal changes in our world, an epistemology that is fit to embrace the flux of the world while holding on to crucial notions such as *home, home environment, or orientation.*

ARTICULATING AN EPISTEMOLOGY THAT CAN
 FOLLOW THE CONTOURS OF CHANGE UNDERGIRDING
 AMBIGUOUS ELEMENTAL LOSS

Alongside the impetus to formulate a new theory of loss is the need to formulate an epistemology of change that can follow its contours. Especially when we talk about something like environment, nature, or life, such an epistemology is badly needed. Returning to an early formulation of nature (*physis*) in Aristotle, we find an account of nature based on the assumption of an underlying substance that remains the same throughout various changes.²⁵ Where Aristotle does admit modifications, he traces it in the activities (*energeiai*) or *actualizations* (*entelecheiai*) of such substances, allowing for the idea of natural beings to come into their own or, as I have put it elsewhere, for nature to “fold back upon itself.”²⁶

This prevailing notion, that nature, life, biology, turns around static substances that are what they are, fits with a notion that sees all of reality in terms of being rather than becoming. It fits with the aforementioned notion of individuation, insofar as that similarly sees life in discrete parts, distinct from each other, with each one being the source of its own agency. However, this view cannot do justice to life as it co-emerges together with others, in direct symbiosis and productive of affective engagement and becoming in the interface with that which touches it. Versus predominant accounts that see life in terms of insular agency or being, I therefore proposed, in my 2020 book entitled *E-Co-Affectivity: Exploring Pathos at Life’s Material Interfaces*, to use the term “e-co-affectivity” to underline that life is to be understood as ontogenetic affectivity, coming into being alongside others (*co-affectivity*) within a context or home (hence *e-co-affectivity*).²⁷

The theoretical underpinning for my emphasis on co-affective ontogenesis can be found in the conceptual framing of the middle voice, which allows focus on affectivity and life beyond the ontologies of being active or being passive, thereby rethinking motion in terms of a dynamic and flexible co-affective ontogenesis of the in-between.²⁸ With appeal to thinkers such as Gilbert Simondon, and employing a method of deconstructively reading Aristotle’s categories (through what I call “categorical contamination”), I have tried to argue that life is always a place of relational affective becoming.

With this focus on relational affective becoming in the background, *Beyond Elemental Loss* continues to employ epistemologies of change and, in particular, seeks to gain traction on the ontogenetic space within which

life and loss emerges, in combination with philosophical considerations of the cultural transmission of concepts. For instance, in thematizing the loss brought about by earthquakes (discussed in chapter 4), I sketch various theoretical frameworks that build upon each other, starting with Homer and Hesiod, through Aristotle, Kant, and Voltaire, culminating in the theory of contemporary plate tectonics. In diagnosing various shifts in conceptual frameworks (e.g., from external balance to internal orientation), I seek to offer insights into a contemporary world that is increasingly shaky, both literally and metaphorically. Said differently, in this book I call to mind the historical and theoretical transformations informing our relationship to the ecological world, not merely for reasons of theoretical interest, but in order to shift our concern for, and our care of,²⁹ the ecological home of which we are part. In my view, it is precisely the elemental, as a social-ecological constellation that has been historically conceptualized and that needs to be deconstructed for the present, that can help us to think through this question of forming an epistemology of change and loss in times of anthropogenic climate change.

HOW THE ELEMENTAL AS A SOCIAL-ECOLOGICAL CONSTELLATION THEORETICALLY DECONSTRUCTED FOR THE PRESENT HELPS US TO THINK THROUGH FORMING AN EPISTEMOLOGY OF ECOLOGICAL CHANGE AND LOSS

In my effort to redefine the elemental, I appeal to three intersecting methodological pathways that inform my own epistemology: (1) the classic, Presocratic understanding of the elements, offering access to thematizing the elements in an interscalar, material way; (2) John Sallis's Heideggerian account of the elemental as a choric space of appearance, opening up to a view of the elemental as necessary background condition; and (3) Sloterdijk's account of micro and macro spheres, allowing for a sense of the elemental as a space in which we find ourselves, and which we co-create, combined with Irigaray's account of our embodied existence enabled by the elemental. Building upon these three conceptual pathways, I argue that the concept of the elemental is crucial to fashion a contemporary epistemology and ethics that can deal with infinitesimal loss in times of anthropogenic climate change.

