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Lucretius Against Human Exceptionalism

Hutchins, Richard

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LUCRETIUS AGAINST HUMAN EXCEPTIONALISM

Richard Patrick Hutchins

A DISSERTATION

PRESENTED TO THE FACULTY

OF PRINCETON UNIVERSITY

IN CANDIDACY FOR THE DEGREE

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Advisers: Christian Wildberg, Brooke Holmes, Joshua Katz

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Abstract

This dissertation explores the ways that human beings are represented as unique but continuous with the rest of living beings in Lucretius' *De rerum natura*. I argue that Lucretius advocates for a "minimalist humanism" as part of his Epicurean ethics and natural philosophy. Methodologically, my dissertation presents philological and philosophical readings of Lucretius alongside questions and concerns arising from the environmental humanities. The chapters are: "Iphigenia and the Calf," "Lucretius' Dark Ecology," "The Animal Contract," "Garden and Empire," and "The Animal Revolt." This dissertation presents close reading of the *Kulturentstehung*, or "culture story" as it is called in English language scholarship, from Book Five of *De rerum natura*, employing paradigms from animal studies and ecocriticism, but also using Lucretius' non-modern way of thinking about animals to critique assumptions about animals and ecology in the environmental humanities.

It is hard to escape the sense of mastery as the stars move in the wide clear heavens to risings and settings unobscured. They look large and near and palpitant; as if they moved on some stately service not needful to declare. Wheeling to their stations in the sky, they make the poor world-fret of no account. Of no account you who lie out there watching, nor the lean coyote that stands off in the scrub from you and howls and howls.

–Mary Austin, *The Land of Little Rain*

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I also want to thank the two readers on my committee, Brooke Holmes and Joshua Katz, though calling them "readers" gives a very misleading picture of the time and energy they put into advising this work. Brooke has had a huge influence on this dissertation. She constantly encouraged me not only to delve deeper into ecological thought, but also not to use it uncritically. She was insistent that I never straight-jacket Lucretius or have him parrot environmental theory. She pushed me to think more creatively about how to let Lucretius speak back to contemporary assumptions about animals and the natural world. The title of this dissertation is a deliberate echo her article "The Poetic Logic of Negative Exceptionalism in Lucretius, Book Five," an indication of just how much I owe to her intellectual generosity and guidance. Joshua Katz was a constant advocate of my work, particularly my attention to language in Lucretius. His insistence that I delve more deeply into classical scholarship in this area has been salutary, and I am grateful to him for his guidance in this regard. His encouragement and positive energy throughout the process was important to me completing this dissertation. To Christian, Brooke, and Joshua I say: χάριν οἶδα. I hope I can reciprocate your scholarly χάρις one day. To any graduate student happening to read these acknowledgments, I say: get advisors like these! It makes all the difference in the world.

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Introduction

A calf is butchered on an altar as its mother wanders paradise in search of it. A band of protohumans, hounded by wild beasts, roam the dark ecology of prehistory. These protohumans form society and acquire culture, as helpless animals flee to them for protection, forging an interspecies social contract for collaborative survival in the brutal landscape of prehistory. Humans then discover metals and develop technology, and two distinct cultures emerge: the culture of the Epicurean Garden and the culture of empire. The culture of empire goes to excess with technology and breaks the interspecies contract by turning former animal companions into weapons in a war that returns civilization to the chaos of prehistory. Five scenes from Lucretius' *De rerum natura*, five ecological fables for our time.

In this dissertation, I offer a new reading of *De rerum natura* that highlights the relationship between humans and animals in Lucretius' account of the rise and fall of culture. I argue that Lucretius represents humans as unique, insofar as they have reason, but as continuous with other life, insofar as humans, like everything else, consist of atoms and void. Lucretius offers a "minimalist humanism," I claim, in which humans are exceptional insofar as they have reason and language, but "negatively exceptional" insofar as they use reason to destroy nonhuman life and themselves.[1] Lucretius' story of the rise of human culture, or *Kulturentstehung* as it is called in classical scholarship, is not only a story about the growth of the human mind or the development of philosophical

[1] For "negative exceptionalism," see Holmes 2013, 153-191, esp. 157-8.

reason, but a story about the birth of a non-philosophical, instrumental reason that has the potential to destroy the shared life of humans and animals.

The themes for each chapter have been chosen with a view to the times in which we live and with an eye to what is recuperable from Lucretius' poem for the environmental movement. The interpretative frameworks that guide each chapter differ. They show new ways of reading Lucretius and contribute to the creation of green values needed to survive the Anthropocene.[2] As Dale Jamieson puts it in his 2014 book *Reason in a Dark Time*:

> The green virtues that would be part of an ethics for the Anthropocene would not be identical to classical or Christian virtues but neither would they be wholly novel. Much that mattered to humanity in the Pleistocene will matter in the Anthropocene as well. In writing a set of virtues for the Anthropocene we can draw on a great deal of traditional wisdom. However, some speculation is in order when we contemplate how to live meaningfully in a world that has not yet fully taken shape. We can think of green virtues as falling into three categories: those that reflect existing values; those that draw on existing values but have additional or somewhat different content; and those that reflect new values. I call these three categories preservation, rehabilitation, and creation.[3]

Scholars in the history of philosophy and literature are well positioned to take on Jamieson's project of locating and rehabilitating green virtues from the past. Such a project would consist in locating "structures of thought" in the past that have the

[2] For a call to create green values, see Jamieson 2014, 185-200. As Jamieson puts it: "We live in a post-Nietzschean world in which the gods are not available to give meaning to our lives, nor can nature provide transcendental grounding in a human-dominated world. The authority of reason, which according to the thinkers of the Enlightenment was supposed to replace obedience to the gods and subservience to nature, has turned out to be tenuous and under sustained attack. Still we can find meaning in the Anthropocene. Climate change threatens a great deal but it does not touch what ultimately makes our lives worth living: the activities we engage in that are in accordance with our values. The green virtues are not an algorithm for solving the problems of the Anthropocene, but they can provide guidance for living gracefully in a changing world while helping to restore in us a sense of agency. Acting individually and collectively in the various roles we occupy gives us the power to blunt the force of climate change while living meaningful lives. Reasonable people can make a difference while living well. (200)"

[3] Jamieson 2014, 186.

"capacity for development," or *Entwicklungsfähigkeit*, for living in the Anthropocene.[4] Reading classical philosophy and literature need not only be a practice of negative criticism, though exposing the more destructive thoughts at the roots of Western philosophy and literature that have enabled the Anthropocene is also an important task for classicists and philosophers.[5] It can also be a creative one—of looking for structures of thought in the past to develop for ecological politics. This dissertation pursues the idea that many classical texts, when rearticulated in the constantly shifting context of the ecological crisis, can help to overturn old world-pictures that foster the human exceptionalism now doing so much to destroy the planet.[6] To read classics from an ecological viewpoint is not only a matter of exposing bad ideas but of recuperating goods ones, even if the good ideas might only be buried in the nooks and crannies of classical

[4] For *Entwicklungsfähigkeit*, see Agamben 2009, 7-8: "The genuine philosophical element in every work, whether it be a work of art, of science, or of thought, is its capacity to be developed, which Ludwig Feuerbach defined as *Entwicklungsfähigkeit*. It is precisely when one follows such a principle that the difference between what belongs to the author of a work and what is attributable to the interpreter becomes as essential as it is difficult to grasp…. Every inquiry in the human sciences—including the present reflection on method—should entail an archaeological vigilance. In other words, it must retrace its own trajectory back to the point where something remains obscure and unthematized. Only a thought that does not conceal its own unsaid—but constantly takes it up and elaborates it—may eventually lay claim to originality." Agamben's notion of *Entwicklungsfähigkeit* is scattered throughout his work in a series of magazine and radio interviews: (1) "Intervista a Giorgio Agamben: dalla teologia politica alla teologia economica," Interview conducted March 8, 2004 in Rome by Gianluca Sacco. Transcript available at http://www.pubtheo.com/page.asp?PID=1552. (2) "I luoghi della vita." Radio interview with Roberto Andreotti and Federico De Melis. *RAI Radio Tre*, February 8, 2004. (3) "Un libro senza patria: Giorgio Agamben intervista di Federico Ferrari." *EUtropia*, 2000, no. 1, 44-46. See also de la Durantaye 2009, 9.

[5] For the article that initially tried to expose the Western roots of the ecological crisis, see White Jr. [1967] 2015, 39-46.

[6] Recuperating "green virtues" from Classical texts may require reading Classical texts against the intention the author had with the text. Important in such reading against the grain would be Stuart Hall's idea that any ideological representation always presents its opposite. Any ideological system must, in in the act of representation, point to the elements of its own undoing. According to Hall, ideology past or present is a layered, heterogeneous phenomenon, containing elements warring against it from within. We need to find the ecological elements. As Hall puts it: "The dominant culture of a complex society is never a homogeneous structure. It is layered, reflecting different interests within the dominant class (e.g. an aristocratic versus a bourgeois outlook), containing different traces from the past (e.g. religious ideas within a largely secular culture), as well as emergent elements in the present. Subordinate cultures will not always be in open conflict with it. *They may, for long periods, coexist with it, negotiate the spaces and gaps in it, make inroads into it, 'warring it from within.*' [my italics]" (Hall [1975] 2003, 12).

sources. This need for attention to detail is a further reason for classicists to pursue such work.

Opening up classical texts to environmental readings may mostly be a matter of reading against the grain—of explaining the text in such a way that fills in the environmentally-relevant gaps and answering the environmentally-relevant questions they could be made to pose when rearticulated. These may not be the gaps or questions that the ancient author set out to be explained or had thought of. To foster such dissident reading, an ecologically-oriented interpretive community within classics would also be necessary.[7] But to even ask ecologically-relevant questions requires having a synoptic-enough view of the current state of ecocriticism, new materialism, OOO (Object-Oriented Ontology), animal studies, and the environmental humanities, and this is demanding.

But if, as environmental activist Bill McKibben has claimed, nature as a force independent of humanity has come to an end, and we now live at the "end of nature," then we need to read representations of animals and the natural world in classical texts with renewed stakes and against new horizons.[8] We need to investigate the connections

[7] For the idea that the text has predetermined sets of gaps to be filled (i.e. predetermined *explananda* set up by the author or narrative voice for a certain kind of implied reader) (Iser 1996, 82-87). For the idea that the *explananda* themselves are not ever predetermined—that the issues themselves, the gaps to be filled in by the reader, are themselves completely up to the reader (Fish 1980, 7, 10). Once again, Stuart Hall is important in such reading against the grain, since he offered three different types of "decoding" that happen with texts, the second of which is most important to this dissertation, the "adaptive and oppositional decoding": (1) "Dominant-Hegemonic" decoding, in which the reader interprets the text according to the dominant order of connotation/connections in the text's language, presenting the "ideal" reading that the hegemonic order would like to prescribe for the reader; (2) "Negotiated" decoding, in which the hegemonic order of connotations/connections is honored but at times suspended or interrupted for the sake of an exceptional or important new connotations/connections to be made; (3) "Oppositional" decoding, in which one reads or decodes consistently according to a new order of connotations or meaning. See Hall 1992 [1980], 138.

[8] In his introduction to the second edition of *The End of Nature* (McKibben 2006 [1989], xviii-xix), McKibben states: "The science, however, was only one part of the original book—and not its most important. What mattered most to me was the inference I drew from that science: that for the first time human beings had become so large that they altered everything around us. That we had ended nature as an independent force, that our appetites and habits and desires could now be read in every cubic meter of air, in every increment on the thermometer. This doesn't make the consequences of global warming any worse

between ideologies and attitudes of the past that have brought some, like McKibben, to the point of claiming that we live at the "end of nature" or even "after nature."[9] As the environmental historian Dipesh Chakrabarty has put it, we need to think seriously about genealogies of "nature" now, since the future is likely to be a period of sustained ecological crisis. The age-old distinctions between human history and natural history have collapsed. We do not know what we do not know about the threat climate change poses to life on this planet.[10] History as a domain of writing and thought separate from

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in a practical sense, of course—we'd be in as tough a spot if the temperature was going up for entirely 'natural' reasons. But to me *it made this historical moment entirely different from any other, filled with implications for our philosophy, our theology, our sense of self* [my italics]. We are no longer able to think of ourselves as a species tossed about by larger forces—now we *are* those larger forces. Hurricanes and thunderstorms and tornadoes become not acts of God but acts of man. That was what I meant by the 'end of nature.' Of course, everyone thinks they live at the hinge point of history. The academic debate that followed the book's release was, and continues to be, lively; many critics claimed that we weren't really 'ending' nature, because either we had been altering our surroundings for centuries, or we were a part of nature ourselves and hence couldn't destroy it. Both objections, of course, are true. Emerging into the world hairless, slow, and relatively weak, we've had to use our one asset—our largish brains—to alter our surroundings. We've changed the places where we lived, the places where we grew our food, and even to some extent the wilderness surrounding them. On this continent, for instance, the Indians would periodically burn sections of forest and prairie to improve the hunting. But always before, our disruptions had some boundary to them…. Beginning with the invisible release of radiation, and then the toxic pollutants like DDT, and then the by-products of large-scale industrialization like acid rain, though, we began to alter even those places where we were not. Short of wide-scale nuclear war, global warming represents the largest imaginable such alteration: by changing the very temperature of the planet, we inexorably affect its flora, its fauna, its rainfall and evaporation, the decomposition of its soils. Every inch of the planet is different; indeed, the physics of climate means the most extreme changes are going on at the North and South poles, farthest from human beings. The by-products—the pollutants—of one species have become the most powerful force for change on the planet. This change in quantity is so large that it becomes a change in quality. The story of our moment, of these few short decades when we happen to be alive, is the story of crossing that threshold." See also McKibben 2006 [1989], 7, 16, 40-78.

[9] For a recent attempt to grapple with McKibben's claim that we live at the "end of nature" and have to create new ways of living in such political and ecological environment, see Purdy 2015, especially 11-50.

[10] The "Anthropocene" was coined by Paul Crutzen and E. F. Stoermer in two influential papers to describe a new, human-dominated epoch in geological history (Crutzen & Stoermer 2000, 17-18; and, more often cited, Crutzen 2002, 415). To paraphrase Crutzen's article in *Nature*: "It seems appropriate to assign the term 'Anthropocene' to the present, in many ways human-dominated geological epoch." This is because, according to Crutzen, human activity has transformed up to half the land surface of the planet, diverted or dammed most major rivers, filled the atmosphere with more nitrogen from fertilizer than is natural for all the earth's ecosystems combined, removed more than a third of the fish from the oceans, and used up more than half the world's accessible fresh water; but most significantly, humans have altered the composition of the atmosphere due to the use of fossil fuels and deforestation. Carbon dioxide has risen over forty percent since the industrial revolution and greenhouse gasses have more than doubled. As Crutzen puts it: "Because of these anthropogenic emissions, the global climate is likely to depart significantly from natural behavior *for many millennia to come* [my italics]." The Sixth Extinction Event was brought to prominence by Elizabeth Kolbert's Pulitzer Prize winning book, *The Sixth Extinction: an Unnatural History* (Kolbert

the natural history, Chakrabarty claims, is being rudely interrupted by the weather.[11] The natural world will increasingly become inseparable from the history of a warming planet, because it was never separable in the first place. It has always been part of human life and thought, despite the long tradition of backgrounding and separating it from our culture stories. And yet, as Christophe Bonneuil and Jean-Baptiste Fressoz have argued, the environmental humanities still lack a nuanced view of what remains a grand, linear narrative of a "we" who have given birth to the Anthropocene.[12] A major task for classicists, then, is to sift our corner of the past to determine who that "we" is who laid the conceptual groundwork and discourse that made the Anthropocene possible. The current contenders are: global capitalism, Victorian-age industrialization, the colonization of New World (the Plantationocene), civilization itself, agriculture (Agrilogistics), and human nature itself. But as attempts to locate an origin for the Anthropocene expand, it

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2014, 2-3, cf. also 6-8, 167, 267-9). She defines the Sixth Extinction this way: "Having discovered subterranean reserves of energy, humans begin to change the composition of the atmosphere. This, in turn, alters the climate and the chemistry of the oceans. Some plants and animals adjust by moving. They climb mountains and migrate towards the poles. But a great many—at first hundreds, then thousands, and finally perhaps millions—find themselves marooned. Extinction rates soar, and the texture of life changes. No creature has ever altered life on the planet in this way before, and yet other, comparable events have occurred. Very, very occasionally in the distant past, the planet has undergone change so wrenching that the diversity of life has plummeted. Five of these ancient events were catastrophic enough that they're put in their own category: the so-called Big Five. In what seems like a fantastic coincidence, but is probably no coincidence at all, the history of these events is recovered just as people come to realize that they are causing another one. When it is still too early to say whether it will reach the proportions of the Big Five, it becomes known as the Sixth Extinction."

[11] Chakrabarty 2009, 197-22, especially 201-7.

[12] Bonneuil and Fressoz 2015, especially 19-44. However, Chakrabarty's call for a new universalism, or in his words a "negative universal history," is still prescient: "Climate change poses for us a question of human collectivity, an us, pointing to a figure of the universal that escapes our capacity to experience the world. *It is more like a universal that arises from a shared sense of catastrophe* [my italics]. It calls for a global approach to politics without the myth of a global identity, for, unlike a Hegelian universal, it cannot subsume particularities. We may provisionally call it a 'negative universal history.'" See Chakrabarty 2009, 222. It is important to emphasize that Chakrabarty is not calling for a return to universalism in the sense of an unreconstructed humanism—not thoughts like "the Greeks and Romans discovered the truth once and for all for human beings," that sort of thing. He is making a disciplinary argument, calling for coordinated efforts across the humanities and the sciences for combating cultures and received ideas that have exacerbated or made possible the Anthropocene. Chakrabarty's "universalism" is one in which pluralism and partial perspectives are vital.

seems increasingly likely that no culture story of our own will be complete without accounting for the contributions of Greco-Roman thought to the crisis.

I hope to show that reading Lucretius alongside ecological thought can help us understand how Lucretius represents animals and the natural world in *De rerum natura*, while also clarifying assumptions current in ecological thought. The roots of this project are to be found in Frederic Jameson's cultural materialist approach to texts, and specifically his notion that close reading is at the heart of ideological critique. For Jameson, close reading is essential to critique because ideology often takes the form of culture stories. When ideology is narrativized, Jameson thinks, stories present culture not as an armory for the elite, but as a whole way of life that everyone engages in, whether they know it or not. For Jameson, culture stories pervade everything we do.

This dissertation unites philology with the environmental humanities through what I call "political close reading." Political close reading is a hybrid of old and new, of semiotic criticism and environmental commitment.[13] It consists of reading closely for the

[13] Practical criticism goes back to the aesthetic approach to close reading created by I. A. Richards in the early twentieth century and influential at Cambridge. For a recent account of what I would call "political close reading," see North 2017. North seeks to recuperate some of the close reading practices of Practical Criticism and the New Critics, what he elsewhere calls the "historicist/contextualist paradigm." These, North argues, already contained seeds that could have been developed towards more political ends, but were not because of the ideology of its creators. North attempts to reconcile what he sees as a false dichotomy between close reading and politically-oriented analysis. As he puts it: "My reason for nevertheless persisting in trying to address both audiences [i.e. historicist and ideological readers] is that I am seeking to expand the area of overlap between them. Indeed, from a certain angle, one might see this as the burden of the book as a whole: one of my larger claims is that many of the deeper interests of these two audiences would be the same, if only we could come to recognize them as such, in that the incipiently materialist account of the aesthetic that lies at the root of the discipline [i.e. literary criticism], and continues to mark its central practice of 'close reading,' is properly understood as part of a longer history of resistance to the economic, political, and cultural systems that prevent us from cultivating deeper modes of life (x) [….] Literary studies was once a discipline that, at least on paper, proposed detailed and intellectually rigorous methods both for analyzing the culture and for taking action to change it (12) [….] On the one hand, the turn to scholarship has meant a genuine rejection of easy universalisms and essentialisms, as well as, in the best cases, a sophisticated intellectual commitment to the material rather than the ideal. On the other hand, it has also involved a rarely examined and professionally enabling assumption that our immediate task as higher students of literature is the production of new and better cultural analysis, rather than the development of new methods for cultivating subjectivities and

sake of making interventions in ecological thought. Somewhat in the style of New Historicism, it relates big ideas to little things—a connotation, intertext, adjective, or pun. These are interesting in themselves and as touchstones for reflecting on how discourse brought us to the Anthropocene.

In a time of ecological crisis, it is especially meaningful to focus on Lucretius' culture story, because Lucretius too is engaging in a cultural materialist project. For Jameson, the stories we tell ourselves about culture are themselves a form of cultural struggle. Every culture has a subculture, which struggles against the dominant culture. This is especially true for Epicureans, for whom a culture worthy of the name has to find a way of escaping the incipient culture of empire in the late Roman Republic.[14] This may be why Lucretius, in the *Kulturentstehung* or culture story in Book Five of *De rerum natura*, portrays the rise of truly humane culture, i.e. Epicureanism, as essentially a form of flight from the totalizing imperial militarism of his time.[15] Lucretius' *Kulturentstehung* is not a neutral description of the rise of culture. It is not an innocent account of early human life, but a revelation that stories about the origins of culture are themselves a form *Kulturkampf* with narrative logics of their own.[16]

collectivities. In this latter respect, its main effect has been to prevent us from taking action. In search of a balanced assessment of 'Always historicize!' then, the best we can say is that it has been a very good banner under which to conduct a retreat. (20)" North and Jameson, however, seem to have more in common than North's book admits, since Jameson himself was an advocate of close reading and attention to style for political reasons.