From this point, I argue for reconceiving the elemental as a social-ecological constellation that is holding and generative of many forms of beings: it is both subject to diachronic flux—enabling historical

transformation—and open to synchronic interaction and co-creation. Instead of static and atemporal, the elemental is viewed as an ontogenetic space of flux. This space of flux is currently, under the pressures of the Anthropocene, a space of incremental (and often problematic) changes that have major effects across various scales, leading to a sense of loss, both within the realm of the material-causal and logical-semantic. To investigate this site of incremental change by way of the elemental allows for grasping loss both on the microlevel (e.g., in terms of the extinction of particular species) and on the macrolevel (e.g., grasping the broader economic and technological forces that engage the earth and increase earthquake risk). The elemental thus ideally serves as an explanatory matrix for grasping various senses of loss without giving up on thematizing the broader ecological-social constellation of which we are part.

The Presocratic Elemental: Perceptive Crystallization Points Amenable to Interscalar Connections

Without focusing on one Presocratic philosopher in particular, I use some of the general content from the Presocratics to extract and radicalize ideas useful for my own analysis. For the Presocratics, the world as we see it includes material changes in the way an element presents itself, and they afford key ideas on the formal principles that rule such material change. For instance, from ice and rain to steam and ponds, water can take on different shapes; still, there are underlying formal principles that rule such change. For Heraclitus, for instance, fire serves both as material flame and as a principle reflective of *logos*.

By looking closely at all (definite) particulars in our physical world, and thinking through what (indefinitely) unites them, various Presocratic thinkers arrived at different answers, ranging from water, to fire, to air, and to earth. As the Presocratic thinker Anaximenes already indicated with regard to air, this element is both particular—it “holds us together and controls us,” while air is also something that “surrounds” the entire world—and thereby holds a universal aspiration insofar as it not only constitutes one particular entity but co-constitutes the being of others, and, most importantly, the *kosmos*, as well.³⁰

What I would like to keep of the Presocratic engagement with the elemental is (a) its synthetic focus on the coagulation points within which

the material ecological world presents itself, enabling both organic and inorganic beings to emerge, and (b) theorizing this synthesis in four ways: water, fire, air, and earth. The explanatory power of the Presocratic elemental consists in its ability to offer a unifying synthetic material framework, while opening up to a wealth of concrete, distinct phenomena that are nonetheless part of broader networks.³¹ What I will not adopt from the Presocratics is their focus on an underlying, enduring *logos*, since this is not in line with the argued historical evolution of the elemental and our co-creative engagement with it.

As I reappropriate the Presocratic elemental for my own purposes in this book, I will stress this synthetic capacity, but I will underline that my account of the elemental also seeks to gain traction on (c) our lived experience, and (d) seeks to integrate heterogeneity and the meaning of contemporary scientific insights as well. To speak first to lived experience, since the four elements offer us a “description that crystallizes what is concretely perceptible,”³² the Presocratic elemental lends itself well to my own phenomenological engagement of the elemental, focusing on perception and lived experience. This is not to say that the elemental is not *more* than how we find it in perception or cannot be further unpacked through micro- or macrolevels; it is rather to say that humans do not know the elemental outside of their engagement in and perception of it.³³ And in thematizing their perception along four such coagulation points—water, fire, air, and earth—the Presocratics add a distilled, clarificatory lens that is both general and specific at the same time.

Moreover, speaking to my theorization of the elemental as a space that can integrate scientific studies of the material world, the elemental is both direct and concretely perceived and interacted with, yet also opens up to a broad scope of other phenomena, indexing the generative capacity of the elemental. As Stacy Alaimo helpfully writes: “Elements are not things, not objects or artifacts, but that which is the substrate for things, as well as life, to emerge.”³⁴ In that regard, elements cannot be easily objectified, since we, as humans, participate in them, just like many other organisms. Cohen and Duckert similarly emphasize the notion that elements can connect the human with the inhuman realm: “Earth, air, fire, and water, alone and in their promiscuous combinations, function within a humanly knowable scale while extending an irresistible invitation to inhuman realms.”³⁵ Thus, both Alaimo and Cohen and Duckert underline the notion that a turn to the elemental, hearkening back to the Presocratics, entails a turn toward

what may be called *interscalar* thinking. This includes room to investigate what Cohen and Duckert call “inhuman realms” or what David Abram words as “more-than-human”³⁶ dimensions.

It is precisely in the aforementioned ability to accommodate interscalar thinking that I seek to push my own conception of the elemental, reinventing the elemental to suit twenty-first-century scientific thought. In my view, there are further “microlevels” (atomic and subatomic) to the elements to be considered, and natural-scientific research can thereby further inform and supplement a Presocratic account of the elemental. In this regard, I argue that the elements of water, fire, air, and earth are not only in themselves elements that entail fluidity, but their origination is in itself also subject to dynamical patterns. While this is more obviously the case when addressing fire, it is also the case for other elements. For instance, scientists have postulated that air—as we currently experience it in our atmosphere—did not exist before and has a historical beginning point in cyanobacteria creating oxygen, followed by plants producing oxygen as well.³⁷ This means, for my articulation of the elements, that while I take the Presocratic approach to the elemental as a helpful access point to articulating elemental loss (particularly given the Presocratic focus on synthesis), simultaneously the Presocratic approach needs to be complemented by adding examinations of lived experience and contemporary material-scientific insights to accurately deepen and complicate the layers of concrete materiality within which we live.

Moreover, I view the elemental not only in terms of ecological materiality but as materiality subject to human interpolation, such that the elements have undergone changes in meaning, in impact, in expression, alongside human evolution. This theoretical move means that I hold the view that we *are produced and enabled by the elements yet simultaneously change them as we interact with them*. This entails that the elemental, while being more-than-human and having origins outside of our existence, never simply shows up “as it is” but always emerges alongside our perception and our evolution, and it is thoroughly informed by the social-political context within which humans live.³⁸ It is in this way of connecting the elemental to the human, and thereby to the political, that we can grasp the elemental both as more-than-human and simultaneously as a background condition receptive to social and historical transformation, as Stephanie Clare underlines.³⁹

As I reappropriate the elements to make theoretical space for their co-evolution along the lines of social-political human development, I will seek to address the role of human-caused changes in transforming

the elements. I will argue that political and economic regimes have informed the way the elements appear and impact us, thus inserting an indubitable human factor in our experience of elemental loss. Small and incremental changes over time have seemed to escape notice until now, in the Anthropocene, where they confront us with a marked sense of ephemeral, elemental loss.

Thus, in short, I adopt from the Presocratics the elemental as synthetic crystallization points enabling interscalar thinking, offering both unity and diversity across the ecological world. Simultaneously, I supplement this perspective with a focus on lived experience and insights gained by science, anthropology, history, mythology, and new materialism,⁴⁰ allowing me to add to the Presocratic analysis both phenomenological and contemporary scientific insights into lived experience, the emergence and composition of the elements, as well as social-material insights speaking to the dynamics of human evolution in relationship to the elements. Through this hermeneutic exercise, I seek to imbue the elemental with a new, creative spark, enabling revival and reconstitution of the elemental in times of ecological crisis and loss.