[14] The idea that Epicureanism was a subculture that sought to resist or escape the dominant culture of the late Roman Republic has been exhaustively demonstrated by Frischer 1982, especially 46-86.

[15] For Lucretius advocating for the partial, temporary pacts of Venus against the totalizing logic of Mars, see Holmes 2016a, 33.

[16] For the distinction between Raymond William's notion of culture as a "whole way of life"—analyzed mainly in terms of cultural evolution—and E. P. Thompson's notion of culture as a "whole way of struggle" (Thompson 1961, 24-33 and 34-39).

For Jameson and cultural materialists, literature, while indirect, is political, because ideology often takes the form of stories. Ideology, thus, requires literary analysis, critique, close reading. While this dissertation critiques Lucretius' depictions of animals, it also shows how the break-downs in applying ecological paradigms to *De rerum natura* tell us something about those contemporary paradigms. Where contemporary ecological paradigms become inoperative, there is space for Lucretius to respond. [17] The goal of this dissertation is to show not only where Lucretius resonates with ecocriticism, but also where break-downs in ecocritical paradigms reveal opportunities for ecological thought to clarify its methods and purposes, and to change them by letting Lucretius speak back.

Ecological thought is deeply committed to returning philosophy back to the reality of things, and ecocritics tend to be suspicious of criticism that treats representations only as codes. At the same time, ecocritics are apprehensive of claims to full knowledge of reality, even though they believe there really is a physical reality. Hence, new materialism. New materialism is an update of the materialist legacy of ancient and early modern philosophy that believes that there is a truth about physical reality, but that truth will either remain "concealed" for a long time or always. New materialists treat φύσις as a trickster in Heraclitus' phrase "nature loves to hide."[18] Because of their commitment to the environment, ecological thought and new

[17] For the concept of "inoperativity" or unworking, see Agamben 2004 [2002], 81-87. For a definition of inoperativity, see Agamben 1998 [1995], 61-62: "The only coherent way to understand inoperativeness is to think of it as a generic mode of potentiality that is not exhausted (like individual action or collective action understood as the sum of individual actions) in a *transitu de potentia ad actum*." Inoperativity is neither compliance nor resistance but a process in which the logic of an idea ceases to function when applied to a stubbornly concrete instance. It is a case of the theory not exhausting the instance, thereby revealing further potentialities in the instance (in the case of Lucretius, where ecotheory does not exhaust the text of *De rerum natura*, thereby revealing further potentialities for ecotheoretical insights from the encounter with Lucretius' text). See also de la Durantaye 2009, 18-20.

[18] Graham Harman has now published two accessible introductions to new materialism that spell out what he calls the "undermining" and "overmining" of material reality (Harman 2018a and Harman 2018b).

materialism are committed to the reality underlying representations of the world, but see objects as "performed" by representation.[19] Such discourse about language, culture, or thought "performing" reality echoes Jameson's cultural materialist notion that politically-committed scholars, through the literary analysis and critique, should analyze the processes through which ideology creates representations out of the raw material of physical reality—how analyzing performances of reality in literature allow for new culture stories.

While there is a reality beneath representation, new materialism argues that it may either be hard to get at or remain hidden. The positive way to put this is that new materialism sees objects as always capable of surprising us, revealing themselves to us if we pay due attention to them.[20] The result is an awe towards objects in our world, objects that are not masterable, but that inspire epistemological modesty towards all that is nonhuman. Cultural materialism, new materialism, ecological thought—these matter in an age of ecological crisis, not only because of the need for modesty and limits towards the natural world, but also because all three forms of discourse see the representation of the natural world as a central issue. Much of the problem of convincing people that

[19] Jameson 1981, 296-7: "Still, it is a historical fact that the "structuralist" or textual revolution—as, mainly through Althusserianism, it has transformed a whole range of other disciplines, from political science to anthropology, and from economics to legal and juridical studies—takes as its model a kind of decipherment of which literary and textual criticism is in many ways the strong form. This 'revolution,' essentially antiempiricist, drives the wedge of the concept of a 'text' into the traditional disciplines by extrapolating the notion of 'discourse' or 'writing' onto objects previously thought to be 'realities' or objects in the real world, such as the various levels or instances of a social formation: political power, social class, institutions, and events themselves. When properly used, the concept of the 'text' does not, as in garden-variety semiotic practice today, 'reduce' these realities to small and manageable written documents of one kind or another, but rather liberates us from the empirical object—whether institution, event, or individual work—by displacing our attention to its *constitution* as an object and its *relationship* to the other objects thus constituted."

[20] For the hiddenness of things and the question of how objects are performed—what Graham Harman calls an "aesthetic approach to material reality" (Harman 2018a, 61-102). The idea is that while there is a material reality, our access to it may in the end remain indirect at best.

climate change is real is their epistemological certainty that the world is too large (or too perfect) ever to be affected by human beings. While it would be quixotic to overplay literature's influence on contemporary politics, representations of the natural world in classical literature cannot help but be political at a time when politics and history are themselves increasingly enmeshed in the fate of the natural world.

Ecocriticism is committed to raising awareness about environmental issues through the analysis of literature. One of its goals is to break down the walls between the humanities and the sciences by arguing that natural phenomena—often assumed to be wholly owned subsidiaries of the life sciences—have stakes for the humanities as well. Climate change and mass extinction are not at root scientific or technological problems. They are cultural problems. We use science and technology to achieve ends that we determine through cultural values and concepts.[21] The crisis demands the full range of interpretive tools for analyzing concepts and language that only the humanities can offer.

Lucretius' *De rerum natura* is important in such an environment because it remains a token of cultural capital today. Works of high cultural value tend to be sites where the meaning of the human and nonhuman, nature and culture, environment and history, are contested, because we always seem to thrust upon such texts the responsibility to speak with insight and authority to our current problems. The ecological crisis is no different in this respect. It is important to bring fresh perspectives like ecocriticism and animal studies to such tokens of cultural capital.[22] My practice

[21] White Jr. 2015 [1967], 37-46.

[22] Sinfield 1992, 21 & 41-2. Especially important to Sinfield's notion of dissident reading is that canonical texts, as powerful cultural tokens, are places where meaning is established and can be contested. Cultural materialists may therefore 1) propose new canons, 2) re-read canonical texts in ways that uncover progressive possibilities, 3) show how the formal properties of such texts lend themselves to political analysis, and 4) contrast the political context in which a text was generated with the political context in which it is reproduced—via re-reading, criticism, re-staging, etc. Cultural Materialism would thereby show

throughout the dissertation has been to select passages from *De rerum natura* that present what Alan Sinfield has called "fault-line stories." A fault-line story is any text from the past that presents an issue that remains problematic or unsettled today, however minor-seeming at first.[23]

My audience is necessarily broad: classicists, ecocritics, new materialists, the environmental humanities, and animal studies. Because I address so many different readers, my analysis hews closely to Lucretius' Latin, but in a way that I hope the Latin-less reader can follow. I discuss Lucretius in a way that is will interest readers wanting theoretical readings of animals in the Roman world. While this attempt to address so many different audiences may make for a cognitively bumpy ride, it is worth pushing ecological paradigms for plants, animals, and ecology to increasing levels of clarity through comparison with untimely ways of thinking.

And yet, as Roland Barthes claimed in the 1970s, "it is not enough in interdisciplinary work to take a 'subject' (a theme) and to arrange two or three sciences around it." Barthes saw that "interdisciplinary study consists in creating a new object, which belongs to no one," a new performance of works we think we know.[24] Barthes suggested that interpretation should rather be like performing music from a score. There

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how the cultural significance of a text has been politically transformed over the course of history, revealing politics that were initially silenced (the "ghosts of alternative stories," as Sinfield calls them), which resurface and can be expanded upon in receptions. Any reactionary politics in the text, through historicizing and reception analysis, would thereby no longer be assumed to be merely the insight of genius that transcends historical contexts. As Sinfield puts it: "Canonical texts may then be respected as serious attempts to comprehend and intervene in the world, and we may quarrel with them as questionable constructions made by other people in other circumstances. This is a rough program for cultural materialism, and it is the dominant method of this book. (22)"

[23] I take my understanding of Cultural Materialism from Alan Sinfield, *Literature, Politics and Culture in Postwar Britain* (Sinfield 1989, 37 and Sinfield 1992). For a cultural materialist approach to environmental texts, see Zapf 2017 [2016].

[24] Barthes 1989 [1972], 72.

is a responsibility to perform the score truthfully, but there is also a responsibility to bring the score to life for the audience.[25] This dissertation is not an attempt to transcend disciplines so much as to have multiple disciplines invigorate each other, while respecting the distinctiveness of each. It is an attempt to practice my *métier* as a classicist and to address the long crisis we are only just beginning to live through.

Lucretius and Animal Studies

At the heart of ecological thought is the question of the animal, and at the heart of animal studies is the question of human exceptionalism.[26] This dissertation intervenes in debates about human exceptionalism by offering close readings of Lucretius that incorporate frameworks from animal studies and the environmental humanities. It uses the pressure of applying ecocritical frameworks to Lucretius to question presentist assumptions built into paradigms from the environmental humanities. It is precisely where ecotheory becomes inoperative in Lucretius that insights into both ecocritical theory and Lucretius can arise. What follows is an attempt to give a general account of animal studies that pauses at points to show openings for Lucretius within this emerging field.

While not yet a canonical discipline, animal studies has been treated by a number of philosophers and cultural theorists. It began with a focus on liberation in Peter Singer's 1975 book *Animal Liberation.*[27] Singer argued that it was speciesist (and ultimately

[25] Barthes 1978 [1971], 156-164.
[26] Waldau 2013, 2.
[2727] As Dawn McCance (2013, 7) points out, Singer himself was so inspired by the 1971 book *Animals, Men and Morals* by Roslind and Stanely Godlovich, and John Harristhe—three young, Oxford philosophers like himself—that he sent an unsolicited review of it to the New York Review of Books, which was published in 1973.

inconsistent) to view animal pain as less bad than human pain. He showed this by presenting numerous real-life examples of blatant harm done to farm and research animals, and revivified a lost tradition of utilitarian animal ethics from a footnote in the work of Jeremy Bentham, the 18th century philosopher and legal scholar.[28] Following on Singer's book, but using a different ethical theory, was Tom Regan's *The Case for Animal Rights* (1983). Regan invoked the rights tradition to claim that animal pain can never be justified by appealing to the benefits it may produce for human beings.[29] Due to the influence of Singer and Regan, the list of analytic philosophers working on animals has grown enormously: Marian Stamp Dawkins, Dale Jamieson, Christine Korsgaard, Peter Singer, Peter Godfrey-Smith, Peter Carruthers, Paul Snowdon, Martha Nussbaum, and Mark Rowlands, to name a few of the most prominent people working in this field. Such growth is not surprising considering that in many ways animal studies got its start in the analytic tradition.

Analytic philosophers have tended to focus on adapting findings from biology and ethology to ethical models in their field, such as the utilitarian ethics of Peter Singer, the deontological ethics of Christine Korsgaard, and the virtue ethics of Martha Nussbaum and Dale Jamieson. Few have experimented with the social contract tradition, however, perhaps because the social contract goes beyond ethics to view human relationships with animals from a political perspective. But any shift to a social contract model of animal ethics presents its own challenges. For instance, how can beings without language be said

[28] "The question is not, Can they reason? nor Can they talk? but, Can they suffer?" (Bentham 1970 [1789], 283, n. 2.)
[29] Regan 1983.

to forge a "contract?" How can they be considered "members" or "citizens" of a human community?

In their 2011 book *Zoopolis: a Political Theory of Animal Rights*, Sue Donaldson and Will Kymlicka intervened in such debates by arguing that the animal movement has been unsuccessful because it has failed to think about animals politically, as part of the human community. In their attempt to think about animals along communitarian lines, Donaldson and Kymlicka distinguish between three kinds of animals as candidates for "citizenship" in human communities: (1) domesticated animals (i.e. companion animals, work animals, and food animals); (2) wild animals; and (3) liminal animals (i.e. squirrels, pigeons, *et ceteri*).[30] The latter have communities, but ones that are embedded in human communities, like the squirrel dens in the backyards of North America. Donaldson and Kymlicka use this tripartite division of animals to think about what we might owe, as members of the human community, to each animal kind insofar as they are potential members of the human community.

As one of the major social contract theorists of the ancient world, and as a philosopher sympathetic to animals, Lucretius, was the first person to present a contractarian view of animal ethics in classical antiquity. I use Donaldson and Kymlicka's communitarian view of animal ethics to show how Lucretius' portrait of the "animal contract" in Book Five of *De rerum natura* resembles what Donaldson and Kymlicka call the human community's "relational duties" to animals, but from Lucretius' proto-utilitarian, benefit-oriented perspective. It is the difference between Lucretius' ancient version of communitarianism and benefit-oriented ethics, as well as differences

[30] Donaldson and Kymlicka 2011.

from modern communitarianism and utilitarianism, that offers possibilities for pushing Donaldson and Kymlicka's communitarian theory of animal ethics towards a more subject-centered, hedonistic, and ataraxic approach to multispecies society. For Donaldson and Kymlicka, relational duties are duties that arise not on account of the animal's special capacities, human-likeness, or intrinsic value, but on account of the specific geographical and historical relationships maintained between humans and animals over time.[31] Donaldson and Kymlicka believe that these situated, relational duties have been ignored by mainstream ethical systems, such as contemporary act utilitarianism, deontology, and virtue ethics, and that only a communitarian approach to animal ethics can demonstrate their importance.

When it comes to animal studies, however, it is cultural studies that has opened up the largest discussion today. Particularly influential on the cultural studies wing of animal studies has been the late work of Jacques Derrida, such as *The Animal That Therefore I Am* (2002) and *The Beast and the Sovereign I & II* (2009). While Animal Studies can be said to have begun with Peter Singer, cultural studies has long devoted itself to the important question of the boundaries between humans and animals. This makes sense for cultural studies, since from the start it has been interested in theorizing difference. Deconstructing the boundaries between humans and animals is natural territory for thinkers in the cultural studies tradition now turning towards animal studies.

One of the earliest thinkers to address the human-animal boundary was Martin Heidegger. Heidegger was only interested in animals, however, to better define the human, or *Dasein*, as he called it. This trope of using animals to understand the human is

[31] Donaldson and Kymlicka 2011, 6.

what Agamben has more recently called "the anthropological machine."[32] Agamben claimed that Western philosophy has only ever really been interested in animals as a foil for humans to define humanity. Agamben was skeptical that Western philosophers have ever been interested in animals for their own sake. For Agamben, himself inspired by Heidegger, however much animals have never been "animals" in the pejorative sense, the anthropological machine keeps humming, background them as merely conceptual tools to better define the human.

Heidegger's influence on ecological thought has also been problematic when it comes to his romanticizing "place" and "community," an obsession which lent itself to notions of rootedness in German nationalist politics in the early twentieth century, and ecofascism in the United States today.[33] Despite being one of the first modern philosophers to raise the question of human-animal boundaries, and despite being an important early anti-humanist thinker, Heidegger remains a divisive figure in animal studies when it comes to concepts like "place," "community," and human-animal boundaries.[34]

Most problematic was Heidegger's claim that animals are *weltarm* and *weltlos* ("world-poor," "world-less"), and that humans by contrast are *weltbildend* ("world

[32] For the "anthropological machine," see Agamben 2004, 33-38: "Insofar as the production of man through the opposition man/animal, human/inhuman is at stake here, the machine necessarily functions by means of an exclusion (which is also always already a capturing) and an inclusion (which is also always already an exclusion). Indeed, precisely because the human is already presupposed every time, the machine actually produces a kind of state of exception, a zone of indeterminacy in which the outside is nothing but the exclusion of an inside and the inside is in turn only the inclusion of an outside... Like every space of exception, this zone is, in truth, perfectly empty, and *the truly human being who should occur there is only the place of a ceaselessly updated decision in which the caesurae and their rearticulation are always dislocated and displaced anew* [my italics]."

[33] Manavis 2018.

[34] For a critique of the romanticization of place and community in ecological thought, see Joseph 2002.

forming"). From this, Heidegger concluded that animals "are" but that they do not "exist."[35]

> The being that exists is man. Man alone exists. Rocks are, but they do not exist. Trees are, but they do not exist. Horses are, but they do not exist. Angels are, but they do not exist. God is, but he does not exist. The proposition "man alone exists" does not mean by any means that man alone is a real being while all other beings are unreal and mere appearances or human ideas. The proposition "man exists" means: man is that being whose Being is distinguished by the open-standing standing-in in the unconcealedness of Being, from Being, in Being."[36]

In other words, humans exist because they interact with reality in a self-reflexive way, i.e. through language. There are, however, thinkers in the Heideggerian vein who have been more generous to animals. Most famous is Jacob von Uexkull, who took Heidegger's notion that humans are *weltbildend*, and animals *weltlos*, and showed that animals too build worlds that are *meaningful for them*. For Uexkull, each animal exists within the phenomenal world it is attuned to. There are as many animal worlds as animal kinds, and each animal kind inhabits its world "to the same degree of perfection" as any other. Uexkull took a relativist stand towards the fitness and meaning each animal has in its phenomenological world. He countered Heidegger's notion that animals are poor in world because they are lacking in the language and reflexivity, by presenting examples of how different animals use the stimuli of their environments as signs, and create meaningful worlds for themselves. For Uexkull, each animal is a subject of his or her own life and world, a radical idea in 1934.

In a famous comparison, Uexkull showed how the same objects in the same room present different "effect tones" to a human, dog, and fly. By "effect tone," Uexkull meant that objects have different relationships to each animal depending on the actions the

[35] Heidegger 1995, 197.
[36] Heidegger 1956, 214.

uncomplicated an animal as a fly (or a tick, in another celebrated example) has a phenomenological world full of objects that they know how to use for ends important to them, and therefore have meaning for the animal. Uexkull's work has been described as an almost shamanistic attempt to use Heidegger's tool-, or function-, oriented approach to "world" to get inside the minds of animals.

Heidegger's human-animal binary had to be deconstructed for the cultural studies side of animal studies to get going. It was Derrida who famously broke down Heidegger's binary, through his commitment to deconstructing the monolithic categories of "the human" and "the animal." In *The Animal That Therefore I Am* (2006), Derrida recounts a story about an encounter with his cat. He describes his cat's gaze confronting him as he, while naked, contemplated an animal's perspective on his humanity. Derrida wonders whether his cat, because of its nonhuman eyes, has a significantly different view of the room, and whether Derrida's nakedness means anything to the cat, or if it even notices.[38] Derrida tells this tale of the cat to suggest that we should think about animals as individuals, and not, like Heidegger, in terms of abstractions like "the animal."[39] *The Animal That Therefore I Am* is important for animal studies because of it avoids placing humans and animals along poles of maximal difference. Instead, Derrida would have us focus on actual humans and actual animals, discussing human-animal boundaries in the context of encounters between individual humans and animals.

As seen, Derrida sought to analyze differences between individual animals and individual humans. However, he argues that because humans share so much evolutionary history with other animals, many of the features that we conveniently use to separate

[38] Derrida 2002, 392. This article was later expanded into the book of the same name.
[39] Payne 2010, 8-10.

species may be no more than "zones of indeterminacy," Derrida argues, rather than concrete differences we can pin down. In a typical deconstructionist move, Derrida claims that many so-called human-animal boundaries are not boundaries at all, but more like thresholds of indeterminacy, in which what is human and what is animal is impossible to fix. Derrida also thought that there are not just indeterminacies *between* species but *within* species, i.e. not just external indeterminacies but internal ones. Where does the animal within me begin and end? Could that be determined? For Derrida, whether one is speaking of humans or animals, one may always potentially differ from one's identity. We are always potentially different from, or able to defer, who we are. Derrida's quest for internal difference within animal kinds is important because it reveals a structure of thought to seek in writers like Lucretius who show animals differing from their assumed natures. By focusing on internal difference, animals can be found to differ from the identities we impose upon them through inherited discourse.

Derrida was not just making a theoretical point in breaking down the human-animal binary set up by Heidegger. His concern was also ethical: blunt categorization enables violence against animals. Derrida's project of deconstructing the discourse that allows for violence against animals led to his interest in commonality: what he called the "indubitable commonality of suffering" that humans and animals share. While mostly known as a philosopher of difference, Derrida's interest in the commonality of suffering between species hearkens back to Peter Singer's invocation of Jeremy Bentham: the question is "not, Can they reason?...but, Can they suffer?" [40] While we may never know enough about animal mind to ground animal ethics upon it, Derrida thinks we do know

[40] Derrida 2002, 388, 397.

enough about animal suffering to act with reasonable moral certainty towards animals. When it comes to the commonality of suffering, Derrida has no doubts:[41]

> The response to "can they suffer?" leaves no doubt. In fact, it has never left any room for doubt; that is why the experience that we have of it is not even indubitable; it precedes the indubitable, it is older than it. No doubt either, then, about our giving vent to a surge of compassion, even if it is then misunderstood, repressed, or denied.[42]

By arguing for the commonality of suffering, Derrida shows the irrelevance of Heidegger's claim that we owe animals nothing because they are "poor in world." For Derrida, we owe them something because they suffer. And like Uexkull, Derrida believes that we have no grounds to say that one animal's world is better than another's, or that one animal has more access to reality than another. Every animal accesses to the world in a way that suits it: "It is not that the animal has a lesser relationship, a more limited access to entities, it has an other relationship….But the difficulties are already piling up between two values incompatible in their 'logic': that of lack and that of alterity."[43] But there is room to criticize Derrida's relativist stance towards mental access to the world—on ethical grounds. The idea that each kind of animal accesses the world in its own way would seem to preclude humans and animals from sharing a phenomenological world. My mental access to reality would not overlap with another animal's, like my dog. We would be acting in two separate epistemological worlds, which does not seem accurate.