With and Beyond Sallis: Reengineering the Choric Space of Appearance to Accommodate Material-Historical Engagement

In positioning my account of the elements as including both a micro- and a macrolevel and in speaking to both the human and the “inhuman” realm, my approach both intersects with and departs from that of John Sallis’s Heideggerian interpretation of the elemental as the choric space of appearance. However, I want to revise and correct Sallis’s account of the elemental, since I want to move Sallis’s account in (a) a concrete, material rather than an abstract direction, and (b) seek to insert into the elemental a human/social role for interference that seems lacking in Sallis’s account. The latter would allow (c) an affective-reflective role for elemental trust to be discussed in chapter 5.

Sallis’s analysis convincingly shows that the elements are expansive and, phenomenologically, exceed our senses, thereby providing the notion that nature escapes the sum total of beings:⁴¹

The fourfold ἀρχή consists, then, of broad earth, open sea, damp air, and bright, uranic aither. It is from these four that all the things we now look upon have become manifest. Yet

these four, which constitute the ἀρχή of all things, are not themselves simply things; rather, they are elemental expanses within which or in the crossings or mutual limits of which things can become manifest—as when, illuminated by sunlight, an ancient temple set firmly on the promontory in the distance yet obscured by mist is glimpsed from out at sea.⁴²

At the same time, Sallis's attempt to make the elements responsible for the notion of (Heideggerian) divine unconcealment, speaking of the elemental in nearly transcendental terms addressing the “brilliance of their manifestness” in which all things “shine forth,”⁴³ obscures the effect of human action upon and interaction with the elements, and it thus forecloses upon the notion of elemental loss so fundamental to this book's argument: the notion that, through human-caused factors, incremental changes have been set in motion that have transformed and altered the meaning and the appearance of the elements. While Sallis still wants to hold on to the Romantic image of the stone-bound temple as obscured by mist, his account does not reckon with the destructive forces of climate change that may undo the mist and scorch the earth as the temple goes up aflame in the heat of wildfires. Thus, said in different words, the so-called “brilliant” immutable elemental, choric spaces of which Sallis speaks do not exist in an atemporal, ahistorical, transcendental condition, but are prone to shifts.⁴⁴

Hence, as Sallis addresses the enigmatic ever-expansive sky as the horizon of manifestness, his argument would suffer in the face of examining such openness for manifestness in the Anthropocene. For instance, if ozone were depleted from the sky, and plant and earth life would come to a full stop, nothing but manifestness itself is altered, thus highlighting the fundamental impact of the world of incidental, sensible changes upon the notion of the elemental as background condition.

Moreover, if contemporary phenomenological thinker Michel Serres is correct that the sky is immersed in “a space-time of communication,” traversed by messengers such as “planes, satellites, electromagnetic waves from television, radio, fax, electronic mail,”⁴⁵ then the elemental space of appearance itself is thoroughly humanized, transformed, and mediated. Similarly, if earthquakes, including those caused by human action such as through gas drilling, lead to vertigo and a radical sense of disorientation, then the elemental manifestness of our material conditions also radically stands to be altered. In a world in which anthropogenic climate change wreaks havoc on our planet, not even the notion of elemental excess and

manifestness is exempt from extinction. Together with our all-too-human flaws, the elemental too will be affected.

For these reasons, I seek to overcome Sallis's interpretation of the elemental, adding a more concrete, material-historical specificity to the elemental, while also inserting a distinct role for human interaction within the elemental. To fill in what I mean by this specific level of human interaction and co-engineering⁴⁶ of the elemental, addressing the broader cultural and ontological forces that produce our atmospheric and embodied conditions of living, I will turn to discuss how my account both implements and critiques Sloterdijk's and Irigaray's accounts of atmospheres and elements.