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[41] See Daniel Dennett (1995, 693 and 2002, 397) on the difference between "moral certainty" and "epistemological certainty" about animals, a concept that comes close to Bentham's idea that whether we treat animals morally or not might have nothing to do with their being conscious or not, or having language or not, but simply whether they feel pain or not. Dennett says: "A curious asymmetry can be observed. We do not require absolute, Cartesian certainty that our fellow human beings are conscious—what we require is what is aptly called moral certainty. Can we not have the same moral certainty about the experiences of animals? I have not yet seen an argument by a philosopher to the effect that we cannot, with the aid of science, establish facts about animal minds with the same degree of moral certainty that satisfies us in the case of our own species."

[42] Derrida 2008.

[43] Derrida 1989, 49; cited in Weil 2012, 32.

Derrida's epistemological relativism goes against the intuition that companion animals, or animals with whom we share evolutionary history, experience the same world that we do, or something like it. Derrida's respect for difference between human and animal worlds leads to a melancholy about the impossibility of humans and animals sharing worlds. While many humans long for shared mental experience with other animals, especially with their pets, if the phenomenological world of nonhuman animals is shut off from us because of epistemological relativism, one's longing to share the world of another animal will never find closure and will continue to be an impossible longing.[44]

Lucretius shares Derrida's certainty about the commonality of suffering between humans and animals. For Lucretius, humans and animals share a basic atomic make-up, and both have the capacity for perception. A major theme in *De rerum natura*, not found in Derrida, or any of the philosophers surveyed so far, is the commonality of pleasure between humans and animals, the continuism of ethics, emotions, and purposes between humans and animals that arises from pleasure as the *telos* of life. Pleasure is such an important theme for Lucretius that animals in *De rerum natura* becomes almost a model, almost mediators of mimetic desire, for ἀταραξία and the life of natural and necessary desires. Lucretius' emphasis on rational hedonism as a framework for thinking about living with other animals has something to add to conversations about commonality in animal studies. While rational hedonism separates humans from animals, because for Lucretius only humans have reason, the focus on pleasure connects humans with the rest of the living world, because all life aims at pleasure, and can find commonality in this pursuit.

[44] For feelings of melancholy towards other animals, see Payne 2010, 9.

The most important recent theorist of human-animal commonality is Donna Haraway, who took the problem of shared life in an even more concrete direction than Derrida with her work on the "companion animal." Haraway focuses on how actually living with nonhuman "significant others" can reveal overlapping capabilities between species. These capabilities, Haraway argues, *emerge*, and only when humans and animals truly share a life. For Haraway, when humans and animals share a life, they increase their capacities to respond to each other and thereby enter into more ethical relationships.

What is important about the companion animal is the new sensitivities unleashed when interspecies companions come to know each other. In a move similar to Jean-Luc Nancy's notion of "being singular plural" or "being with," Haraway analyzes how new aspects of identity in humans and animals emerge through the process of individuals from different species becoming companions. The more you and your dog get to know each other, the more your dog changes you and vice versa, and the better both of you will become at responding to each other ethically. The concept of the companion animal counters notions of identity as static, as a series of pre-established features that either mesh well or not with the pre-established features of the other whom you encounter, like puzzle pieces coming together.

For Haraway, identity is always plural. It has never been singular, however much inherited discourse might describe it as fixed. The upshot is that living with other animals is a dynamic process that changes human and animal identity in ways that cannot be predicted in advance. Companion animal relationships contain all kinds of discoveries waiting to happen about who we are and what we can become together with other

animals, as well capacities for responding ethically across species lines.[45] Haraway's goal with the concept of the companion animal was to get away from dualist models that assume separate, static, fixed, or predetermined animal and human capacities that fit well or not. Haraway wanted to change the subject from the question about which animals are smart enough to deserve ethical treatment, to what becomes possible when we live together: experiment with shared life first, theorize second.

While Haraway focuses mostly on pets when speaking about companion animals (often her dog Cayenne Pepper), the concept of the companion animal can describe any animal who has a relationship with a human. Work animals, food animals, non-domesticated animals—all of these are potentially companion animals. The companion animal is a continuation of Haraway's focus throughout her career on the conceptual richness that emerges when we think about the material situatedness of our lives: that we only have concrete, partial perspectives on reality, and the fact that epistemological modesty about our limited perspectives can be conceptually fruitful.[46] Rather than imposing abstract theories onto animal life, companion animal thinking attempts to show that there are philosophical insights that accrue from paying attention to the reality of the animals around us. For Haraway, *a priori* theorizing about animals all too often justifies "common sense" intuitions about what animals are *not* capable of. The companion animal concept also has a hedonistic angle. It is through enjoyment one another's company—through the pleasures that emerge from deliberately blurring the boundaries between

[45] It is important to note that Cary Wolf (2013, 103), while sympathetic to Haraway's emergent, response-oriented animal ethics, has emphasized that despite the highly contextual, situational nature of our obligations to animals, we still ultimately have to make choices—choices that may turn out to be right or wrong. While it is ethically important to maintain an awareness of the situatedness of our actions and capacities to respond to other animals, at some point, we have to cut through the complexities and act.
[46] For the felicitous consequences of admitting our epistemologically limited, partial perspectives, from the early, cyborg stage of her career, see Haraway 1991, 154, 181.

human and nonhuman that, Haraway thinks, we can create relationships with other animals that are humane and pleasurable for everyone involved.[47]

Haraway is committed to acknowledging the situatedness of our lives because she is wary of the reach for easy certainties: the urge to reduce the ethical complexities of living in a world full of other animals, among whom we are just one. Better to avoid purity, she thinks, and change the world in ways we can live with—to "stay with the trouble." The task for intellectuals then, in Haraway's view, is to learn to live more ethically within the complexity that being human brings with it, especially in light of the knowledge that sometimes we have to kill and take from the world to live, just like other animals. Haraway's is a pragmatic argument: the world is not going to become vegetarian or vegan anytime soon, however good that would be. Better to focus on the politics necessary to turn back the ecological doomsday clock even just a bit. Haraway thinks that while we need to critique habits of thought that all too easily "make killable" nonhuman animals, at the same time, if we must kill, we should learn to "kill well," which means being fully aware of what we are doing.[48]

In short, the companion animal is the idea that relating to animals cannot be understood in advance of actually living with them. The concept does come with risks though. First, discussions of the companion animal seem to slide all too easily into discussions of all animals, taking the individual animal as representative of the whole nonhuman world. Second, discussions of the companion animal often focus on pets, making the pet stand in for all nonhumans. Finally, companion animal relationships all

[47] Haraway's focus on the hedonism of deliberately confusing boundaries can be found in Haraway 1989, 174. Haraway repeatedly acknowledges her debt to the animal activist and Wittgenstein scholar Vicki Hearne. See Hearne 1994.
[48] Haraway 2008, 81.

too easily conceal power inequities beneath the surface. Companion animals remain under the sway of human domination, even though they greatly benefit from their human companions, and are often the kinds of animals who have evolved to live with humans, rather than in the wild where they would feel isolated or in danger. The bulk of companion animals are thus not ideal representatives for the rest of nonhuman life.

The companion animal relationship may also conceal the fact that humans are the less social animal. While we like to think of ourselves as the most social species, checking the box on our abilities with language, we tend to think of companion animals as inhabitants in *our* social world rather than we in theirs, which shows the limits of *human* sociability. Companion animals live in our world, not we in theirs. They may be the more adapted, the more social, animal. They have done more to conform to our ways than we to theirs. Few humans could live in dog packs, while many dogs live in human families. The power-differentials in human-canine evolutionary history show dogs to be the more socially adapted animal across species lines. Companion animals are usually the kinds of animals who have been adapted for human purposes. The companion relationship is not balanced today because it was not balanced in evolutionary history.

There has always been a worry that, in becoming companions, animals lose their animality. While this might seem like an outdated nostalgia for a lost purity of the natural world characteristic of Deep Ecology—i.e. a fetishization of "pristine," "original," "holistic," or "harmonious" nature—the concern with the "loss of animality" remains valid, since it shows how companionship relationships sometimes blind us to the fact that companion animals frequently resist our control.[49] Recognizing this tension between

[49] For the outdated version of the concern of animals losing their animality through domestication, see Shephard 1982, 19-46.

companionship and power—between shared life and human control—is simply a matter of being realistic about what animal companionship is. We can love our companions, but we have to recognize that even the most domesticated animals, the ones who need us the most, also resist us. They are animals, not Oedipal objects.

Lucretius deals with many of the issues central to the companion animal concept: shared life, emergent capabilities, and the ethical complexities of domestication in deep history. In Book Five of *De rerum natura*, Lucretius describes the birth of the companion animal, and later in that same book, the betrayal by humans of former animal companions. The companion animal is central to Lucretius' account of the rise and fall of culture. This centrality of the companion animal is part of Lucretius' tendency to represent animals in ethically charged ways. Here, the cultural studies' focus on representation since the "crisis of representation" in the 80s, especially after Foucault's *The Order of Things*, becomes important to Lucretius' contribution to animal studies.

Within animal studies there has long been a tension between representation as accurate portrayal and representation as speaking for animals. This tension can be seen in Lucretius, between his realistic descriptions of the natural world and his descriptions of animals that advocate for their interests. It is true that Lucretius sometimes depicts animals in anthropocentric ways as part of his advocacy for them, but I would argue that Lucretius' anthropocentrism is close to what Frans de Waal has called "animalcentric anthropomorphism."[50] Lucretius' anthropocentrism does not just depict animals in human terms but does so in a way that makes them more fully present and advocates for their interests. As Steve Baker has put it, "any understanding of the animal, and of what the

[50] de Waal 1999, 255-80.

animal means to us, will be informed by and is inseparable from our knowledge of its cultural representation."[51] Even if you are the type of person who thinks that words and representations do no harm (about which you might want to reflect), the critique of the representations of animals often undermines ways of thinking about animals that make it easier to harm them with a clean conscience. This is a major part of animal studies' contribution to the *Kulturkampf* side of animal liberation.

A landmark in the critique of the representation of animals is the late John Berger's beautifully written essay "Why Look at Animals?" from his 1980 book *About Looking*.[52] Berger argued that getting at the reality of animal suffering has always been difficult, since (echoing Rousseau's *Essay on the Origin of Languages*) the earliest human metaphors and representations were of animals. Representing animals is one of the oldest facets of human culture. And yet, in imperial and industrial societies, representations of animals are all too often used as "indexes of our power," in Berger's famous phrase. Berger's argument in the essay, however, is not so much about exploitative indexing as about disappearance: animals are slowly disappearing from the world through confinement, habitat loss, over-consumption, and extinction—this just as images of animals are proliferating at increasing rates. Berger sees this as a shameful attempt to compensate for the disappearance of real animals.

This disappearance of animals, Berger believes, was prepared for by representations that enable violence.[53] Representations lead to extinction, and extinction

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[51] Baker 1999, 4.

[52] See also the useful overview of debates in animal studies about representation in Simons 2001.

[53] Berger 1980, 3-28, esp. 7 and 18: "In the accompanying ideology, animals are always the observed. The fact that they can observe us has lost all significance. They are the objects of our ever-extending knowledge. What we know about them is an index of our power, and thus an index of what separates us from them. The more we know, the further they are away. Yet in the same ideology, as Lukacs pointed out in *History and Class Consciousness*, nature is also a value concept. A value opposed to the social

leads to the proliferation of representations—around and around we go, where it stops nobody knows. Somewhat like Haraway, Berger notes that relationships between humans and animals are not a matter of fixed features of humans and animals coming into contact, but of individual humans and individual animals, each with specific histories and quirks, entering into unique engagements, in which the animal and the human bring with them the representations that each has of the other to the encounter.[54] For Berger, the representations that humans and animals bring with them play a role in how each treats the other.[55] Like most critics of animal representation, Berger wants to analyze and get closer to the realities of human-animal interaction. Like Jameson, Berger promotes the analytical tools and critical thinking of the humanities to better locate, articulate, and challenge harmful assumptions about animals built into their representations. "Why Look at Animals?" is considered a classic in animal studies because of how it combines detailed description of animals with radical ethical sensibility.

Berger saw the degradation of animals in zoos as foreshadowing not just the future of animals but of humans in late-stage capitalism, and pointed out that the

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institutions which strip man of his natural essence and imprison him. 'Nature thereby acquires the meaning of what has grown organically, what was not created by man, in contrast to the artificial structures of human civilisation. At the same time, it can be understood as that aspect of human inwardness which has remained natural, or at least tends or longs to become natural, the life of a wild animal becomes an ideal, an ideal internalised as a feeling surrounding a repressed desire. The image of a wild animal becomes the starting-point of a daydream: a point from which the day-dreamer departs with his back turned. (18)" While Berger does not address the dominion verses of Genesis, there is a recent (short) book on the relationship between the dominion verses and contemporary U.S. environmental policy. See Hendricks 2005. In contrast to the dominion verses, the back cover contains a quotation from *Numbers* 35:34, "Defile not therefore the land which ye shall inherit."

[54] As Berger claims, animals often appear lazy, passive, and unintelligent, because, as they disappear from the wild, humans increasingly encounter them in contexts of captivity. As Berger famously concludes in *Why Look at Animals*: "Nowhere in a zoo can a stranger encounter the look of an animal. At the most the animal's gaze flickers and passes on…That look between animal and men…has been extinguished. (28)" Thus both the animal look and the human look are highly dependent on the context and history of the two—not just species—but individuals in interaction. Animal encounters now are not what they had been. History plays a role there too.

[55] Although, of course, Berger wrote *On Looking* before Haraway's developed the concept of the companion animal.

relentless enclosure of animals through capture, commodification, habitat loss, and mass extinction, destroys not so much *our* ability to look at animals (which we continue to control through zoos and the proliferating of images) but *their* ability return their gaze on us. Berger sees animals in late capitalism as left with only the weapons of the weak. Slow, sluggish, unresponsive, insubordinate—they are captives who either cannot or will not respond to our gaze, to *our need* for them to display their animality.[56] Lucretius also presents a vision of civilization as totalizing animal life. But in contrast with Berger, Lucretius imagines animals less anthropomorphically, as a still potentially deadly force, or swerve, that could break out at any moment in a burst of resistance.

For Lucretius and Berger, civilization is a process that reduces animals to cogs in a megamachine, and what begins with animals will end with humans. Whether you call it Mars, as Lucretius does, or the culture of capitalism, as Berger does, both critique totalizing attempts to control animal life that respect neither species boundaries nor the species-being of humans or animals. But there is a limit, Berger and Lucretius think, to how far society can push living beings before chaos ensues (as Lucretius thinks) or loss beyond hope (as Berger thinks). For Lucretius, animality is an unstable thing, yet still powerful, like a temporality of prehistory waiting to erupt from within civilization.

To conclude this overview of animal studies, it is necessary to discuss a recent return to ecofeminism and the work of Carol Adams. Ecofeminism grew up alongside the environmental movement in the 1970s. The term first appears in Francoise d'Eaubonne's *La Feminisme ou la Mort* (1974), and was used as a name for a conference at the University of Massachusetts Amherst called "Women and Life on Earth: Ecofeminism in

[56] Berger 1980, 28.

the 1980s." Ecofeminist theorist Noel Sturgeon, in her short history of ecofeminism, underscores the importance of the recent return this way: "Ideologies that authorize injustices based on gender, race, and class are related to the ideologies that sanction the exploitation of the environment." Sturgeon continues: "ecofeminism reworks a longstanding feminist critique of the naturalization of an inferior social and political status for women so as to include the effects on the environment of feminizing nature." In Sturgeon's view, ecofeminism combines antimilitarism, feminism, environmentalism, anticolonialism, and animal liberation.[57] It seeks linkages between these commitments, while taking a particular interest in how feminism and environmentalism could combine to create new concepts that address the ecological crisis. In showing how patriarchy and ecocide have intersected historically to "other" or "background" women and animals,[58] ecofeminism emphasized the possibilities within environmentalism that feminists had been ignoring, and solidarities with feminism that environmentalists had been disregarding.[59]

Ecofeminists believe that patriarchy and the environmental crisis are connected, and that when feminists and environmentalists understand each other's goals, both benefit. As a form of literary criticism, ecofeminism focuses on how landscapes, women, and animals are often described in similar language. It takes the form of discourse analysis. Ecofeminists, however, maintain that, even if initially created for the sake of domination, such discourses linking women and animals can be appropriated to create

[57] Sturgeon 1997, 23-4, and Chapter One, "Movements of Ecofeminism" for an early history. See also Adams and Gruen 2014, 7-36.
[58] For an early ecofeminist critique of the linked "backgrounding" of women and animals, see Plumwood, [1993] 1997, 69-70.
[59] Adams and Gruen 2014, 1. This book includes a history of ecofeminism and animal activism by printing, in the margin of each page, a timeline of significant events in the history of the animal rights and feminist movements.

positive forms of identification for political ends.[60] Ecofeminism does not operate on the assumption that power is only a top-down phenomenon, but that power is more like capillary motion. Through critical thinking, power can be rerouted in productive ways. While there is no essential link between women, animals, or the earth, nevertheless, many ecofeminists believe that all three—the earth, animals, women—are positive in their own right, and could be linked to resist interconnected forms of violence. Ecofeminism thus promotes investigation into the history of gendered discourses of women, land, and animals to critique the traces of such discourse that still haunt contemporary culture, and that are newly revenant in our time.[61] Ecofeminism is more a form of intersectional critique than of identification. It is not a claim about the essence of women, animals, or the earth.[62] Since the 1990s, ecofeminists have tried to avoid essentializing links between women and nature, and have turned either to deconstructing such essentialisms or to performing them for political ends.[63]

The most important ecofeminist working today is Carol J. Adams. In her classic work *The Sexual Politics of Meat: a Feminist-Vegetarian Critical Theory* (1990), Adams argued that the animalizing of women and people of color was linked via common metaphors and tropes to the feminizing, sexualizing, and racializing of animals. Adams' central concept is "the absent referent": the idea that violence against women is often described in terms of violence against animals, and that violence against animals is

[60] Alaimo 2000.
[61] See Kolodny 1975.
[62] This distinction between ecofeminism as a mode of critique and ecofeminism as a claim about the essence of women is central to the work of Stacy Alaimo. See Alaimo 2000; Alaimo 2008, 299-304; Alaimo 2016, 41-53; Alaimo 2018, 530-550.
[63] It is true that 1970s ecofeminism did sometimes present itself naively under the banner of an earth goddess identity and alternative spiritualities, but that is no longer the case. See Sturgeon 1997, 23-58. For strategic essentialisms seems and mimicry, see Homi Bhabha 1994, 265 and esp. Chapter Four.

described in terms of violence against women. Adams demonstrates that abused animals, with surprising frequency, are gendered female.

The absent referent reveals a pattern, a discourse, found everywhere in patriarchal cultures, in which women and animals are compared in highly reductive, violent ways. Such comparisons not only reduce human life to animal life, but also reduce the complexity of animal life in the comparison. Adam's concept of the absent referent is an important tool for locating and dealing with such discourse. The absent referent helps to highlight discourse about women and animals in Lucretius, because of his frequent use of feminine metaphors to describe nonhuman life and the natural world.[64] But Lucretius is not a feminist or ecofeminist. If he presents an intersectional critique of violence towards women and animals, this is only a stop on the path to his attacking *religio*. As critics like Adams have shown for other thinkers, Lucretius links the suffering of women and animals in discourse that is reductive, that reduces the women and animals in the comparison. While ecofeminism can open up passages in Lucretius that resonate with animal studies, these passages become more complex when situated in Lucretius' context.

This dissertation—rooted in political close readings of Lucretius' Latin and invested in paradigms from the environmental humanities, animal studies, and classics—aims to give new life to under-read portions of Lucretius' text. It seeks to show how Lucretius' non-modern ways of thinking can push animal studies to new degrees of clarity and nuance by having Lucretius speak back from his untimely position and his systematic view of the nature of things. The goal of *Lucretius Against Human*

[64] For a survey of how feminine metaphors in Roman philosophy, including in Lucretius, open up what tends to be a masculine discourse to feminine perspectives, though problematically, see Dressler 2016.

Exceptionalism is to contribute, at least in part, to our knowledge of the historicity of contemporary options for thinking about animals in an age of environmental crisis.

Lucretius' Ecological Theory of Temporality and Language

This dissertation is a work of close reading and reception, and is based on Lucretius' own theory of temporality.[65] For Lucretius, time is not a universal, *a priori* category independent from the material world. The only reality, for Lucretius, is the atoms. Time in Lucretius is, therefore, matter in motion, the processes of the material world we live in. This means that for Lucretius, time is more like space—like a topography, landscape, or fold—and not a bodiless measure, uniform reference point, or abstract canon. It is the relationship the material world takes to itself. If time in Lucretius is the dynamic processes of the atomic universe, then it might be better to talk about temporality in Lucretius rather than time, since Lucretius lacks any all-encompassing, coercive, cosmological sense of time. Temporality is distinct from time in that time implies an abstract, uniform, and often coercive timeline, whereas temporality is grounded in matter, local to physical processes, and implies multiple time-scales coexisting at once. Lucretius' universe is a tapestry of interwoven temporalities, a *textum* of atoms. Most of these temporalities are small scale, contingent, and nonhuman.[66] Lucretius' material way of thinking about temporality means that, in his universe, temporality behaves like space, and can be superimposed onto itself, like two points on a plane—or in Michel Serres'

[65] This section is indebted to Holmes 2016b.
[66] Cp. Bennett 2010, 118; Grosz 2004.

famous metaphor, like a crumpled handkerchief.[67] Lucretius, thus, has his own model of temporality, based on the conjunction and disjunction of atoms, that resembles posthuman theories of temporality, which are also based on the dynamism and flux of the nonhuman world.[68]

Since Lucretius takes the ecology of the atomic world seriously as a basis for temporality, his ecological theory of temporality opens up an ecological theory of reception based on his view of the temporality of atoms—their flowing together and scattering apart, equilibrium and disequilibrium, conjunction and disjunction, stochastic tendencies, pathways, and limits.[69] In other words, temporality in Lucretius is not a simple linear timeline. Nor is it *for* anything—progress, providence, inbuilt purposes, divine self-recognition. It is simply the relentless mutation of material reality itself.