Reimagining Sloterdijk's Spheres and Irigaray's Elements to Theorize Embodied Participation in Elemental Constellations

My project on elemental loss uses aspects of Sloterdijk's spherology, particularly in Sloterdijk's helpful spatial theorization of place-making in the form of "spheres," such as bubbles—on the intimate microlevel of personal relationships—and foams—on the macrolevel of cultural, multicentered ways of living—postulating the engineering of co-created, air-conditioning atmospheres ("greenhouses") of existence.⁴⁷ However, versus Sloterdijk, I seek to dispel the purely "human-made" character of the constellations ("greenhouses") that he emphasizes. Rather, I want to intersect his project on spheres with that of the (natural-material) elemental as the Presocratics thematized it. For Sloterdijk, place and human coexistence are co-constitutive of each other:

An inquiry into our location is more productive than ever, as it examines the place that humans create in order to have somewhere they can appear as those who they are. Here, following a venerable tradition, this place bears the name "sphere." The sphere is the interior, disclosed, shared realm inhabited by humans—insofar as they succeed in becoming humans. . . . Spheres are immune-systematically effective space creations for ecstatic beings that are operated upon by the outside.⁴⁸

For Sloterdijk, spheres both create and structure human coexistence and are, vice versa, the products of such human coexistence. Subject to constant adaptation, spheres are "air conditioning systems in whose construction

and calibration, for those living in real coexistence, it is out of the question not to participate.”⁴⁹

The advantage of adding a Sloterdijkian viewpoint on spheres to my analysis of the elemental is that it provides a comprehensive notion of humanity’s role in the creation of place, home, and atmosphere. Where Heidegger focused on time, being, and solitary existence (particularly in *Being and Time*), Sloterdijk adds emphasis on place, becoming, and coexistence, thinking through the way our existence is always indebted to others, and to the co-creation of places in coexistence. This provides an important insight for my account of the elemental, as it can work to correct Sallis’s approach to the elemental by stressing the fact that the elemental is not simply a place of divine unconcealment or a gift of Being, but instead a space of elemental appearing that is informed by real efforts of formal design, technical production, legal support, and political molding.⁵⁰ What is worthwhile in Sloterdijk’s notion of spheres is his attempt to show that constellations are places we both find *and* build, and that we always have a mediated relationship to these spheres, as they are culturally and technologically created.

However, while Sloterdijk’s account of spheres is productive for my account of the elemental in terms of adding the social-technological mediation with the elemental, what is problematic is his negligence in discussing the ecological dimensions of the places that we live in. While his articulation of warfare and airfare indicates the ways in which humans have increasingly explicitly thematized, and transformed, air, the material-ecological condition of our existence, as well as the broader role of the elemental for our systems of co-immunity and coexistence, has been omitted from his discussion. For this reason, the account of the elemental as I offer it in this book can appeal to Sloterdijk, but this book will also use more ecologically oriented accounts to supplement his omissions.

In resisting Sloterdijk’s emphasis on the *mere* anthropogenic, or, in his words, “anthropotechnic” generation of our elemental spheres, Luce Irigaray’s thoughts on the elemental offer recourse, since she emphasizes both the ecological dimension of the elemental as well as the way in which we, as embodied, driven humans, are experiencing the elemental. For Irigaray, “the elements represent ‘natural matters’ that originate our bodies and lives as well as the environment and ‘the flesh of our passions.’”⁵¹ As Irigaray writes in her reflections on Nietzsche in *Marine Lover*: “Deeper than the solid crust you must now descend to announce the meaning of the earth. Remember what happens on the inside so that you can be sure

of where you are running on the outside. And realize that a solid plane is never just a solid plane. That it rests on subterranean and submarine life, on capped fires and winds which yet stir ceaselessly beneath that shell.”⁵² Irigaray is keen to point out the *elemental depth* that enables our embodied lives, referencing earth, water, fire, and air (in her words: “sea, sun, air, and earth”) that lie beneath the surface, enabling, informing, and transforming our lives. Just as Nietzsche’s mountains need a reminder of such elemental depth, at least in Irigaray’s view,⁵³ Heidegger similarly needs a reminder that his notion of being-in-the-world is, in the first place, one of elemental becoming, namely that of becoming “airborn”: “Going out of the mother, I come into the air, I enter into the world, and into the community of living beings.”⁵⁴ In pointing to the forceful *forgetting* of elementals such as air (in the case of Heidegger) or water (in the case of Nietzsche), Irigaray shows that Western thinking has emphasized human domination, initiating a path toward violence: “Nature in its elemental multiplicity is already bowed to the autarchy of a power: *physis* already opened up by and for man in accordance with his needs, or desires, to appear.”⁵⁵

Irigaray’s point demands underlining, in that it corrects Sloterdijk’s spherological point that the atmosphere can simply be owned or engineered: the elemental, for instance in the form of air, will always be a communal space open to others—both other human and nonhuman living others as well as other inorganic substrates that are part of our world. Irigaray’s access point also returns us to the strength of Sallis’s account of the elemental, in emphasizing the choric space of appearance, but Irigaray does so without Sallis’s problematic highlighting of the metaphysical gift of Being, rather stressing the importance of *beings* and their material, fluid, elemental ontogenesis.⁵⁶

This is not to say that I do not find certain aspects of Irigaray’s elemental problematic, such as her claims about the radical dichotomy between men and women, which is at odds with her claims regarding a shared and continuous elemental materiality.⁵⁷ Moreover, I need to distance my own account of the elemental from Irigaray’s tendency to appeal to dreams and imagination for theorizing the elemental.⁵⁸ Of course, this trajectory, of connecting the elemental to imagination and to the subconscious, can be worthwhile in itself and has an important scholarly philosophical predecessor in Gaston Bachelard,⁵⁹ who wrote that “the four elements [are] the hormones of the imagination.”⁶⁰ Moreover, as Bachelard clarifies the link between the imagination and the elements,

our imagination regarding the elements tracks and condenses the worldly reality: “They [the elements] help in assimilating inwardly the reality that is dispersed among forms.”⁶¹

However, versus Irigaray and Bachelard, my project is precisely *not* about pursuing the imaginary power of the elemental, not even when this imaginary elemental, according to Bachelard, tracks or assimilates the reality of the world. Since the point of gravity in my project is to discern the elemental in terms of the historically and culturally emergent ways in which ecology and society emerge, my focus will not be on the elemental as accessed through the imagination but on the elemental as materially informed and historically transformed through the *thick medium of culture and history* (which, admittedly, in that form may include cultural imagination⁶²). Thus, my point here subverts Marx’s claim, that matter produces ideology and culture, to argue that (cultural) historical mediation intersects with ecological factors to produce shifting meanings and appearances of the elemental.

Four Elements and Portals into Elemental Loss

The *structure* of the book follows the need for a situated focus on the losses I speak of, and traces the elements of water, fire, air, and earth. Accordingly, it is divided into four main chapters, which each analyze an element and a particular form of loss. The book begins by investigating loss as connected to oceanic extinction, migration, colonialism, and shifting relationships to the sea and its shores. The second chapter discusses fire and loss, and investigates fire both in terms of its mythological conception and in its current iteration as industrial fire and climate-change induced megafires. The third chapter is devoted to shared constellations of air, the engineering and creation of bad air, and the inequity of and rights to breathing good air. The fourth chapter is devoted to earth, earthquakes, and loss of equilibrium—this chapter asks the question of what is lost when the ground shifts, literally, and we find ourselves tumbling, disoriented, in need of orientation and recalibration.

Since the elemental in the form of water, fire, air, and earth includes such broad and deep terrain, I offer various *portals* into the elemental, moving from local aspects of the elemental to more global factors, thereby weaving together a philosophical story aimed at doing justice to the various layers of the elemental while opening up to the emerging sense of loss

that has come to pervade our relationship to the elemental. The particular portals offer, as historical instantiations, access to the elements; thereby they give access to a synthetic manifold while also seeking to speak to the historical and particularized nature of living with and in the elements.