This has consequences for ecological politics. If temporality in Lucretius is not *for* anything, then the institutionalization of time through human cultural projects like calendars, schedules, ideas of progress (whether social or technological), military build-up (what Lucretius calls Mars), or the ideology of endless growth (the culture of capitalism)—all of these would be human impositions on all the nonhuman, interwoven temporalities of the natural world.[70] For example, different trees grow at different time-scales with different rhythms. Each kind of tree has a different temporality, because it has a different material make up. Human city planning also has a temporality. As urban sprawl grows, the hegemonic temporality of city planning destroys the alternative temporalities of trees by paving them with parking lots. Human temporalities, despite

[67] Serres 1995, 60.
[68] West-Pavlov 2013.
[69] Webb 2006, 131-5.
[70] Bennett 2010, ix.

their ubiquity and importance in human life, are not woven into the material fabric of reality but constructed and imposed on reality from without. However much human institutionalized time may come to seem like a natural, somatic fact over the course of human history, Lucretius shows human temporalities to be repeatedly disrupted by nonhuman temporalities: like the bodies of wild animals in revolt, storms, fires, soil deterioration, and earthquakes. In *De rerum natura*, Lucretius is particularly keen to show these nonhuman temporalities bursting the linear narrative of Roman imperial strivings.

Somatic temporalities in Lucretius pile up (cumulative time), scatter (chaotic time), and erupt (the swerve). It is, therefore, possible to base a nuanced theory reception on Lucretius' ecological model of temporality. For instance, two points of reception could be said to fold to resemble each other. But like two points in a landscape, however much they overlap, both will retain the specificity of the atomic make up of their positions. In a model of reception based on Lucretius' view of temporality, two points of similarity may resemble one another, but will always contain material differences specific to their temporality, since, again, temporality for Lucretius is a function of atomic processes. The broad application of Lucretius' view of temporality to classical reception would suggest that every repetition, every resemblance between Lucretius and contemporary ecological thought, will contain material differences. On a Lucretian model of reception, there would be no repetition without difference, no invariants, only quasi-invariants.[71]

[71] Holmes 2016b, 27-9.

Lucretius' atomic view of temporality is just one part of his systematic vision of reality, a vision inseparable from his poetic project. As Michel Serres put it: *Lucrèce a raison*: "Lucretius is right" (and "Lucretius has reason"). Serres meant not only that Lucretius got some things right, but far more importantly, that Lucretius has a systematic way of thinking about the natural world, a "reason," a *ratio naturae*.[72] Lucretius' reason, his way of seeing reality, is inextricably bound up with imagination, metaphor, and sensitivity to how language performs reality. It is precisely because Lucretius is not modern, not purely empirical, not a writer of treatises, but a visionary poet of reality, that he can still teach us his old way of seeing reality anew. Science, restrained to denotative prose and the scientific method, has had to catch up time and again with Lucretius' poetic vision. For instance, Lucretius' physics is not just a physics of solids, but of flows, and chaos. We are only awakened to it now because of the advent of chaos theory and theories of turbulence and disequilibria.[73] Had Lucretius not used imagination, metaphor, and poetic language to the extent he did, he would not have theorized reality with the accuracy that is repeatedly validated after the fact—but this is just science catching up with his vision. His validation only makes him "right" for us. His reason was already there, complete in *De rerum natura*, a whole way of seeing. This includes the way he expresses his vision in poetic, metaphorical, connotative, ethical, and value-laden language. Lucretius is, therefore, important for ecology and the environmental humanities because he demonstrates that poetry and imagination—the humanities—are essential to seeing reality accurately.

[72] Serres 2000, 25.
[73] Serres 2000, 4-7.

The poetry of *De rerum natura* is, therefore, not merely ludic honey on the cup. It does not just make Lucretius' "bitter" content more accessible or interesting. This is especially the case with his puns, for which he was already known in antiquity, and which are central to this dissertation.[74] Many scholars see Lucretius' puns as evidence of a poet at play, or as a pedagogical tool to disclose the existence of the invisible atoms (*elementa*) through an analogy with the visible letters of his poem (also *elementa*), i.e. the "letter-atom analogy."[75] There are many cases in *De rerum natura* where these theories work. But there are other uses to which Lucretius put his puns, particularly in his description of prehistory in Book Five. The difficulty for any overarching theory of Lucretius' puns is that we know little about Epicurean semiotic theory.[76] We do know enough, however, to show that Lucretius had an ecological theory of language best seen in his articulating and disarticulating of the sounds in words. To understand what Lucretius is doing with words in his account of prehistory, it is necessary to summarize his thoughts on the origins of language.[77]

Lucretius believed that protohumans, like any other animal, were deeply enmeshed in their environment. As they interacted with this environment, they were continuously bombarded with simulacra flowing off natural objects, impinging on all of their not-fully-human senses.[78] Early humans reacted to these simulacra striking their

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[74] Servius, *in Aen*. 8.187.
[75] Scholars who see Lucretius' puns as ludic: Friedländer 1941; Deutsch 1978; Snyder 1980; Ferguson 1987; Armstrong 1995. Lucretius' puns as pedagogical: Dionigi 1988, 109.
[76] Glidden 1983, 204.
[77] Here I follow the account of Lucretian semantics in Holmes 2005.
[78] Epicurus, *Letter to Herodotus* 75: ὅθεν καὶ τὰ ὀνόματα ἐξ ἀρχῆς μὴ θέσει γενέσθαι, ἀλλ' αὐτὰς τὰς φύσεις τῶν ἀνθρώπων καθ' ἕκαστα ἔθνη ἴδια πασχούσας πάθη καὶ ἴδια λαμβανούσας φαντάσματα ἰδίως τὸν ἀέρα ἐκπέμπειν στελλόμενον ὑφ' ἑκάστων τῶν παθῶν καὶ τῶν φαντασμάτων, ὡς ἄν ποτε καὶ ἡ παρὰ τοὺς τόπους τῶν ἐθνῶν διαφορὰ εἴη. "Thus names too did not originally come into being by being given; but by the natures of human beings themselves according to each people *undergoing feelings* particular to them and by *receiving perceptions* in their

bodies automatically. When hit, without conscious thought, they emitted air through the mouth. That air, as it exited the mouth, made a sound, a *sonitus*, which is a physical thing, a combination of atoms.[79] These sounds, released automatically in reaction to the protohuman environment, were inarticulate. By inarticulate, I mean that they were not yet physically shaped or crafted by the human tongue. At this stage of prehistory, the tongue was not yet a craftsman, not yet the *daedala lingua* of later humans with words and language. Early humans did not have speech because, like other animals, they did not have the right kind of tongue to craft, shape, or articulate animal sounds into words.[80]

Nonetheless, these animal sounds still carried information about that protohuman body and its relationship to its environment.[81] As the sounds were ex-pressed from the body (*expressit*, ἔκθλιψις), they picked up and interacted with the atoms inside the early human body on their way out of the mouth. Those protohuman sounds conveyed particles from the state of the protohuman body at the time of its encounter with the simulacra of the prehistoric environment, and were partly shaped by them.[82] And those sounds

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particular way [each people] *emitted air, formed into shape by each of these feelings and perceptions*, as would be the difference in peoples' localities. [my italics]"

[79] Epicurus, Usener Fragment 334: ὡς διδάσκει Ἐπίκουρος...φύσει ἐστὶ τὰ ὀνόματα, ἀπορρηξάντων τῶν πρώτων ἀνθρώπων τινὰς φωνὰς κατὰ τῶν πραγμάτων. "As Epicurus teaches…names are by nature: the first human beings having burst out with certain sounds in reference to the things."

[80] Epicurus, Usener Fragment 335: ὥστε καὶ τὸ ὄνομα φύσει εἶναι ὡς ἔργον φύσεως.... ὁ γάρ Ἐπίκουρος ἔλεγεν ὅτι ουχὶ ἐπιστημόνως οὗτοι (οἱ πρῶτοι θέμενοι) ἔθεντο τὰ ὀνόματα, ἀλλὰ φυσικῶς κινούμενοι, ὡς οἱ βήσσοντες καὶ πταίροντες καὶ μυκώμενοι καὶ ὑλακτοῦντες καὶ στενάζοντες. "Thus, the name is by nature, as a work of nature…. For Epicurus said that these men (the first name givers) established names not knowingly but by being moved by nature, like those who cough and sneeze and moo and bark and groan." Cp. Rousseau *On the Origin of Inequality*: "Inarticulate cries, plenty of gestures, and some imitative sounds, must have been for a long time the universal language; and by the addition, in every country, of some conventional articulate sounds...particular languages were produced."

[81] Mackey (2015, 73) argues that, since Epicurus' second stage of language was thought to build on preexisting δηλώσεις in the first stage, i.e. the stage of the automatic emission of names, that the first stage already had language as such, however uneconomical in communication.

[82] Mackey 2015, 71.

referred, in a purely natural, unintentional way, to that environment.[83] However, these protohuman sounds were not yet words (*verba*), since they communicated more about the body of the pre-human utterer than the external world, even though the earliest human sounds were already becoming useful as names for things and had a regularity given to them by the environment as a stable cause of those sounds.[84]

It was only later, when the human tongue—a quasi-personified body part—was able, first to divide up the pre-human sounds, then to re-articulate them, that words arose. The tongue, like an independent agent, shaped, crafted, and molded those early human sounds like a potter or an artist: the *daedala lingua*.[85] Thus, for Lucretius, human language emerges only when the tongue becomes capable of instinctively dividing up and rearticulating sounds.[86] The result for Epicurean semiotics is that words are not entirely arbitrary signs. They do not get their meaning only from difference with other words. Rather, even at advanced stages of language, they still retain some relation to the ecological conditions from which they sprung. But there is a middle step, for Lucretius, between words getting their meaning from their rootedness in nature and words getting their meaning from their difference with other words: the point in human prehistory when the animal sounds generated from interaction with the environment were crafted by the tongue. Since Lucretius imagines the tongue taking the prehistoric phonemes, i.e. the sound particles, and rearranging them into a different atomic combination to make a word, a word for Lucretius is partly related to its environment and partly a human

[83] Holmes 2005, 557.
[84] Holmes 2005, n. 61.
[85] Holmes 2005, 561.
[86] Cp. the importance of humans evolving the right kind of tongue for language, in contrast to other primates in Everett 2012.

artifact.[87] For Lucretius, words are naturalcultural. But as language and civilization proceed, words, just like other technologies in Lucretius' culture story, become more and more detached from their ecological origins, and run to excess to create a virtual world detached from the natural world. Important for understanding puns in *De rerum natura*, then, is that words still retain some of the phonemes, some of the sound particles, that protohuman bodies emitted in automatic reaction to their environment. For Lucretius, those sounds are still in our words.

The fact that human words retain protohuman sounds has repercussions for what Lucretius' puns *do* in his prehistory: Lucretius' puns disclose the proto-human sounds by disarticulating modern human words whose ecological origins Lucretius is describing in his prehistory. The puns rewind the clock on language, disarticulating words back either into their original animal phonemes or into forces in the pre-human environment that gave rise to the words. While imagination and poetic language are important for Lucretius to see the natural world accurately, Lucretius realizes that language can become detached from the natural world over time. Language at advanced stages creates a virtual world, where words refer only to other words—a world of free-floating signifiers that has lost its connection with the ecological conditions of its emergence. This is not dissimilar from what is happening now, in late modernity, as mass extinction and deforestation increasingly detach human language and culture from its conditions of emergence in the natural world. What will happen to the human mind and language without these ecologies?

[87] Porter 1996, 622.

Lucretius is, thus, highly sensitive to the ecology of language, because for him a lot is at stake. Humans abuse the natural world and animals, at least in part, because language has lost its connection with its ecological conditions. But Lucretius is also fully conscious that using poetic or imaginative language to perform reality, as if to return language to the natural world of its emergence, comes with risks, just as any performative utterance may fail in its perlocutionary effects.[88] Lucretius can only try to perform in advanced language, and in the bodies of his Roman readers, the physical sensations and feelings of those early human ancestors, who, when bombarded with the simulacra of their environment, sent forth the first names in direct response to the things of their ecological environment.

Lucretius' heightened awareness to how advanced language, while fictive, can nonetheless perform the linguistic habitat of early human ancestors is important for environmental reasons. As ecocritic Cheryll Glotfelty has argued, reading poetry about the environment is politically important because poetry does not just describe the nonhuman world. It also discloses its value through poetry's heightened attention to language's connection or disconnection to the environment.[89] Lucretius' *De rerum natura* is important for ecocriticism because it presents a poet trying both to re-root and re-route words back into the natural world—but not naively. While Lucretius wants to return words to the taproots of pre-human sounds, he is fully conscious of the limits and risks of a project that would return language, already at an advanced stage, to its ecological conditions of emergence. His solution is to use advanced language not so much to produce analogies as to perform *natura*—a *natura* that is itself a performance, a

[88] Holmes 2005, 560-580.
[89] Glotfelty 1996, xxiii.

dance, of atoms. *Natura* and *De rerum natura* hold hands in that dance. As ecopoet Gary Snyder expressed it in his beautiful poem "Ripples on the Surface" from his volume of selected poems *No Nature,* "Nature not a book, but a *performance*."

Ripples on the Surface

"Ripples on the surface of the water—
were silver salmon passing under—different
from the ripples caused by breezes"

A scudding plume on the wave—
a humpback whale is
breaking out in air up
gulping herring
—Nature not a book, but a *performance,* a
high old culture

Ever-fresh events
scraped out, rubbed out, and used, used, again—
the braided channels of the rivers
hidden under fields of grass—

The vast wild
the house, alone.
The little house in the wild,
the wild in the house.
Both forgotten.

No nature.

Both together, one big empty house.

-Gary Snyder

Chapter Summaries

This dissertation offers a new reading of Lucretius' *De rerum natura* that focuses on the language used to describe animals and ecology in the poem, as interpreted through frameworks from animal studies and the environmental humanities. Chapter One, "Iphigenia and the Calf," engages with Carol Adams' concept of the "absent referent," from her ecofeminist classic *The Sexual Politics of Meat*. In this chapter, I show how, for Lucretius, violence against women and animals is intersectionally connected under patriarchal *religio*. I claim that the absent references to animality in the sacrifice of Iphigenia in Book One (1.80-101) are made present again in the sacrifice of the calf and the grief of the mother cow in Book Two (2.347-66). While Lucretius does not intend to critique patriarchy *per se*, but rather *religio*, he nonetheless unites these two scenes in a way that not only describes human pain in terms of the animal pain, but animal pain in terms of human pain. The result is that animal suffering does not take a back seat to human suffering in the politics of these interconnecting metaphors.

In Chapter Two, "Lucretius' Dark Ecology," I show how the state of nature in Lucretius is a place full of animal pleasure, but mostly tending to pain. Dark ecology is the idea that the world is interconnected and that, if we are honest, this results mostly in pain. [90] It rejects the overly sentimental attitude of much nature writing influenced by Deep Ecology, in which nature was depicted as a morally-uplifting, harmonious whole. For dark ecology, being interconnected means being vulnerable. We do not have to pretend to love or feel improved by immersion in what is often an inhuman natural world.

[90] For "dark ecology," see Morton 2007, 181-197; Morton 2010, 59-97; Morton 2016.

You can care about ecology while being a weird, introverted, goth, pessimist who does not bask in the glory of the great outdoors, but who nonetheless thinks that ecological enmeshment will only become more painful the more we abuse animals and the natural world.

At the heart of dark ecology is the idea that any attempt to extricate ourselves from the ecological mesh will only result in more pain. In "Lucretius' Dark Ecology," I show how Lucretius' description of prehistory evinces: (1) the interconnectedness of humans and their environment, and (2) the pain that this enmeshment entails. In doing so, Lucretius rejects the Golden Age myths of prehistory that preceded him, and in particular Empedocles vision of prehistory as a time of human-animal harmony under the reign of Aphrodite.[91] But Lucretius does not just describe prehistory as dark ecology. His language also performs that dark ecology by re-staging the painful and pleasurable forces that caused early humans to emit the key-words he uses to describe the state of nature.[92] Lucretius does this by recycling the letters and sounds of the words that he uses into puns that recreate the painful and pleasurable forces in the landscape of prehistory that gave rise to the protohuman utterances that would later become the words *vis*, *Venus*, *Orcus,* and *utilitas*, words related to concepts central to Epicurean philosophy.

In Chapter Three of this dissertation, "The Animal Contract," I present Lucretius's account of the birth of the companion animal. I show how Lucretius views the companion animal as the solution to the problem of how humans and animals survived an increasingly indifferent natural world. Lucretius introduces the companion

[91] Gale 1994, 62 and 168-9.
[92] As Shearin (2015, 8-9) points out, there is always a tension in performative utterances between description and performance.

animal in his attempt to give an anti-creationist account of prehistory. Companion animals, for Lucretius, are not "natural" in the sense that they are created by a divinity, but natural in the sense that *natura* drove the weakest animals to seek out humans for protection. In turn, the animals offered benefits to their human protectors, and forged an interspecies social contract with humans for collaborative survival, a form of procedural justice on terms that both the humans and nonhuman companions could understand.[93]

In "The Animal Contract," I take Lucretius' story of human-animal contractarianism seriously as a way to push the moral imagination to envision a multispecies society operating on a hedonic basis. As with Donaldson's and Kymlicka's notion of nonhuman citizens in *Zoopolis: a Political Theory of Animal Rights*, Lucretius, I argue, shows humans to have relational obligations to companion animals that stem from a history of shared life and collaborative survival. I conclude "The Animal Contract" by arguing that, as with Haraway's concept of the companion animal, the animal contract in Lucretius ultimately aims at the collaborative survival of humans and animals, however great the power inequities and instrumentalization sedimented in these relationships. The animal contract is a way of imagining how to maintain non-perfect but mutually beneficial relationships with other animals for survival, and Lucretius' interspecies contractarianism is a survivalist paradigm. As with Haraway, the animal contract in Lucretius demonstrates how much more we are capable of when we live with other animals.

In Chapter Four, "Garden and Empire," I present an extended analysis of a lengthy analogy. Lucretius begins the analogy by using linguistic puns to perform the

[93] For *natura* as a kind of power controlling the behavior of atoms to create and foster living things (1.56, 1.216, 1.263, 1.629, 2.1117, 5.1362), see Gale 1994, 67.

hidden world of atoms. Lucretius then moves, in the second half of the analogy, to compare atomic reality with what he believes to be the two fundamental human cultures: the culture of the Epicurean Garden and the culture of empire. Lucretius not only contrasts these two cultures, but describes their landscapes in language that connotes the contrasting ethical values of Garden and empire. In this cultural part of the analogy, Lucretius presents the language of nature as hewing closely to the language of ethics.

As the cultural part of the analogy proceeds, Lucretius increasingly uses the word *simulacra* to contrast the simulacral worlds of Garden and empire. Lucretius describes the Garden in language that re-creates the world of Epicurean culture, in which humans and animals are harmoniously entangled in instrumental but mutually beneficial relationships. The culture of empire, by contrast, aggressively fills the landscape with loud and flashy simulacra. In a moment of incredible materialist poetics, Lucretius nearly collapses the simulacra shouted or stomped out by the culture of empire into the simulacra enacted by the words of the text. As the analogy comes to an end, the word *simulacra* itself starts to recreate for the reader the dizzying virtual world of the culture of empire. Lucretius' subtle use of poetic effects in this analogy shows the culture of empire to be so excessive, so far gone from the limits of nature, that its simulacra have virtually occluded the natural world they live in.

Chapter Five, "The Animal Revolt," follows up on the animal contract and on Lucretius' distinction between Garden and empire. Lucretius describes contract animals being slowly turned into war machines. As they are led onto the battlefield, however, the animals revolt against their "armed teachers and savage masters" (5.1311), on what

Monica Gale has called a "cosmic battlefield."[94] Lucretius describes the rebel animals as an explosive mob or tempest that builds up as humans grasp for more and more control over their bodies. Lucretius double-codes the rebel animals as a *turba* and a *turbo*, a "mob" and "atomic vortex," and the animals form packs to break free from human control. [95] The animals reassert their animality with a ferocity whose grandeur is equivalent to the control that built up to it. As the animals break out onto a line of flight, they free themselves from the runaway instrumentalization of their bodies by a civilization totalized by Mars.[96]

The animal revolt has the hallmarks of a nature-revenge story. Lucretius seems to cathect his emotions onto the rebel animals, using their rage, pain, and desire for freedom to critique the culture of the late Roman Republic.[97] The bodies of the animals themselves do the work of cultural deconstruction, while Lucretius' words connote the swerve, suggesting a not-quite-human but still voluntary desire in the animals for freedom.[98]

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[94] Gale 2000, 232-40.

[95] Epicureanism was, as Bernard Frischer argued, not only a subculture that resisted the dominant culture of its time—whether that be the Greece of Epicurus or the Rome of Lucretius—but also an alternative community, i.e. a community that withdraws from the dominant culture (*fuite*). Frischer claims that Lucretius' history in Book Five is not just a retelling of the past in a naturalistic light critical of myth and religion, but a history of resistance and flight from the dominant culture of the Roman Republic. See Frischer 1982, 46-52, 67-86, esp. 49, 61-2.