For instance, in accessing the element of water, I start with the altered seashores and intertidal life on the coast of the province of Zeeland in the Netherlands, to then discuss oceanic extinction, tracing oceanic slave-trading from Zeeland to the shores of the Caribbean, trying to find oceanic languages that can revive opportunities in the liminal connections to the water that we used to call home. For the chapter on air, I have chosen the portal of illness, particularly allergic and asthmatic illness, to access the complexities of air, air pollution, pollen, and social inequity. The portal of illness renders visible, I argue, an oscillation between particularized sensitive bodies and the airy medium in which they take part; it is through how a particular kind of participation is historically produced in the space of interaction between these two that certain bodies more than others are made subject to layers of attrition and diminution.

As for these four elements—water, fire, air, and earth—that I explore, it is important to mention that these same elements emerge in cross-cultural comparisons—for instance, in Chinese philosophy. As Macauley notes, this very overlap speaks to “both the near universality and cultural particularity of conceptions of the elements.”⁶³ While cross-cultural comparisons could be worthwhile, given my focus on the historical transmission of concepts within the current Western worldview and relationship toward the elemental, I will, for this book, omit such comparisons.⁶⁴ Moreover, as mentioned, given the historical mediation within this tradition that has precisely given rise to our sense of loss within the climate crisis, this approach has a diagnostic value as well. Simultaneously, my account of the elemental is sufficiently elastic to include discussion of non-Western accounts of the elemental as well. Case in point is my account of indigenous Californian ways of handling fire to be used upon the land in a creative way (as discussed in chapter 2), offering a significant counterpoint to Western ways of handling and relating to fire.

In breaking up the book into four main chapters each devoted to a particular element, the book seeks to acquire conceptual depth, without denying intersection between the topics of each chapter. Already in the *Theogony*, Hesiod describes the “family” of elements, for instance in the personified elements of Earth (Gaia), mother of many, including Heaven (Ouranos) and Ocean.⁶⁵ Relatedly, as Empedocles in his writings confirms,

water, fire, air, and earth constantly intermingle. Accordingly, I seek to follow the trajectory of Empedocles's philosophy, which does not prioritize one element over the others, but sees the four elements—or in his words: roots (*rhizomata*)—as equally important as they temporarily mix or are separated from each other due to the forces of love and strife.⁶⁶ Thus, the elements could arguably be said to “belong” to each other, as John Sallis shows in this analysis of the connection between sea and earth: “In a certain respect the sea is an opposite of earth, not in a purely formal sense but in a sense at once both sensible and elemental: the sea offers no support at all, in contrast to earth, which supports all, earth from which virtually all other support is, in one way or another, borrowed. And yet, sea belongs to earth, even dividing and articulating its surface.”⁶⁷ Given the interaction between the elements, the senses of loss I address speak as much to the elements under discussion respectively in each chapter as to the interface and interaction *between* the elements. This means that discussions occurring in one chapter—for instance, the smoke caused by California megafires—have impact on the discussion of air in another chapter. Thus, this book seeks to offer a rigorous discussion of the elements in each chapter, while seeking to remain flexible in and open to offering cross-references that speak to interaction between the elements.

The fifth, and final, chapter functions as a conclusion, as it seeks to bring the four main chapters together. I argue that the losses that are tangibly felt in relationship to the elemental constellations have been accompanied by a loss of trust in both the elemental (material-social) constellations that provide us a home *and* in our relationship to the elemental. If it is the case that trust, when operative, is invisible,⁶⁸ and if it is the case that trust, when functioning, offers a sense of security and feeling at home in the elemental world,⁶⁹ then the historical changes underlying anthropogenic climate change have confronted us with shifts in the elemental that have left in their wake a profound loss of trust and thus a sense of disorientation. Based off Elinor Ostrom's model of communities sharing the commons collaboratively and Michel Serres's proposal for a dialogical exchange with the elemental and the communities around it, I postulate that a new kind of ethics and politics based on elemental trust can transform our sense of elemental loss into one of elemental change, moving us away from powerlessness and disorientation toward agency and reorientation.⁷⁰