[96] For "line of flight," see Deleuze and Guattari, 1987, 35. For the importance of putting animal pain into a narrative of that animal's life to create the sympathy necessary for humans to imagine what it is like to be that animal, see Payne 2010, 18-19.

[97] For the depiction of animal aggression and vulnerability as cathexis, or emotional investment, on the part of the narrator, see Payne 2010, 28-57, esp. 49-52.

[98] For the argument that the Lucretian swerve is less a matter of "free will" than of voluntary action and natural and necessary causes internal to the person in question (in my case, the rebel animals) that itself seeks freedom from domination, see Johnson 2013, 99-130, esp. 116-130.

Chapter One: Iphigenia and the Calf

Always put the cruelty first.
-Judith Shklar

In one of the earliest works of scholarship to provide a feminist framework for linking the abuse of animals with the abuse of women, Carol Adams claims that in patriarchy it is not so much that men have power over women and humans in general have power over animals. Rather, men have power over women, (feminized) men, and (feminized) animals.[99] In other words, male power pervades nature in gendered form. Adams was one of the first to notice that descriptions of animal abuse are often laced with connotations of gender: abused animals tend to be gendered as female, and the act of animal abuse is described in ways similar to the abuse of women.

"Gender," Adams says, "is an unequal distribution of power; interconnected forms of violence result from and continue this inequality. In a patriarchy," Adams continues, "animal victims, too, have become feminized. A hierarchy in which men have power over women and humans have power over animals, is more appropriately understood as a hierarchy in which men have power over women, (feminized) men, and (feminized) animals." [100]

This chapter uses Adam's ecofeminist framework, the "absent referent," to highlight a pattern in Lucretius' *De rerum natura*. The absent referent is the idea that descriptions of violence against women often contain references to animals, and that

[99] Adams 1995.
[100] Adams 1995, 55-84 and 80.

descriptions of violence against animals are often gendered so as to contain references to women. While Adams is primarily interested in the ways that meat eaters conceal the animality behind the meat they eat, she also shows how meat eating has come to be associated with masculinity and the butchery and objectification of female bodies. In short, Adams thinks that violence against women tends to be described in terms of violence against animals and violence against animals in terms of violence against women.

This chapter will show how Lucretius' description of male violence against women and animals becomes more visible when read through Adams' notion of the absent referent. Here, as in all the other chapters of this dissertation, I present political close readings, in this case, of two interconnected texts from *De rerum natura*. By political close reading, I mean close readings of Lucretius' Latin that do not treat the text as an aesthetic object only. Political close reading involves showing how Lucretius is political in ways that can only be appreciated by attention to the subtler, smaller aspects and nuances of his text. The phrase political close reading is meant to signal that by engaging in close reading, I do not mean to invoke the politics of the Southern Agrarians or New Critics, but rather to blend attention to the details of Lucretius' language with ecological politics and the animal liberation movement.[101] The first text for political close reading is from Book One of *De rerum natura*. It describes the sacrifice of Iphigenia, which is depicted as an animal sacrifice. The second text for political close reading is from Book Two of *De rerum natura*, and shows a calf being sacrificed on an altar, while its grief-stricken mother wanders a *locus amoenus* in search of it. These are two of the

[101] Cf. North 2017.

most moving scenes in *De rerum natura*. In the latter passage about the sacrificed calf, I argue that Lucretius makes the absent referent present by turning the sacrifice of Iphigenia on its head. While the sacrifice of Iphigenia is described in terms that connote animal sacrifice, the sacrifice of the calf is described in terms that connote human sacrifice. By reading the two passages together, I show that Lucretius makes the absent animal referent in the sacrifice of Iphigenia present again in the sacrifice of the calf. And the human referent in the sacrifice of Iphigenia is forced to play the role of the absent referent in the sacrifice of the calf.

The methodology of this chapter consists in putting these two scenes from *De rerum natura* into a hermeneutic circle, to point out their resonances and to suggest reasons for thinking that Lucretius meant the two passages to be read in dialogue with one another.[102] An important claim in this chapter is that the sacrifice of Iphigenia in Book One foreshadows not generally or vaguely but specifically the sacrifice of the calf in Book Two. The sacrifice of the calf in Book Two is foreshadowed in such a way that it cannot be read without thinking about the traces of Iphigenia from Book One. Once this hermeneutic circle is set in place, these passages reveal Lucretius to have hit upon a strikingly contemporary perspective on the intersectional nature of patriarchal violence against women and animals. But crucial to my argument is that he has not hit upon this for ecofeminist reasons; rather, he has happened upon this structure in his attack on *religio*. This means that the intersectional nature of violence that emerges in Lucretius' text, albeit unbeknownst to him, can be made more visible by reading it through an

[102] Alison Sharrock has claimed that the two passages "must be allowed to link up" together, but has not shown how they link. Sharrock 2006, 268.

ecofeminist lens. Lucretius himself, however, has not anticipated ecofeminism and is not a feminist—not a critic of patriarchy but of *religio*.

In this chapter, I show that Lucretius inadvertently and unwittingly echoes ecofeminism as a mode of critique, insofar as interlocking myths of violence against women and animals emerge in his text, having a common source in *religio*. But while I show that Lucretius employs a mode of critique legible from an ecofeminist standpoint, and a logic that gains by comparison with ecofeminist concepts like Carol Adam's "absent referent," I do not claim that Lucretius is a feminist. As Georgia Nugent and Alison Sharrock have shown, *De rerum natura* does not all a female reader to project herself into the poem, and consistently appeals to a male Roman reader. Brooke Holmes has shown that the "humans" who forged the social contract in *De rerum natura* are in fact men, and that it is only when fathers begin to care for their children that society, on Lucretius' account, emerges to make humans exceptional in the natural world. Lucretius thereby makes the care of fathers essential to the emergence of society, while backgrounding the care of mothers to the realm of prehistory, animal "nature," and instinct.[103] Lucretius also fetishizes the links between women, nature, and animals in ways that limit the role of the feminine in *De rerum natura* to nurturers, erotic bodies, or wombs.[104] Even when an ancient writer, like Lucretius, is not himself an ecofeminist,

[103] Holmes 2103 demonstrates that the humans of the social contract a very pointedly men, and that Lucretius shows men and their negotiations of women and children as essential to the emergence of society.
[104] For arguments against the idea that Lucretius is a feminist, see Nugent 1994, 179-205; Sharrock 2008, 253-274. Nugent argues that while Lucretius aligns himself with the earth as *terra mater*, his descriptions of mother earth end up reducing possibilities for a female reader to project herself into the poem: "there are two main roles in the poem for women—the generative body and the (repulsive) erotic body." Nugent conclusively shows that women's roles in *De rerum natura* tend to be limited to bodies or wombs, which is true about the mother cow and Iphigenia passages. Women in Lucretius, Nugent shows, tend to be figured as minds incapable of understanding. This is also true of Iphigenia and the mother cow. Both play the role uncomprehending bodies in the throes of suffering, with Iphigenia's suffering quasi-eroticized. Even when

locating ecofeminist structures of thought in the past is still important because it lends historicity to contemporary options in the environmental humanities, like ecofeminism, even though it cannot be said to anticipate ecofeminism as a fully conscious and powerful mode of critique for an era rife with ecocide and misogyny.[105]

Unlike Adams' more analytical form of criticism in *The Sexual Politics of Meat*, which was itself a development out of deconstruction,[106] the absent referent in Lucretius arises more from Lucretius' tendency to use myth and mythmaking to critique Roman culture. The sacrifice of Iphigenia and of the calf are, in fact, origin or foundation myths. They are not just myths of violence but myths of foundational or "originary violence." By originary violence, I mean the way that structures of society (the "laws") are set up in some original act or event to justify keeping some persons in, and some out, of the human community. Myths of originary violence justify who gets society's protections and who do not. They are myths that establish origins that justify who is killable and who is not.[107] But whereas myths of originary violence are usually negative, in the sense that they justify violence, Lucretius' myths of originary violence are positive, in the sense that they critique the violence against women and animals that has its source in male-dominated *religio*. Lucretius could not be clearer that the origin of this violence resides not with men alone but with men using religion for the sake of power. Thus, his critique of the violence against women and animals is really a critique of *religio*.

Lucretius praises connections between women and nature, we have to be wary of what Val Plumwood (1997 [1993], 9) has called "the angel in the ecosystem".

[105] Alaimo 2000; 2008, 299-304; 2016, 41-53; 2018, 530-550.

[106] Adams, 2010 [1990]), 5-6.

[107] Wolfe 2013, 8-9.

It is important to note that *religio* in Lucretius does not mean "religion" exactly. Nor is it entirely different either. For Lucretius, *religio* refers to any addition of thought or opinion to the bare system nature. It is an imposition of human thought and meaning onto a nonhuman world. Whether we call this imposition "myth," "ideology," or "superstition" (the latter is often the preferred translation for *religio* in Lucretius),[108] the problem with *religio*, Lucretius thinks, is that it offers tools for the powerful (i.e. men, in *De rerum natura*) to do violence to the rest of the living world. Lucretius' myths, therefore, are critical myths and not justificatory ones.

Reading closely the sacrifice of Iphigenia and of the calf in dialogue with one another will reveal that Lucretius is not just critiquing religion in general, but highlighting the victims who suffer systematically under male-dominated *religio*. Lucretius' depiction of women and animals, therefore, comes close to representing what another philosopher famously called "the non-power at the heart of power."[109]

[108] "Superstition" is the preferred translation in the commentary by Leonard and Smith (1968 [1942], 206). And yet, the character Balbus in Cicero's *De natura deorum* (*On the Nature of the Gods*) distinguishes between *religio*, which for him is a positive term that denotes the understanding of the true meaning of myth and ritual, and *superstitio*, which Balbus considers a negative term, denoting popular or literal and unquestioning belief in received myths. See Gale 1994, 25, note 90. What Lucretius criticizes about *religio*, therefore, is not just uncritically believing certain things about the gods but also the consequences of such belief, which he characterizes as something that "weighs down" (*gravi sub religioni*, *De rerum natura* 1.63), "oppresses" (*oppressa*, 1.63), and "stands on top of" or "crushes" (*super…instans*, 1.65) the human spirit. Epicureans, for their part, advocated a notion of the gods that hews as closely as possible to the bare realities of "nature," i.e. atomic nature. They believed in gods, but in naturalized, material, atomic gods, who dwell in tranquility in the *intermundia*, i.e. in the empty spaces between worlds.
[109] Derrida, 2008.

The Absent Referent: Animal Traces in the Sacrifice of Iphigenia

In the most famous scene from Lucretius' *De rerum natura*, Agamemnon, the commander of the Greek fleet, sacrifices his own daughter, Iphigenia—or "Iphianassa," as Lucretius calls her—to receive favorable winds from the goddess Diana to sail to Troy. As classicists have noted, the sacrifice of Iphigenia is described as both an inverted wedding and as an animal sacrifice.[110] Connotations of animality, i.e. the way the animal becomes the absent referent in Iphigenia's sacrifice—and not connotations of marriage, although important—will be the focus here. In the passage below, Lucretius famously uses the sacrifice of Iphigenia to warn us about the dangers of religion.

Illud in his rebus vereor, ne forte rearis
impia te rationis inire elementa viamque
indugredi sceleris. quod contra saepius illa
religio peperit scelerosa atque impia facta:
Aulide quo pacto Triviai Virginis aram
Iphianassai turparunt sanguine foede
ductores Danaum delecti, **prima virorum**.
cui simul **infula** virgineos circumdata comptus
ex utraque pari malarum parte profussast,
et maestum simul ante aras adstare parentem
sensit et hunc propter ferrum celare ministros
aspectuque suo lacrimas effundere **civis**,
muta metu terram genibus summissa petebat.
nec miserae prodesse in tali tempore quibat
quod patrio princeps **donarat** nomine regem;
nam sublata **virum manibus** tremibundaque ad aras
deductast, non ut sollemni more sacrorum
perfecto posset claro comitari Hymenaeo,
sed casta inceste nubendi tempore in ipso
hostia concideret mactatu maesta parentis—
exitus ut classi felix faustusque **daretur**.
tantum religio potuit **suadere** malorum.

[110] Bailey [1947] 2001, vol. 2, 614-15; Munro 1846, *ad loc*. 126-8.

The one thing I fear in this matter is that you perhaps think that you are entering into the principles of an unholy system (*impia rationis elementa*) and a path of crime. But, on the contrary, too often religion has given birth to wicked and unholy deeds: as when at Aulis the chosen leaders of the Danaans, the prime of men, foully defiled the altar of the Virgin of the Crossroads with the blood of Iphianassa (i.e. Iphigenia). As soon as the ribbon had bound her virgin braids flowing down equally on both sides of her cheeks, and as soon as she sensed her sad parent standing at the altar and next to him the attendants hiding the knife and her countrymen pouring out tears at the sight of her, mute with dread (*muta metu*), lowering herself (*summissa*) by her knees she sought the earth. It was no help to the poor girl that she was the first to have given (*donarat*) the name of 'father' to the king; for lifted up by the hands of men, she was led to the altar trembling, not so that when the solemn custom of the ritual was completed she might be escorted by the loud wedding song, but so that as a pure victim (*casta hostia*), sad, she might fall impurely (*inceste*) by the sacrificing stroke of her father at the very age of marriage—so that a happy and fortunate departure might be given to the navy. So powerful was religion in persuading (literally "making sweet") evils.

Here, Lucretius argues that serious dangers arise from having false views about nature: in the case of Iphigenia, from believing that gods intervene in the world and that, therefore, humans should give them worship, and even human sacrifice.[111] But since Lucretius believes, contrary to Roman religious norms, that gods do not intervene or act in the world, sacrifice, in Lucretius' view, can only be a pointless cruelty, whether of humans or of animals. Lucretius describes the sacrifice of Iphigenia as both an inverted wedding and as an inverted animal sacrifice, and numerous ironies follow from this. First, whereas Lucretius thinks that a true knowledge of nature would be life producing, religion, for him, has a deadly fertility, as he says: "religion has **given birth** to wicked and impious deeds" (*religio* ***peperit*** *scelerosa atque impia facta*, 83). Religion, therefore, for Lucretius, turns out to be a kind of necropolitics, opposed the vitalism of animal life and of human marriage.

[111] Sedley [1998] 2003, 154, note 37.

As Monica Gale has noted, Lucretius specifies the agents of this religious violence as males, and characterizes them, ironically, as the "chosen leaders of the Danaans, the prime of men" (*ductores Danaum* ***delecti***, ***prima*** *virorum*, 86).[112] They are, indeed, "chosen" and "primary" leaders—but of a pointless cruelty. Instead of producing life, they "foully defiled with Iphigenia's blood the altar of Diana" (*Triviai Virginis aram*/*Iphianassai turparunt sanguine foede*, 85). Diana was originally a tree spirit, the mistress of animals, purity, the moon, and wildnerness, and Iphianassa was an archaic name for Artemis/Diana.[113] Lucretius also specifies that it was "the hands of men" (***virum*** *manibus*, 95) by which Iphigenia was "led" (*deductast*, 96) to the altar against her will. Such hands, ironically, signified trust or protection in paternalistic Roman culture. The leadership of these men is, therefore, no leadership at all. They lead Iphigenia like a scared, unwilling animal to slaughter, whose emotions—for she has no voice—are articulated through her trembling body (*tremibunda*, 95).[114]

Iphigenia's emotion also blends with the narrator's voice in the striking repetition of "ah" sounds in *m**a**nibus tremibund**a**que **a**d **a**r**a**s*/*deduct**a**st*, which seems to work like an emotional release-point. These sounds seem to signal a freely-circulating feeling or emotion, that is shared not only with the internal audience of weeping citizens—the *civis* of line 90, who "pour out their tears" (*lacrimas effundere*)—and not only with the energies and rhythms of Lucretius' hexameters, but also with the free-floating, affective atmosphere in the passage in general.[115] The "ah" sounds seem to mark the emotions that

[112] Gale 1994.
[113] Leonard & Smith 1968 [1942], *ad loc*. 212. For Iphianassa as an archaic name for Artemis/Diana, herself a "mistress of animals," see Budin 2016, 4, 115-142.
[114] Munro notes that *tremibunda* ("trembling") expresses at once the trembling of the animal victim and the fluttering anxiety of a bride (Munro 1846, *ad loc*.).
[115] Cp. what Julia Kristeva says about bodily affect as the basis of symbolic affect in literature (1995, 104): "[There is] the *semiotic*, which consists of drive-related and affective *meaning* organized according to

accompany the revelation that the narrative logic of the passage had been leading up to all along, to the point when the truth of *religio* is finally revealed: "ah ah ah ah!"[116]

Connected with the theme of revelation and affective release is that of "binding" that links religious violence against women and against animals. For instance, Lucretius describes Iphigenia as having a ribbon, or *infula*, "bound" (*circumdata*, line 87) around her "virgin *braids*" (*virgineos…comptus*, 87). This *infula*, or ribbon, blindfolds her.[117] The binding also looks to the folk etymology of *religio*, which was thought to derive from *re-ligare*, "to bind down" or "to bind back." Iphigenia is, in fact, bound with a sacrificial animal ribbon, an *infula*, rather than a marriage ribbon, a *vitta*.[118] It is this animal binding that ties Iphigenia's "virginally bound hair" (*virgineos…comptus*), which has been prepared as if for marriage. These human-animal bindings connect to the larger theme of binding between humans and gods that Iphigenia's sacrifice sets in motion. There is, for instance, the ambiguity of *quo pacto* at the beginning of the passage (line 84). *quo pacto* can mean both "in which way" and "by which *pact*." Iphigenia is bound to death under this pact (*quo pacto*), so that the gods will give the navy winds to sail to Troy (*exitus ut classi felix faustusque* ***daretur***, 100). It is through the motif of binding that

primary processes whose sensory aspects are often nonverbal (sound and melody, rhythm, color, odors, and so forth), on the one hand, and *linguistic signification* that is manifested in linguistic signs and their logico-syntactic organization, on the other."

[116] For the idea that different narrative structures or logical flows, whether in literary or philosophical texts, can release new or different affects, see Deleuze's reading of affect in Spinoza (Deleuze 1997, 138-51).

[117] In Aeschylus' *Agamemnon*, Iphigenia was gagged (χαλινῶν, line 238) to not curse the house of Atreus. I take Lucretius' specific linking of her silence and her fear in *muta metu* ('mute with fear', line 92 above), and the long accusative/infinite construction that depends on the enjambed *sensit* ('she sensed') in line 90, to suggest that the ribbon does not gag her but blindfolds her. As I read the passage, she is reduced to understanding her situation through feeling alone. There is nothing in the passage that suggests that she "saw" anything, as Rouse and Smith translate it.

[118] Leonard & Smith 1968 [1942], *ad loc.* 210.

violence against women and animals is, in Lucretius' view, structurally bound up with male-dominated *re-ligio*.[119]

Through the binding power of *religio*—sightless, and like an animal led to slaughter—Iphigenia is reduced to sensation alone (*sensit*, 90). She goes from human to scapegoat, suspended in an in-between of humananimality. Lucretius marks this suspension as a loss of humanity, which adds to the sense of the passage's tragic double-bind. It is here that *religio* turns Iphigenia into "bare life," cast out of the community of human language and political belonging.[120] She only *senses* the sadness of her murderous father, Agamemnon, standing by the altar (*maestum…parentem*/***sensit***, 89-90). And yet, her sensations remain value-laden and contain content. For example, she is able to sense the fact that the priests are concealing the sacrificial knife nearby.[121] *Ferrum*, the word for "knife" here (literally "iron," 90), tends to be associated by Lucretius with *ferus*, "wild"/"barbaric"/"feral." Given the atmosphere of the passage, Lucretius seems to provoke these associations in the reader. To continue with the idea that Iphigenia is able, through feeling alone, to understand what is happening, Lucretius also shows Iphigenia

[119] For the practice of adorning the sacrificial animal with a ribbon, or *infula*, and other binding practices, see Bremmer 2010 [2007], 134-5; Scheid 2011 [2007], 264.

[120] For "bare life" see Agamben 1998, 9. Bare life is neither *bios*, which is life in a collectivity or political community; nor is it *zoe*, which is unqualified living existence, as *zoon* denotes in Greek. *Zoe* exists prior to language and community. *Bios* exists only in community. Bare life, however, is a third term. It is what comes into being when *zoe* enters into *bios*, i.e. when unqualified life (*zoe*) is on the threshold of entering into or forming community, and begins to take on qualities associated with living in a community, like politics and language. More dramatically, however, bare life also comes into being when those already living in communities (*bios*) are violently removed from that community, and lose the protections, rights, status, and language of that community. It is important to note that when cast out, *bios* does not become *zoe* again, in Agamben's view. It does not return to being unqualified life. And yet it is no longer *bios* either, since it has been cast out of the community. Bare life is, therefore, neither completely unqualified life, nor political life, but something in the interzone between the two. Bare life, therefore, tends to be difficult to classify. The important fact is that by becoming bare life *bios* becomes killable with impunity. And more horrific still, it is precisely in rejecting bare life that a community founds itself a community in the first place.

[121] For the practice of concealing the knife from the animal victim, see Bremmer 2010 [2007], 136.

sensing her fellow countrymen's gaze (*civis*, 91). Nonetheless, there is an irony in the fact that these countrymen (or "citizens," another translation for *civis*) pour out tears "at the *sight* of her" (*aspectu suo,* 91). That is, like us, Lucretius' readers, the *civis* are privileged to *see* the horror that Iphigenia, the victim, cannot, who is specifically prevented from seeing in herself. *aspectu suo* can, therefore, be said to point to a layered dramatic irony—a dramatic irony not only in respect to us, the readers, but also in respect to the internal audience of *civis* watching the sacrifice, who act as a kind of chorus, like exemplary ancestors for contemporary readers of Lucretius partisan to Iphigenia. They are inside the drama of the text siding with her and suggesting the reader do likewise through their emotional reaction to her sacrifice.

And yet, Iphigenia, on account of her sensory deprivation, lacks even the basis for the sadness that Lucretius says her father and her fellow *civis* feel. It is true that Iphigenia is called "sad" at precisely the moment when she meets her father at the altar, he standing by with the knife, "sad," to strike the blow (***maestum****…ante aras adstare parentem,* 89), she as the "sad" victim to be slain by his hand (*hostia*…***maesta***, 99). A truly dark sympathy, they share only the sadness of religion. But "sad" (*maesta*), as a description of Iphigenia, is in tension with what, if Iphigenia could speak for herself, is the complexity of her inner, emotional world: suspended between human and animal, bride and sacrificial offering, daughter and victim, and between the multiple loyalties broken in the name of religion—all of which she "sensed" (*sensit*, 90) from behind the ribbon that normally adorns an animal (*infula*, 87) and that reduces her to sensations less than human. *Maesta* ("sad") or *miserae* ("wretched") simply do not capture the complexity of her situation. They are strangely flat. I would suggest that these adjectives represent an

outside perspective on Iphigenia. They are the voice of myth, or what Bakhtin calls the voice of the "common view." To call Iphigenia "sad" or "wretched" is, therefore, to speak in two voices at once. The internal narrator sums up Iphigenia's emotions from the outside but this is intoned in the voice of myth.[122]

Were she to speak for herself, however, Iphigenia would hardly call herself "sad." It is Iphigenia's emotional ill luck, therefore, to be cast by fortune into a situation of extreme precarity, in which male religious leaders have forced her into multiple forms of suspended identity, thereby depriving her of even the possibility of feeling the emotions proper to a human being in such a calamity. It is true that the flatness of "sad" could be seen as getting at her emotional deprivation. But the complicated and conflicting emotions that Lucretius describes her sensing all around her, and the multiple conflicting values in the passage, suggest that her emotions, were she to express them, would be not so much sadness as horror at being suspended between so many different killable identities and broken loyalties at the moment of death.

Like a dumb animal "mute with dread" (*muta metu*, 92), Iphigenia can only rely on her value-laden sensations to register the impending violence. Her voice has been removed, as emphasized by the "m" sounds in *muta metu*, which may imitate non-articulate animal sounds.[123] The interchangeability of the letters and the chiastic structure of the vowels in ***m*U*t*A *m*E*t*U** seem to connect her fear and her silence. As the scene

[122] For the voice of the "common view," "a given sphere of society," "going opinion," or "current opinion," see Mikhail Bakhtin's famous reading of Dickens' *Little Dorrit* in Bakhtin 1981, 259-422, especially 301 and 305.

[123] For the difference between animal sounds, which do communicate the state of the body in animals, and words, which are sounds crafted or fashioned by the tongue, and refer to the external world, see Holmes 2005. Iphigenia does communicate something, viz. the state of her body, her feelings, just like an animal, with her inarticulate sounds, and the text of Lucretius performs these sounds for us through its sonic effects, effects which could hardly be classed as ludic or ornamental giving the ethical seriousness of the passage.

concludes, Lucretius says that Iphigenia "lowered herself by her knees" (*summissa genibus*, 92) and reached out for (or "petitioned") the earth (*terram petebat*, 92). If *petebat* contains a sense of "petition," or even "prayer," then the phrase *terram petebat* could conjure an image of Iphigenia praying to the earth (*terra mater*) against the violence of men praying to the sky, the region of *religio*.[124] In the normal practice of Greek or Roman religion, Iphigenia's disorientation and unwillingness to proceed to the altar would have nullified the sacrifice, even were she an animal. This is because according to Greco-Roman custom, animals were supposed to have gone willingly to the altar. Iphigenia does not. Animal victims were supposed to have lowered their heads to indicate consent.[125] Iphigenia just falls to the ground.[126]

In addition to specifically male hands having done the deed (*virum manibus*, 95), Lucretius emphasizes the masculine hegemony of religious violence by saying that, "she (Iphigenia) was the first to have given the name of 'father' (*patrio nomine*) to the 'king' (*regem*, 94)." In saying that Iphigenia was the first to have "given" (*donarat*, which means "given as a gift") the name of "father" to Agamemnon, Lucretius strongly hints that Agamemnon is violating the familial bond of reciprocity with his own daughter. Instead of reciprocating with her by giving her a gift in return for her giving him the

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[124] Consider the famous pun leading up to this passage (1.62-5), in which Lucretius etymologizes the origin of *religio* by linking it to faces that appear in the 'region of the sky' (*caeli regione*), and which 'press down upon' (*oppressa*) human life on earth: *Humana ante oculos foede cum vita iaceret*/*in terris oppressa gravi sub* ***RELIGIONE***,/*quae caput a cae****LI REGIONE*** *ostendebat* (cp. ***RE-LI-GIONE*** vs. *cae****LI-REGIONE***)/*horribile super aspectu mortalibus instans.* "When human life lay foully oppressed on the earth, crushed under **RELIGION**, which displayed a head from the **REGION** of the heavens, standing over mortals with a horrible face." It is against this oppression of the sky gods that Iphigenia can perhaps be seen as "praying to" or "petitioning" mother earth below (*terram petebat*) as she falls to her knees. This pun was known in antiquity (Servius, *in Aen*. 8.187, cited in Friedlander 2007, 355).
[125] Bremmer 2010 [2007], 135; Burkert 2000 [1985], 56; Scheid 2003, 83.
[126] Munro suspects that *summissa genibus* ("let down by knees") may refer to the knees of others, i.e. to the knees of the male priests: viz. they knee her to the ground (Munro 1846, *ad loc.*).

"name of king," Agamemnon breaks the familial reciprocal bond and gives Iphigenia as a gift to Diana in reciprocity with the gods. This bond with the gods is entered into for death-oriented, anti-nature purposes: so that winds might be *given* to the fleet to sail to Troy (*daretur*, 100). Not only is this a clear violation of familial reciprocity between father and daughter—one substituted by a pointless and cruel bond with the gods. It is also an entry into a religious reciprocity whose aim is war. The navy will sail to Troy to begin a decade's long campaign.[127] In a final outrage at the hands of male-dominated *religio*, however, Lucretius calls Iphigenia a *casta hostia* (98-99), a "pure" or "unblemished sacrificial victim," who, as he specifies, is killed by the stroke of her own father, *mactatu parentis*. It was not required in ancient sacrifice that the king kill the victim himself, but Agamemnon did.

Not only has Lucretius presented Iphigenia's sacrifice in multiple ways that connote animal sacrifice. He has also inadvertently revealed Iphigenia as an origin myth for structural violence against women and animals. The Iphigenia myth not only demonstrates Lucretius' view of the essence of *religio*. It also does so by characterizing religion's violence against women and animals as foundational for Roman politics. The idea that religious violence is part of the deep history of Roman politics is suggested most clearly by Lucretius' anachronistic use of *civis* ("citizens," 91). Most translators, precisely in order to avoid anachronism, translate *civis* as "countrymen," as I have done above. But there was no such thing as "citizens" in the mythical time of Iphigenia's sacrifice, a myth that is supposed to take place in the heroic age, not in the Roman Republic of Lucretius' day. *Civis*, therefore, is not just anachronistic, but pointedly so,

[127] For the general background to sacrifice as gift-exchange with the gods, see Scheid 2007, 149-50.

and in a way that is intentional on Lucretius' part. It marks the religious violence of Iphigenia's sacrifice as a genealogical origin that mirrors the essence of *religio,* as if religion's origin were its essence. By placing "citizens" back into a foundation myth about male religious violence against a woman sacrificed like an animal, Lucretius seems to be suggesting that, for him, the interconnections between religion, politics, women, and animals is far from ancient history, but rather, part of the sedimentary structure of Roman politics itself.[128] As Alessandro Schiesaro has pointed out, Lucretius is criticizing not so much religion in general as religion's social and political function in specific. Schiesaro notes that Polybius, the Greek historian who narrated the rise of Rome, thought of religion as always having been considered by Romans to be "the foundation of Roman greatness (6.56)." Schiesaro also points to the political function of the word "king" in the passage. *Regem*, in line 94, he says, would have reminded Romans in Lucretius' time of their own troubling political origins in religious kingship. *Rex* was no doubt one of the most hated words in the Latin language. Schiesaro shows that the sacrifice of Iphigenia was "couched in the language of Roman officialdom" in order to reveal for just how long patriarchal religion had been a tool for men in power.[129]

Lucretius concludes his passage about Iphigenia with a curious supplement, a statement that adds to the passage and completes it at the same time. This is the most famous line from *De rerum natura*: "So powerful was religion in persuading evils" (*tantum religio potuit suadere malorum*, 101). Affixing a statement that is both an addition and a completion at once introduces the possibility of logical tension. A

[128] Munro wonders apropos Lucretius' use of *civis* "What did Lucr. think of the fate of his own countrymen the Decii?" (Munro 1846, *ad loc*. 128.)
[129] Schiesaro 2007, 52.

supplement (an addition from the outside) and a conclusion (a reiteration of the inside, that is, of the content) are not necessarily the same thing. Such "supplementary logic," however, is not a concept that began with Derrida, or Rousseau.[130] In ancient rhetorical handbooks, there existed a similar rhetorical figure called an *epiphonema* (ἐπιφώνημα, "additional utterance"). Peta Fowler has argued that the sentence "So powerful was religion in persuading evils" is an *epiphonema*.[131] It not only *summarizes* the myth, in that it reveals the essence of religion to be its power for evil (literally, "what it can do": *potuit*, 101). It also *adds*, or introduces from the outside, the additional idea that religious violence is not just persuasive but "sweet" (*suadere*, "to persuade" or "to make sweet"). Sweetness was not something Lucretius talked about in the Iphigenia passage. It is a subtle addendum by Lucretius from the outside, supplemented as if an afterthought.

The upshot of reading *tantum religio potuit suadere malorum* as a supplement is that the "sweetness" of religious violence in the Iphigenia passage looks different depending on which perspective, available in the passage, you take on it. In other words, the instability of *tantum religio potuit suadere malorum* as a supplement is part of the ambiguity of the meaning of *suadere* from the perspective of the different viewpoints established in the passage. For a poet like Lucretius, a pressing issue in this passage is the ethical question of the vitalism of his poetry versus the violence it portrays. Though Lucretius surely means to condemn the idea that masculine religious violence is sweet, or

[130] Derrida introduced the "logic of supplementarity," or in his phrase "…That Dangerous Supplement…" in his readings of Rousseau and Levi-Strauss (Derrida 1997 [1976], 141-165, especially 144-5). See also (Derrida 1978, 289); and (Derrida 1992, 66-7).
[131] Fowler 2011 [2007], 204-5 and note 13. David Sedley has noted Lucretius' tendency to introduce new ideas into the conclusions of his arguments, a fact suggesting that there may be further instances of supplementary logic to explore in Lucretius. See Sedley's reading of *divinitus* at *DRN* 1.149-58 in Sedley 2003 [1998], 198-9.

persuasive, nonetheless, the poetry of the Iphigenia passage is one of his most virtuoso performances. Its sweetness is in tension with the passage's violence. As an Epicurean rational hedonist, Lucretius shows himself to believe sweetness to be a value in poetry, and rationally choice-worthy for promoting his message. The sacrifice of Iphigenia is sweet and persuasive, therefore, but not in a way that is visible to the perpetrators of the sacrifice, the male priests and army leaders, lacking as they are the Epicurean science of reality and, therefore, Epicurean sight.[132] While Lucretius is criticizing what is sweet and persuasive to male religionists perverted by false views about physical reality and the gods, there is nonetheless a sweetness in the Iphigenia passage that, in a dramatic irony, is visible to Lucretius and his Epicurean readers but invisible to the characters he is describing from afar: the sweetness of the cares you lack.[133]

Human Soul, Animal Body: the Influence of Empedocles

So far, this chapter has focused on the absent animal referents in the sacrifice of Iphigenia, and how those referents are part of Lucretius' intersectional critique of patriarchal religion. It is necessary, however, to turn off the main path at this point to discuss the most direct influence on Lucretius' description of Iphigenia in Book One of

[132] For the idea that poetry, myth, and metaphor are not a problem for an Epicurean, like Lucretius, so long as you know the Epicurean truth about the universe, see Asmis 1995, 16-21; Gale 1994, 6-18; Wigodsky 1995; Obbink 1996; Holmes 2005, note 3.

[133] Cf. *DRN* 2.1-4: ***Suave**, mari magno turbantibus aequora ventis,/ e terra magnum alterius <u>spectare</u> laborem;/ non quia vexari quemquamst iucunda voluptas,/ sed quibus ipse malis careas quia <u>cernere</u> **suave est***, "**Sweet** it is, when on the great sea the winds stir up the waters, to see from land the toil of another; not because it is a joyful pleasure that someone is in trouble, but because it is **sweet** to see what evils you yourself are free from." Note the ring structure beginning with *Suave* in line 2.1 and ending with *suave est* in line 2.4.

De rerum natura, as well as the most direct influence on his description of the sacrificed calf in Book Two, described in the final section of this chapter.

Scholars agree that Lucretius' description of Iphigenia is most directly in dialogue with a fragment that has survived from the Greek philosophical poet and Pythagorean-vegetarian Empedocles, who lived about four hundred years before Lucretius. While Lucretius does not share Empedocles' Pythagorean belief in the transmigration of human souls into animal bodies, he does share Empedocles' horror of sacrifice.[134] The fragment of Empedocles below, scholars agree, was the most proximate source for Lucretius' description of the sacrifice of both Iphigenia and of the calf described in the next section. Here, Empedocles describes a father who has unknowingly sacrificed and eaten his son, because the son appears to him as an animal; his soul has transmigrated into an animal's body. Empedocles is warning us about the dangers of eating the flesh of any living being, human or nonhuman.

μορφὴν δ′ ἀλλάξαντα πατὴρ φίλον υἱὸν ἀείρας 1
σφάξει ἐπευχόμενος μέγα νήπιος †οί δὲ πορεῦνται† 2
λισσόμενον θύοντες· †ὁ δ′ αὖ νήκουστος† ὁμοκλέων 3
σφάξας ἐν μεγάροισι κακὴν ἀλεγύνατο δαῖτα. 4
ὡς δ′ αὔτως πατέρ′ υἱὸς ἑλὼν καὶ μητέρα παῖδες 5
θυμὸν ἀπποῤῥαίσαντε φίλας κατὰ σάρκας ἔδουσιν. 6

> The father will lift up his dear son in changed form and cut his throat, the great fool, while he prays. The attendants bring in the pleading victim; but the father is deaf to its cries and, having carried out the sacrifice, prepares an evil feast in his halls. In the same way the son seizes his father and children [seize] their mother, and having ripped away her life they eat her loving flesh.[135]

[134] Garani 2012 [2007]), 246, note 186.
[135] This is Fragment B 137. For the text of Empedocles reproduced here, and for commentary on the fragment, see Wright 2010 [1981], 145 for the text and 286-7 for commentary. See also Inwood 2001, 271 for the text and 289 for textual notes.

In both the passage about Iphigenia above and the fragment from Empedocles here there are numerous similarities. In both, a father sacrifices a child, described as an animal. In both, the animal is really a human. But in Empedocles the human child retains his human soul while still inhabiting an animal body, retaining his full capacity for human consciousness and feeling. In Lucretius, Iphigenia is fully human, but described as an animal, her animality suggested through use of the absent referent. In Empedocles, the situation is almost the reverse. The victim has the outward form of an animal, but remains human inside, retaining his human soul. The important point is that, whereas Lucretius uses metaphor to make intersectional connections between animals and humans, for Empedocles human and animal souls actually inhabit each other's bodies. As a Pythagorean sympathizer, Empedocles believed that animals can have human souls and humans can have animal souls. This is why Empedocles warns his readers against eating or abusing animals. They may be, or have once been, human.

There are further similarities at the level of language. In both Lucretius and Empedocles, the victims are "raised up"—*sublata* in Lucretius (95 above) and ἀείρας in Empedocles (1). Raising or lifting the victim was a practice typical when sacrificing small animals. The raising up of the victims in Lucretius and Empedocles, therefore, makes sense, because the animals referred to in both are young: the marriageable Iphigenia and the child animal here.[136] Furthermore, in both Lucretius and Empedocles, the father does the killing with his own hand. In both there is an emphasis on the pollution from killing life. This fact is doubly emphasized by Lucretius; he repeats the

[136] Adult animals, however, were considered more suitable for public worship, which is yet another way in which both the sacrifice of Iphigenia, of the child here, and of the calf in the section below would be considered ritual failures (Scheid 2011, 264). Bailey notes that in Aeschylus' *Agamemnon* Iphigenia is also said to have been raised up (λαβεῖν ἀέρδην, *Agamemnon* 234).

adverb *foede* twice: ***foede*** *cum vita iaceret* (1.62) and *aram.…turparunt sanguine* ***foede*** (1.85).[137] But in Lucretius, Iphigenia is said to be mute with dread (*muta metu*, 92 above). Like an animal, she cannot speak for fear. In Empedocles, there is a notable contrast. Empedocles shows the soul of the child struggling to break through the limitations of his animal body and animal voice by crying out in prayer.[138] And yet, despite the humanity, and even spirituality, of the animal's cries, the father—the "great fool" (μέγα νήπιος, 2), as Empedocles calls him, is also foolishly "deaf" to his son's prayer. He literally does not hear (νη) the utterance (ἔπος) of his son.[139] So, whereas the animal in Empedocles cries out with a human-like voice, the animal in Iphigenia is mute with fear.

David Furley notes that in both Empedocles and Lucretius the child knows what is happening and "adopts an attitude of prayer" (λισσόμενον, 3; *muta metu terram genibus summissa petebat*, 85 above).[140] Building on Furley's insight that Lucretius adapted from Empedocles the motif of the victim praying, I would add the simple but important fact that the fathers in both Lucretius and Empedocles are also shown as praying. Agamemnon prays to Diana for winds ("so that a happy and fortunate departure

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[137] Furley 1970, 63 note 17.

[138] λισσόμενον, "beseeching"/"praying": the child's human soul is "beseeching" his father, almost as in prayer, from within his animal body: a prayer to a father who is also praying (ἐπευχόμενος) in a sacrifice that Empedocles considers polluted, since Empedocles believes that killing any animal brings pollution.

[139] There is a multi-layered pun in the Greek phrase "great fool" (μέγα νήπιος), in that νήπιος primarily means "infant" (in the etymological sense of one who cannot speak, like the Latin *in-fans*). By extension, νήπιος also means "fool," in the sense that speechlessness suggests childlike foolishness. This is ironic, first, because the young animal being sacrificed really is a child without speech, a νήπιος, whereas the father is a mature human capable of speech, praying to the gods. It is also ironic in that the father is a "fool," a νήπιος, not only for the obvious reason that he is foolishly sacrificing his son but because he cannot hear the words (he is literally νη-ἔπος) of his son. νήπιος in Greek, like *in-fans* in Latin, can suggest in its components the idea of "not-word"/"not-utterance" (νη- is a negative prefix, and ηπιος comes from ἔπος, which means "word"/"utterance"). The father is also, of course, in Empedocles' eyes, a νήπιος for killing any animal at all: he is a fool in regards to what Empedocles thinks true religion requires, which is non-killing and purity.

[140] Furley 1970, 62.

might be given to the navy," *exitus ut classi felix faustusque daretur*, 100), and the father in Empedocles is explicitly said to be praying as he makes the cut ("he will cut its throat while praying," σφάξει ἐπευχόμενος, 2). As if to underline the pollution of religious violence, both Empedocles and Lucretius explicitly describe the victims—the child animal in Empedocles and the bride animal of Iphigenia in Lucretius—as counter-praying against their father-murderers. In Empedocles, the prayers of both the father and the son are formally set in contrast, enjambed in subsequent lines: σφάξει ἐπευχόμενος at the beginning of line 2, λισσόμενον at the beginning of line 3. But in another act of intertextual extension, Lucretius makes the motifs of pollution in Empedocles even subtler and more politically pointed by describing Iphigenia not as counter-praying against her father, as Empedocles did with the child-animal above, but as turning away from her father and his sky gods to take up a position of prayer to the earth.

The phrase *genibus summissa* (92) from Lucretius above, which describes Iphigenia as falling to the ground on her approach to the altar is ambiguous. Does *summissa* mean "having let herself down" or "being sent/thrown down?"[141] *Genibus* is also ambiguous. Does it refer to Iphigenia's knees: "having been let down *by* her knees" or perhaps "having been let down *on* her knees?"[142] Or does it refer to the knees of the male priests: "having been thrown down by (the priests') knees?"[143] Either way, Iphigenia ends up, as Furley suggests, in an "attitude of prayer"—to which I would add, a

[141] Leonard and Smith side with "letting *herself* down by the knees," and add that this is the difference between reading the participle as the middle/reflexive voice versus the passive voice (*ad loc*.).
[142] Bailey notes that the ablative is hard to determine here, but suggests "falling *on* her knees," while Munro suggests "let down *by* her knees" (*ad loc*.).
[143] Munro thinks *genibus* refers to Iphigenia's knees lowering herself, but speculates that it could also refer to the knees of others, by which I assume he means the priests (*ad loc.*)

prayer not to the sky or her father but to the earth. Iphigenia's prayer differs from the child animal's prayer in Empedocles in one other important respect as well. Whereas the child animal prayed from within its animal body, vocally petitioning his father, Iphigenia's prayer is silent, directed towards at mother earth: *muta metu* ***terram*** *genibus summissa* ***petebat***, "mute with dread (*muta metu*), being lowered by her knees (*genibus summissa*) she sought the earth (92)." Iphigenia has given up on men and sky gods, and in silence is forced by necessity to "pray to" or "seek' the earth (*petebat*)."[144]

Lucretius adds an important additional value-context to the Empedoclean fragment he is extending, i.e. to the text of Empedocles above. In Empedocles, the focus was on the evil of animal sacrifice. There was nothing about gender. In his adaptation of Empedocles, Lucretius adds to Empedocles' critique of animal killing the idea that violence against animals takes gendered form. This new, gendered dimension is consistent with Lucretius' emphasis elsewhere in the Iphigenia passage on the specifically male orientation of religious violence: ("the chosen **leaders** of the Danaans, **the prime of men**," ***ductores*** *Danaum delecti,* ***prima virorum***, 85; "by the hands **of men**," ***virum*** *manibus*, 95). As we will see in the last section of this chapter, connotations of gender in religious violence against animals is not additional or analogous aspect of this violence but part of a larger structure, unbeknownst to Lucretius, that reveals the interlocking nature of religious violence against women and animals.

In taking up the theme of counter-prayer and of the pollution of false religion, Lucretius is revivifying not Empedocles the natural philosopher of the long poem *On*

[144] Munro notes that the tense of *petebat* (imperfect tense) makes the scene more graphic than it would be if it were in the perfect tense: we see Iphigenia *in the process* of "seeking" or "praying" to the earth.

Nature (Περὶ φύσεως) but Empedocles the religious critic of the *Purifications* (Καθαρμοί). That is, while Lucretius is most often said to be influenced by the Empedocles the natural philosopher, and *De rerum natura* itself is said to be a translation of Empedocles' *On Nature* (Περὶ φύσεως), in both the Iphigenia passage and in the passage about the sacrifice of the calf discussed below, Lucretius speaks in the voice of Empedocles from the Καθαρμοί, inhabiting the role of Empedocles the religious reformer. It is because Lucretius is doing the Καθαρμοί in the two passages that deal with sacrifice in *De rerum natura* that he links connotations of animality in the Iphigenia passage with connotations of humanity in the sacrifice of the calf below. In other words, it is because in both passages Lucretius is adapting Empedocles' Καθαρμοί that the absent referent in the Iphigenia passage becomes present again in the sacrifice of the calf. Both are linked by the fact that Lucretius is taking up the spirit of Empedoclean critique of religious crime.

Though the passages about the sacrifice of women and animals in Lucretius travel between one another by way of the intertext with Empedocles' critique of religious violence in the *Purifications*, there are also differences between Lucretius and Empedocles: namely that Lucretius rejected the theory of the transmigration of souls. In Empedocles, therefore, the point is that when you eat meat you do not know whose soul you are eating, because Empedocles believes that souls change their outward shape (μορφὴν ἀλλάξαντα) while retaining their identity. In Lucretius, human and animal souls do not change their outward shape. As a materialist atomist, Lucretius believes that

you are your physical shape. At the same time, humans and animals in Lucretius are portrayed as suffering nearly the same mental and physical pain, as we will see shortly.

What needs to be emphasized, however, is that while for Empedocles harming animals is problematic because you can never really be sure what kind of soul you are harming, for Lucretius, the outward appearance of an animal is a reliable indicator of its identity. The Epicureans were notorious for believing that all appearances are true. Lucretius seems to think that the mental capacities of humans and animals are so similar that it is not a matter of mere words when animals to stand in as absent referents for humans, and humans for animals. This is because, when it comes to suffering, for Lucretius, the minds of humans and animals are physical and undergoing similar physical experiences that make their sufferings sympathetic.

Making the Absent Referent Present: Mother Cow and Calf

The intertextual highway that the absent referent travels between Empedocles and Lucretius is both direct and indirect. It is a well-established fact that Lucretius read Empedocles directly.[145] But Lucretius also knew Aeschylus' portrait of Iphigenia in *Agamemnon*, though it was not the main source for the portrait of Iphigenia in *De rerum natura*. The Iphigenia myth was, of course, also well known in classical culture generally. The Empedocles fragment, therefore, stands behind the Iphigenia passage both directly, through Lucretius' reading of Empedocles, but Lucretius too a lesser extent was also inspired by Aeschylus. And as we will see below, the Empedocles fragment was also

[145] See Garani 2012 [2007] for the most recent, extensive treatment of Empedocles' influence on Lucretius.

an intertext for Lucretius' description of the sacrifice of the calf. Therefore, the sacrifice of Iphigenia above and the sacrifice of the calf below are not just linked thematically (being both about sacrifice), or hermeneutically (you cannot read one without thinking about the traces of the other). They are also linked by their sources, having in common, the Empedocles fragment above. The absent referent to animality in Iphigenia travels through the Empedocles fragment about a human child trapped in an animal's body, to become present again in the humanity of the sacrificed calf and its grieving mother. Empedocles' horror of animal sacrifice, therefore, speaks through both the Iphigenia passage above and the sacrifice of calf below.[146] And again, in sacrifice of Iphigenia and the sacrifice of the calf below, Lucretius is voicing not Empedocles' *On Nature* (Περὶ φύσεως) but the *Purifications* (Καθαρμοί).

Establishing these three lines of connections between the Iphigenia scene in Book One and the calf in Book Two—thematic, hermeneutic, intertextual—is important because it helps to show the multiple paths the absent referent to animality in the sacrifice of Iphigenia travels to become present again in the sacrifice of the calf below. Through these links internal to *De rerum natura*—but mediated by Empedocles—animal absence in Iphigenia becomes present again in the sacrifice of the calf, and human presence in Iphigenia is made to take a back seat for once to the suffering of animal mothers and children under *religio*, as we will see now in Book Two. These various connections also play a role in connecting the human-like grief of the mother cow below with the grief of

[146] Furley 1970, 55-64, especially 62; Monica Gale 2006 [2000], 103-5; Gale 1994, 72. Furley notes that the fragment from Empedocles was itself a source for the sacrifice of Iphigenia in Aeschylus' *Agamemnon*. David Sedley adds that the portrait of Iphigenia from Aeschylus' *Agamemnon* and Euripides *Iphigenia at Aulis* and *Iphigenia at Tauris* were, unlike the Empedocles fragment, not direct sources for Lucretius (Sedley 2003 [1998], 30). Hence, my focus in this chapter on the influence of the Empedocles, and not of Greek tragedy.

Iphigenia's own mother, Clytemnestra. Clytemnestra was absent from Lucretius' telling of the Iphigenia myth above. The mother cow and her grief, however, bring traces of Clytemnestra's grief to the fore in the mother cow's search for her murdered child.

Here, Lucretius makes the absent referent present again by turning the politics of metaphor on its head. For once, human tragedy is forced to play the role of absent referent in the tragedy of animals, and human suffering is subordinated to animal suffering. Lucretius depicts a mother cow searching for her lost calf who unbeknownst to her has just been pointlessly sacrificed on an altar to the gods.

quorum unum quidvis generatim sumere perge: 347
invenies tamen **inter se differe figuris**. 348
nec ratione alia proles **cognoscere** matrem 349
nec mater posset prolem—quod posse videmus 350
nec minus atque homines inter se nota cluere. 351
nam saepe ante deum vitulus delubra decora 352
turicremas propter mactatus concidit aras, 353
sanguinis expirans calidum de pectore flumen; 354
at mater viridis saltus orbata peragrans 355
quaerit humi pedibus vestigia pressa bisulcis, 356
omnia convisens oculis loca si queat usquam 357
conspicere amissum fetum, completque querellis 358
frondiferum nemus adsistens et crebra revisit 359
ad stabulum desiderio perfixa iuvenci; 360
nec tenerae salices atque herbae rore vigentes 361
fluminaque illa queunt summis labentia ripis 362
oblectare animum subitamque avertere curam, 363
nec vitulorum aliae species per pabula laeta 364
derivare queunt animum curaque levare; 365
usque adeo quiddam **proprium notumque** requirit. 366

Go on, take any animal kind (in nature): you will find, nevertheless, that they differ from each other in figure. In no other way could a child recognize its mother, nor a mother her child—which we see they can do, and are no less known to each other than humans are. For often in front of ornate temples of the gods a calf falls sacrificed beside the altars of burning incense, breathing out a hot river of blood from its chest; but the abandoned mother, wandering through the life-green valley, searches the ground for tracks made by cloven hooves, surveying every region in the hope of seeing her lost offspring again, and coming to a stop at a leaf-bearing grove fills it with lamentations, and frequently going

back to look in the stable, stabbed with longing for her calf; neither can young willow-shoots nor grasses enlivened with dew nor those rivers flowing atop their banks delight her mind and remove the sudden pain, nor can the sight of other calves in happy meadows lead her mind into other channels and lighten her pain: so persistently does she seek what is her own and known to her.

Here we get a "cow's eye view," as David West puts it, of the "leaf-bearing groves," "young willow-shoots," "grasses enlivened with dew," and "rivers flowing atop their banks," as the cow searches the landscape for her calf.[147] Lucretius, it is worth remembering, also portrayed the sacrifice of Iphigenia from her perspective. She was blindfolded and mute with dread, capable of animal sensation only, feeling the dangers around her, expressing her emotions through her trembling body. Both scenes valorize the emotional perspectives of the victims.[148] But they also engage with what seems to be a Roman male fetish for the suffering female body.[149] For both Iphigenia, and for the mother cow, the focus is on what male-dominated *religio* looks like through the eyes of bare life, that is, through the eyes of the cast-out and killable: that thin line of life hovering between suffering and death.[150] The narrative voice also slips into the thoughts and merges with feelings of the victims. While told from a third-person perspective, the narrative voice is hardly objective or distanced from the suffering of the victims, the opposite of what is usually said to be characteristic of epic.[151]

[147] West 1979, 71-88.
[148] Morrison 2013, 214-5; E.J. Kenney 1971, 16.
[149] For the Roman male fetish for the suffering female body, see Keith 2000, 36-41.
[150] For "bare life" see Agamben 1998.
[151] While written from the third-person perspective, the descriptions are, nonetheless, heavily colored by the perspectives and emotions of the victims. Some would call this focalization, but its intensity suggests something closer to "free indirect discourse," closer to narrative discourse that slips in and out of the minds and feelings—and not just of the points-of-view—of the character or, in this case, victims.

Lucretius humanizes the grieving cow by calling her "mother" (*mater*, 349-350) and "abandoned mother" (*orbata mater*, 355).[152] Lucretius also calls her calf "child" (*prolem*, 350). While Lucretius does not share Empedocles' belief in the transmigration souls, he does represent the emotional and cognitive responses of the mother cow as close to what a human mother would undergo in such a situation. Furthermore, Lucretius compares the knowledge human mothers have of their children and animal mothers of theirs, when says that animals are "*no less known* to each other than humans are" (***nec minus** atque homines inter se **nota** cluere*, 350). It is hard to know why Lucretius says this, but he may be expressing the idea that there is some sort of solidarity between mothers in mourning, since the focus of the passage is on mourning. Lucretius further specifies this relationship when he says that "you will find that each particular animal differs from each *in figures*" (*in figuris*, 348). That is, while animal kinds are generally similar in their material make-up, each individual has a particular *figura*, or composite shape, that its animal mother knows as its own "in no other way" (*nec ratione alia*, 349). Here, Lucretius is focused on animal knowledge, but of a specific kind, what we might call "acquaintance knowledge," that has not necessarily come about through biological acquaintance alone, insofar as the mother cow has "fashioned" (*fingere*) the "figure" (*figura*) of the calf, but also very likely through care as well, which is associated with mothers and "nature" throughout the poem in a fetishization typical of Lucretius. *Figura* and *fingere* are etymologically related. The "composite shape" of the calf, its *figura*, is known to the mother cow because the mother cow has "fashioned" (*fingere*) its "figure"

[152] David Konstan (2013, 193-209, esp. 200) has denied the connotations of humanity in the mother cow and calf. For pushback against Konstan's denial of the humanity of the mother cow, see Sharrock 2008, 267.

(*figura*). But again, there is also the aspect of care that Lucretius stereotypes when describing mothers and "nature" throughout the poem.

Animal mothers recognize themselves as the physical models of their children. This is not knowledge of the child's personality. Nor is it the ability to have the proposition-based thought, i.e. to be able to say to oneself in a sentence: "this is my child."[153] Rather, an animal knowledge based on figurality—that is, on the ability to recognize the *figura* of one's calf—would represent a kind of pre-propositional, sensation- and acquaintance-based form of knowledge, equally grounded in relationships of care. It is the knowledge of biological model to biological copy and of nurturer to dependent that Lucretius associates with "mother nature" and still instinctual protohuman mothers in his prehistory.[154]

Like Iphigenia, in the passage above the calf's youth and life are cut short through the pointless cruelty of religion. The calf dies while "breathing out a hot river of blood" *sanguinis expirans calidum de pectore flumen* (354).[155] The mother cow is also "pierced

[153] Lucretius' depiction of animal knowledge, in which the mother cow has a belief that is in fact true about the world, comes close to Frank Ramsey's concept of "success semantics." As the name suggests, this is a success- (and not language-) oriented concept of true belief. If someone (an animal) has a thought and that thought is reliable enough that the animal is ensured to get what it wants if it acts on it, then that is belief is true. Nothing more is needed, especially not language or the ability to make sentences. If the animal has a belief that, when relying on it, they are sure to be successful at what they are about, then that belief is true about the world. The rival view, which has always been more popular, both among philosophers now and in classical antiquity, is a language-based theory of belief. On this view, belief is a property of sentences or language. Without either, an animal cannot be said to have belief. It is far from obvious why this should be so, or so popular. Why does an animal, in order to count as having a belief, have to be able to put that into language? Why should meaning only be a property of sentences or language? There is no doubt that language sometimes helps to make (at least human) thought more determinate or clear (at least if one tries), but why an animal who lacks language or the ability to make sentences should not be said to be capable of having true beliefs was far from obvious to Frank Ramsey. See Mellor 1990, 52-109.

[154] Holmes 2013. Where the care of fathers enters history as a privileged supplement, the great "necessity" "humans" (i.e. men) lacked when it was only mothers caring, to get society off the ground.

[155] Segal 1970, 104-18. The blood of small animal victims was allowed to blacken the altar or drip into the hearth or sacrificial pit, whereas a bowl was used to catch the blood of larger victims. The point in both cases was that no blood should fall on the earth (Bremmer 2010 [2007], 137). In the case of the sacrifice of the calf in Lucretius, even though the victim is small, the excess of blood may indicate that the sacrifice had

through the heart with longing" for her child (*perfixa desiderio*, 360), as if in sympathy with the pain her child felt when wounded in the chest (*de pectore*, 354). Lucretius contrasts this vivid violence with the vitalism of the natural landscape: the lush, flowing paradise, or *locus amoenus*, that the mother cow must pass through grieving to find her child. Despite its attractions, however, Lucretius tells us that the landscape did not 'divert her mind into other channels' (*derivare animum*, 365). Lucretius is here activating the latent metaphor in *derivare* ("to turn the course of a river"), contrasting the flows of the cow's mind with the flows of the landscape. The mother cow, nonetheless, keeps the flow of her concentration directed towards her lost calf.[156]

None of the aspects of the earthly paradise that she traverses—all of which are described in language that echoes the absence of the youth and life of lost in her calf—are able (*queunt*, 362/365) to delight her mind and take away the pain.[157] The landscape fails to turn away her anxiety, her *cura*, which stands in, by synecdoche, as the mental path she is traveling that parallels her physical path through the *locus amoenus* (*avertere curam*, 363). And yet, the landscape that we see through her eyes fails to calm her not because she is too unintelligent to take pleasure in it, but because, as Lucretius says at the end of the passage: "so persistently does she seek what is her own and known to her" (*usque adeo quiddam proprium notumque requirit*, 366). Her persistence for what is "her

gone awry. For surely some of the "river of blood" (*sanguinis…flumen*) would have fallen on the earth. That is, like the sacrifice of Iphigenia, this too is a ritual failure.

[156] The imagery of flow is important here, because the analogy is supposed to explain the bonds in atomic compounds. The imagery of water and flow indicate the other side of Lucretian physics, the side recently legible with the advent of chaos theory and the physics of turbulence and disequilibra. See Serres 2000 and Holmes 2016b for the importance of the physics of fluids to Lucretius' contemporary status.

[157] *Ob-lectare animum* (363) means, literally, to "delight-away her mind." *Oblectare* may pun on *lac*, "milk," as in line 370, which comes just after the passage above: "*each* [young animal] usually runs down to *its own* udder of *milk*" (***ad sua quisque** fere decurrunt ubera **lactis***), suggesting that child animals have reliable enough knowledge of of their mothers.

own" (*proprium*) and "known to her" (*notum*), and not mere instinct, is what keeps the landscape from diverting the flow of her mind. She is *choosing* to pursue her child, and not otherwise following the pleasures all around her that would ensnare an animal acting out of mere instinct or temporary awareness of loss.

I want to bring this chapter to a close by returning to Carol Adams' notion of the absent referent. Lucretius has made the absent referent in the sacrifice of Iphigenia vividly present in the sacrifice of the calf. As Adams puts it, the absent referent: 'was what enabled the interweaving of the oppression of women and animals. Behind every meal of meat is an absence: the death of the animal whose place the meat takes. The "'absent referent,'" Adams continues, "is that which separates the meat eater from the animal and the animal from the end product. The function of the absent referent is to keep our 'meat' separated from any idea that she or he was once an animal…to keep something from being seen as having been someone. Once the existence of meat is disconnected from the existence of an animal who was killed…[it becomes] instead a free-floating image, used often to reflect women's status as well as animals'. Animals are the absent referent in the act of meat eating; they also become the absent referent in images of women butchered, fragmented, or consumable."[158]

Animals, Adams argues, are used as metaphors to heighten scenes of female butchery: the animal's fate is transferred to the fate of the human victim. The danger of such metaphors is that, as Adams noted in *The Sexual Politics of Meat*, "the original meaning of the animal's fate is absorbed into a human-centered hierarchy." The real suffering of animals becomes an instrument in a hierarchy of meanings that prioritizes

[158] Adams 1990, 13.

human suffering. But, as I hope to have shown, by making the absent animal referent in the sacrifice of Iphigenia present in the sacrifice of the calf, Lucretius reveals a structure, unbeknownst to himself, that male-dominated *religio* is a common source of the suffering of women and feminized animals. While he is attacking *religio,* and not patriarchy, like Adams and other ecofeminists, Lucretius interlocking myths result in valorizing the point of view of the human and animal victims of *religio* equally.

This valorization comes about partly because, in both the sacrifice of Iphigenia and of the calf, Lucretius is adapting Empedocles' idea that sacrificial victims may have human souls. Lucretius is, therefore, not setting up a mere analogy between the suffering of women and animals under *religio,* but presenting a common source, in his view, of female suffering across species lines. Iphigenia and the mother cow are not merely analogous in their pain and misfortune but strikingly similar in their mental and physical suffering due to the violence of male-dominated *religio*.

The sacrifice of women and animals in Lucretius, therefore, does not present male religious violence against animals as a merely an additive or additional form of injustice: animal suffering is not merely analogous to the suffering of women. Rather, Lucretius presents the violence against women and animals under patriarchy as connected. It is a moment in *De rerum natura* that is at once strange and typical. Lucretius does present a structure of thought that is legible through ecofeminist critiques of the shared sources of violence against women and animals, but he also presents Iphigenia and the calf as reductively similar in their mute, tortured bodies, and dynamics of care and mourning. Thus, while hitting on what we can now call an ecofeminist structure in which there are common sources of violence against women and animals, Lucretius fetishizes the

suffering bodies of women and animals by essentializing them in a way typical of *De rerum natura*, in which women are reduced to the "natural," the earth, the instinctual, and a form of care sidelined as animal, in contrast with the care of fathers, associated with the rise of society.

And yet, if a goal of ecofeminism is to make visible the common sources of violence against women, (feminized) men, and (feminized) animals, as I quoted from Carol Adams at the beginning of this chapter, then Lucretius' attack on the violence of Roman *religio* has inadvertently given rise to myths that gain in resonance and complexity when read through ecofeminist critique.

Chapter Two: Lucretius' Dark Ecology

> *The new fundamental feeling: our conclusive transitoriness.* –Formerly one sought the feeling of the grandeur of man by pointing to his divine *origin*: this has now become a forbidden way, for at its portal stands the ape, together with other gruesome beasts, grinning knowingly as if to say: no further in this direction!
>
> -Nietzsche, *Daybreak*, I.49

Lucretius' state of nature is an animal place, a dark ecology full of violence and pleasure. Early humans in Lucretius are enmeshed in this ecology of eater and eaten whose primary feature is the vulnerability of the flesh. This vulnerability is sometimes pleasurable, but Lucretius shows it mostly tending to pain.

In this chapter, I argue that Lucretius' state of nature is neither a utopia nor dystopia but an animal place where humans are just another body in a democracy of the flesh. Lucretius' vision of prehistory can be fruitfully compared with Timothy Morton's concept of "dark ecology."[159] Dark ecology is the idea that (1) humans have always been enmeshed in nature and (2) that this enmeshment, if we are honest, results mostly in pain. An important feature of dark ecology is Morton's emphasis on the porosity of the boundaries between humans, animals, and the material world. With dark ecology, Morton was trying to get away from the overly sentimental attitudes of much nature writing influenced by Deep Ecology, in which nature is depicted as a morally-uplifting, harmonious, divine whole—a kind of Golden Age. For Morton, being interconnected means being vulnerable, and vulnerability can be uncanny.[160]

[159] For "dark ecology," see Morton 2007, 181-197; Morton 2010, 59-97; Morton 2016; Morton 2018, xxxiv, 14-16, 101. Morton 2017, 14-15, 90-95.
[160] For vulnerability as sometimes so intimate as to feel uncanny or unreal, see Morton 2018, 145.

Dark ecology does not ask us to pretend to love or feel improved by immersion in what is often an inhuman or brutal natural world. You can care about ecology while not glorifying in the great outdoors. As far back as agriculture, or "agrilogistics" as Morton calls it, there has been a kind of virus or program that has increasingly denied human interconnectivity with things, which has resulted in the Anthropocene and will result in a natural world that will cause more pain if such anthropocentric attitudes to the natural world are not combatted. "We Mesopotamians," as Morton says, have been pressing the eject button on ecological enmeshment for the entire history of civilization. This desire to transcend reality, so antithetical to Lucretius' vision of material immanence, laid the groundwork for the Anthropocene.[161]

In this chapter, I focus on three passages from Book Five of *De rerum natura* that establish the distinctiveness of Lucretius' dark ecology. The first passage is what I call the "earth is not made for us" passage. This ten-line segment occurs early in Book Five. Lucretius describes the creation of the earth as a kind of construction. Lucretius presents the earth as a "divine work" (*opus divom*, 5.158) or "foundation" (*fundatum*, 5.161), i.e. a home, οἶκος, or ecology, but rather than a divine, harmonious home, Lucretius shows it to be flawed and already falling over. Hence, Lucretius' dark ecology: the world is not a divinely secured harmony. It is not a god, not made *for* anything, least of all for humans. Rather, Lucretius shows it to be a temporary assemblage of atoms just waiting to collapse and drift into the void. The second passage for this chapter is what I call the "Venus in the Forest" section of Lucretius' human prehistory. In a few tightly-wrought lines, Lucretius describes solitary protohumans coming together from primal solitude for the

[161] For "agrilogistics," see Morton 2016, 3-59; Morton 2017, 74.

first time, trysting in the forests and driven by the "force" (*vis*) of *Venus*. I present this passage as another instance of Lucretius' dark ecology in that Lucretius explicitly rejects the Golden Age myths of prehistory that preceded him, particularly, Empedocles' vision of early human life as a stage of history in which an interspecies harmony was orchestrated by Aphrodite. For Lucretius, the problem with Golden Age myths is that they depict capital-N Nature as a divine whole that Lucretius' dark ecological vision rejects, both as not true and as harmful to understanding what it means to be enmeshed in physical reality.[162] In the third and last passage of this chapter Lucretius claims that protohumans were not only like other animals, but one of the most helpless ones. Lucretius describes early humans being regularly devoured by wild beasts using puns that perform the primal natural forces at work between humans and animals in the state of nature. Lucretius' puns in this section restage, in his Latin, the automatic emergence of sounds from the protohuman bodies being devoured by wild beasts in Lucretius' dark ecology. As with the other important puns in this chapter, Lucretius employs the keyword of his dark ecology: *vis* ("force," "violence," "desire"). He describes wild beasts as devouring wild humans, but in the process the humans see their own ***VIS****cera* ("guts"), by the force (*vis*) of the wild beasts' attacks, being recycled into the beasts' bodies. This recycling of human and animal flesh takes place so close-up, at such a level of intimacy, that the porosity of Lucretius' dark ecology becomes an almost unreal experience as the humans watch their bodies being transferred into animal flesh. Lucretius' dark ecology is an enmeshment so intimate that it seems uncanny. At the same time, Lucretius, through

[162] Gale 1994, 62, 168-9.

his puns, performs a disarticulation of the words describing the beast attack back into the prehistoric phonemes that the human victims uttered at the moment of death.

Central to Lucretius' dark ecology is his poetry and poetic vision. He not only describes protohuman life as a dark ecology, but uses language that is itself darkly ecological. He recycles the letters and sounds of the words to perform the painful and erotic enmeshment of protohuman and animal flesh in the landscape of prehistory, words like *vis*, *Venus*, *voluptas*, and *Orcus*. Such puns reveal with accuracy *natura* as a process that ceaselessly takes material from one body to create another. [163] Lucretius' dark ecology is not simply realistic about what it means to be enmeshed in material reality. Lucretius' poetry lets the reader experience, through simulacra of sight and sound, a re-staging of the dark ecological truth of non-transcendence and enmeshment, which includes the enmeshment of language as seen and heard in his puns.

vis is the *mot-clef* of Lucretius' dark ecology. *vis* is a not completely localized force in Lucretius' dark ecology. As violence, lust, or force, it refers to the animal passions. As Venus pervades the natural world, so too *vis*, her counterpart, is immanent in the state of nature.[164] Lucretius' culture story is a gradual discovery of the segmentation and channeling of human *vis*, its ability to extend itself through the use of reason, technology, institutions, and ideas. Reason is not an independent, disembodied faculty for Lucretius, nor an end in itself. It is not the pre-established essence of the human, but something cobbled together empirically over time. As Elizabeth Asmis has argued,

[163] For *natura* as the constant interchange of bodies, see Gale 1994, 39.
[164] The idea that Aphrodite pervades nature can also be found in the Strasbourg papyrus of Empedocles (Martin and Primavesi 1999, 131 line 267): [Ἀλλ᾽ ἐν μὲν Φιλότητι <u>συνερχό]μεθ᾽</u> εἰς ἕνα κόσμον, "But under Love <u>we</u> unite together to form a single cosmos." Cf. *DRN* I.13: *aeriae primum volucres te, diva, tuumque/ significant initum perculsae corda tua vi.*

reason is embedded and discovered in the *ratio naturae*. Humans develop it through interaction with the forces of the natural world.[165] The growth of reason comes from the meeting of human *vis*, a non-specific energy, with the environment. In short, Lucretius' dark ecology is a violent place but also a place of incredibly Venusian not-yet-human animals.[166] That humans were powerfully Venus-oriented animals right from the start is important because, as Lucretius shows, the earth was not made for our sake.[167]

Inhuman World

Lucretius tells us three times that the world was not made for the sake of human beings: twice early in Book Five, and once in Book Two. The idea is axiomatic for understanding the dark ecological logic of his prehistory. A close analysis will show that the passages that deal with Lucretius' materialistic theology were carefully composed to turn his opponents' cliched thoughts and rhetoric against them. In this example from early in Book Five, Lucretius parodies the idea that the world was made for our sake, specifically

[165] Asmis 1993, 765: "The Epicureans held that reason develops as a response of human nature to the environment. Although each human being has an inborn capacity to learn how to reason, just like the capacity to walk or to speak, neither the content nor the ultimate goal of human reasoning is predetermined by this capacity. Second and related to this point, reason is an instrument, not an end in itself. Reason serves the desire for pleasure, and good reason is ultimately reason that produces pleasure. Good reason does not merely hit upon the truth; it uncovers and focuses on truths that serve human happiness." "Impelled by need and desire, reasoning grows to extremes (764)." "Propelled by desire, successive discoveries lead to further discoveries in each of the arts (772)." "There is something inevitable about this descent into absurdity." Asmis focuses on the growth and abuse of reason. I think Lucretius' focus however is more on the power and growth of desire, as evidenced by the extensions and abuses of reason, since *vis* is the one transhistorical constant to human nature—notably a nonhuman feature shared with other animals. I agree with Asmis that desire propels reason for its own ends of pleasure. It was not inevitable for Lucretius that things descend into absurdity. There were other possible expressions of *vis* already in the state of nature, and when coupled with philosophical reason could have ended up differently. Epicurus does not emphasize human *vis* near as much as Lucretius. Lucretius is fascinated by life and intensity. This is why Lucretius' *Kulturentstehung* is tragic: great potential for life gone terribly wrong.

[166] For "negative exceptionalism" see Holmes 2013.

[167] Lucretius is clear about the inhumanity of the world in several places: *DRN* 2.177-181; 5.156-165; 5.195-199; 5.218-221. In scholarship, the topic has been addressed most recently by Holmes 2013.

targeting the idea that a god made the *mundus* as an ideal home for himself and his fellow cosmic citizens: human beings. Lucretius parodies this almost Deep Ecology with bombastic and overly "constructed" lines:

dicere porro hominum causa voluisse parare	5.156	156: d**i**cere/d**e**cere
praeclaram mundi naturam, proptereaque	157	
allaudabile opus divom laudare decere	158	158: **allauda**bile/**lauda**re
aeternumque putare atque inmortale futurum,	159	
nec fas esse deum quod sit ratione vetusta	160	
gentibus humanis fundatum perpetuo aevo	161	
sollicitare suis ulla vi ex sedibus umquam,	162	
nec verbis vexare et ab imo evertere summa,	163	163: **VER**bis/**VE**xa**RE**/**EVER**tere "with words" "to shake" "to overturn"
cetera de genere hoc adfingere et addere, Memmi,	164	164: **ad**fingere/**add**ere
desiperest.	165	

Moreover, to say that for the sake of human beings they [the gods] wanted to prepare a splendid nature of the world, and that for that reason it is fitting to praise the work of the gods with high praise and to think that it is eternal and will be immortal, and that it is impious to disturb from its seats ever by any force what has been established for the human races by the ancient reason of the gods for all time, or to disturb it with words and to overthrow it from top to bottom, and to imagine and add other things of this sort: is foolish.

This passage presents an unnamed opponent's position. Lucretius both describes the position and parodies it. Syntactically, it is an accusative-infinitive construction that depends on the final word, *desiperest*, which is the main clause and the sucker punch. The thought is: My opponents make claim X, Y, and Z about the nature of the world, but that is all foolish.

Lucretius parodies the idea that there is a moral relationship between gods and humans, because the gods made the world for our sake. In the middle of line 156, *hominum causa* (*"for the sake of human beings"*) emphasizes this. *Causa*, the preposition with *hominum*, has a moral sense, meaning "for the benefit of" or "out of consideration

for the interests of."[168] Line 157, *praeclaram*, is a word that is usually translated as "splendid" or "bright." Here, Lucretius means it in a moral sense: splendid at benefiting human life.[169] Of course, Lucretius is mocking the idea that it was because the gods were concerned with human interests that for that reason they made a world, and made it splendid.[170]

Latent in the first few lines of this passages is a rhetorical formula commonly referred to as *do-quia-dedisti* ("I-give-because-you-gave"). Traditionally, Greco-Roman hymns aimed morally to bind praiser and praised by activating the logic of reciprocal gift-giving. The idea here is that since the gods gifted us with a beautiful world outfitted for our flourishing, it is our duty to return the favor by praising it and its makers. Lucretius parodies these topoi. He describes the world as an *allaudabile opus*—not a *laudabile opus*, "a praiseworthy work," but an *ad-laudabile opus*, "an extra-praiseworthy work." Praising it is also *decere*, "fitting," again in a moral sense—it being fitting to praise to the gods to repay them for giving us a world just for us. Lucretius of course rejects the idea that the gods or the world care about our praising. As he says earlier in *De rerum natura*: "the very nature of divinity needs us not at all, nor is it propitiated with services." [171] One of Lucretius' tactics, then, is to parody this reciprocity between humans and gods by making it comic.

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[168] *Oxford Latin Dictionary*: *causa* , entries 17, 18, 19.
[169] *OLD*: *praeclarus*, entry 2b and 3b.
[170] Lucretius criticizes this thought process at 5.181-3, where he asked how the gods could have had a conception of mankind prior to the existence of human beings, "*Exemplum porro gignundis rebus et ipsa/ notities hominum dis unde est insita primum,/ quid vellent facere ut scirent animoque viderent....*
[171] *DRN* 2.650-1: [*omnis...divom natura*] *nil indiga nostri,/ nec bene promeritis capitur....* This is not to say that an Epicurean does not benefit by contemplating the gods. He does because they present him with an image of perfect ἀταραξία.

It is important that *humanum causa* is front and center in the passage. There are two criticisms implied in the phrase. First, *causa* foreshadows the main point of the argument: that eternally ataraxic gods could have had no cause to abdicate their tranquility to build a world. Second, even if they had intervened, one presumes it would have been more for their sake than for ours. The phrase offends Epicurean theology because *humanum causa* is opposed to the αὐτάρκεια of the gods. There must be greater emphasis on *causa* than *humanum*, more on the gods than humans.[172] Lucretius is employing the argument from sufficient reason: creationists have to give a satisfactory reason why eternal gods would be motivated to act rather than remain at rest. Furthermore, if textual space means time, there may be a suggestion in the line-break at 5.156, which divides the thinking here: the question of the gods having sufficient reason is separated by the line-break from the question of the *praeclaram* or *splendid* nature of the world.

Nonetheless, Lucretius wrote *humanum causa* not *divum causa*, and this means his criticism is focused on the human-centeredness of the creationist view. Lucretius' anti-anthropocentrism is much more pronounced than his later fellow Epicurean sectarian Diogenes of Oinoanda. The comparison is worth briefly going into. Lucretius' attack is not just ambiguous but deliberately so. It is broader in scope than it needs to be. Both Plato and the Stoics—or rather a generalized creationism—are available as targets here. Diogenes, however, focuses much more on Stoic theology: Did god make the world for

[172] Lucretius is perhaps engaging in an implied "*tu quoque*" argument. Cicero criticized Epicurus (*De finibus* 1.19) for supposedly having said that atoms swerve without a cause: *ait enim declinare atomum sine causa, quo nihil turpius physico quam fieri quidquam sine causa dicere*. If this reports a common criticism, the appeal to the absurd causality of creationism is a way diverting the focus away from a popular criticism a layperson like Memmius might be assumed to have been familiar with.

himself or for the sake of human beings? Diogenes poses this as a rhetorical question since, as he says below, a god abdicating his tranquility to make a world, no matter for whose sake, is absurd, γελοῖον—the latter an echo of Lucretius' *desiperest* above (5.165). Diogenes had the following inscribed on his stele (fragment 20 VI-IX):

"Well, in the first place, we come to this question: was it, may I ask, for his own sake (δι᾽ ἑ[α]υτὸν) that the god created (δημιού[ρ]γησε) the world (κόσμον) (VII) [or for the sake of human beings (ἢ διὰ τούς ἀνθρώπους)? For it is obvious that it was from a wish to benefit (ὠφελεῖν) either himself or human beings that he embarked on this] undertaking. For how could it have been otherwise, if nothing is produced without a cause (χωρὶς αἰτίας) and these things are produced by a god? Let us then examine this view and what the Stoics mean. It was, they say, from a wish to have a city and fellow-citizens, just as if (VIII) [he were an exile (φυγάς) from a city, that] the god [created the world (κόσμον) and human beings. However, this supposition, a concoction (μεμηχανημένον) of empty talking (ματαιολογίᾳ), is] self-evidently a fable (μῦθος), composed to gain the attention of an audience, not a natural philosopher's argument searching for the truth and inferring from probabilities things not palpable to sense (ἐκ τῶν εἰκότων τὰ ἄδηλα). Yet even if, in the belief that he was doing some good (IX) [to himself, the god] really [made the world and human beings],.....For god [is, I say], a living being, indestructible [and] blessed from [age to] age, having complete [self-sufficiency (μηδενὸς ἐνδεὲς ὄν)]. Moreover, what [god, if] he had existed for infinite [time] and enjoyed tranquility [for thousands of years, would have got] this idea that he needed a city and fellow-citizens? Add to this the absurdity (γελοῖον) that he, being a god, should seek to have human beings as fellow-citizens."[173]

Martin Smith produced a list of parallels between Diogenes' inscription and passages from Lucretius, and noted the passage from Lucretius above.[174] The immediate parallels are the following. Lucretius' *vexare* and *evertere* (5.163 above) suggest the collapsing of a structure which Diogenes reproduces here in the parodic δημιουργέω. *Fundatum* (5.161 above) suggests the Stoic idea of the cosmic οἶκος or city, but may also refer to the "receptacle" in Plato's *Timaeus*.[175] Diogenes refers specifically to the Stoics: εἰ γὰρ

[173] Translation by Smith 2003, 76-82.
[174] Mostly unexplored. Smith 1986, 204-207.
[175] *Timaeus* 49a: πάσης εἶναι γενέσεως ὑποδοχὴν αὐτό, οἷον τιθήνην.

ὥσπερ οἰκτήριόν τι καὶ πόλιν ἑαυτῷ τὸν κόσμον ἐδημιούργησε.[176] *Opus* and *decere* in line 5.158 above also reflect Diogenes' repeated use of κόσμος as a beautifully ordered object. Thus, in mocking this nexus of ideas about the earth as so ordered as to be an adornment (κόσμος) or an οἶκος that was divinely constructed, Lucretius is attacking the very foundations of a certain kind of ecology, divine holism, the very thing dark ecology seeks to show as absurd. Lucretius suggests by his sarcasm that the world is a flux of matter in motion with no purpose, no pre-stamped order or inbuilt moral uplift. Lucretius' mocking tone in *adfingere* (5.164 above) is preserved by Diogenes in μεμηχανημένον and μῦθον, "concoction" and "fable." [177] Smith notes that Diogenes' sources are not clear, but that since Epicurus was known to have attacked Plato and not the Stoics, the anti-Stoic polemic in Diogenes is the work of later Epicureans.[178] Whether this Epicurean argument was originally aimed at Plato or the Stoics matters for understanding what to do with the rhetoric in the passage from Lucretius above, which I will detail shortly. In Cicero's *De natura deorum* (1.18-23), the Epicurean Velleius uses this same argument against Plato and the Stoics and mocks their god as a builder.[179]

It is this language of building that makes available both a critique of Plato's demiurge in the *Timaeus* and the Stoic god of the city. Both gods "construct" a world. However, it is only in the *Timaeus* that multiple gods are at work and that the world is

[176] Fr. 20.I.8-10. I don't reproduce this but it is the beginning of the sentence following the last one in the passage from Diogenes above.
[177] Diogenes Fr. 20.VIII.4-5 above.
[178] Smith 1998, 138.
[179] At *DND* 1.21 Velleius criticizes the *mundi aedificatores.* Cf. 2.154: *Est enim mundus quasi communis deorum atque hominum domus, aut urbs utrorumque; soli enim ratione utentes iure ac lege vivunt. Ut igitur Athenas et Lacedaemonem Atheniensium Lacedaemoniorumque causa putandum est conditas esse, omniaque quae sint in his urbibus eorum populorum recte esse dicuntur, sic quaecumque sunt in omni mundo deorum atque hominum putanda sunt.* And Sen. *Ira* 2.27.2, where the universe is divinely ordered but not for the sake of human beings, cited in Holmes 2013, 156 note 6.

eternal.[180] The Stoic κόσμος is not eternal in the same way, since it is an eternal recurrence of creation and destruction. By *mundi naturam* (5.157 above), Lucretius means this earth. He wants to prove its mortality. For the Stoics, this earth is not eternal—one reason that Lucretius is more likely attacking Plato, but of course, would not mind offending a passing Stoic. As Diogenes' attack above characterizes him, the Stoic demiurge is a lonely, exilic god, who creates the world as a city so that he can have citizens to keep him company. But Lucretius' criticism has to do with creationism by multiple gods: *opus divom* (5.158) and *deum* (5.160). This focus on the plurality of gods in constructing a world-home means that the passage in Lucretius is oriented towards Plato's *Timaeus* and not the Stoics, picking up what was likely Epicurus' original argument.[181] Either way, the basic attack on the world as a well-built divine harmony comes in for the same collapse.

It is worthwhile to look into the overly "constructed" rhetoric of the passage in Lucretius. There are many word patterns that parody the idea of the world as a stable, eternal structure for human flourishing. For instance, the whole passage is framed by *dicere* at the beginning and *desiperest* at the end, the sounds of the words echoing each other, and emphasizing orderliness. There are bracketings of *porro* and *parare* at the beginning and end of 156, and *praeclaram* and *proptereaque* in 157. These are nested by *dicere* at the beginning of 156 and *decere* at the end of 158, both words echoing each other. There is the subtle string of rhyming line-endings in *parare*/*proptereaque*/*decere*, at the end of the first three lines of the passage. Lucretius' point is to parody the idea of

[180] Or more accurately "sempiternal."
[181] *Timaeus* 28c-d: τόδε δ᾽ οὖν πάλιν ἐπισκεπτέον περὶ αὐτοῦ, πρὸς πότερον τῶν παραδειγμάτων ὁ τεκταινόμενος αὐτὸν ἀπεργάζετο, πότερον πρὸς τὸ κατὰ ταὐτὰ καὶ ὡσαύτως ἔχον ἢ πρὸς τὸ γεγονός. εἰ μὲν δὴ καλός ἐστιν ὅδε ὁ κόσμος ὅ τε δημιουργὸς ἀγαθός, δῆλον ὡς πρὸς τὸ ἀίδιον ἔβλεπεν.

the world as a divine *opus* ("work" or "construction," 158). Lucretius parodies this by making the passage itself an overworked *opus* with overconstructed lines.

This divinely constructed *opus*—Lucretius reports his opponents saying—is a "foundation for all time," *fundatum perpetuo aevo* (161). In line 159, *aeternum* and *futurum*, imitate this divine foundationalism by making the line a kind of word-picture of all time, *aeternum* beginning the line, referring to all past time, and *inmortale futurum*, ending the line, referring to all future time.[182] In 161, *fundatum*, "foundation," recalls *opus* in 158, but "foundation" emphasizes even more the idea of the world as a house, a divinely created "ecology" just for humans.[183] Of course, in Lucretius' view reality is material flux and assemblages of atoms that will eventually collapse and drift into the void. In 160, *ratione vetusta*, "by ancient reason," refers to the world's supposed god-bestowed rationality, a pompous rendering of the πρόνοια, "providence," of Plato's Demiurge. In short, Lucretius' brick-and-mortar rhetoric parodies the idea of the world as a divinely, rationally constructed gift for human life, because in his view it is more like a shipwreck of matter in which everything is porous and vulnerable to everything else.

This divine rhetorical construction collapses at line 162, where *sollicitare suis...sedibus* suggest a falling apart.[184] At 163, *vexare* ("to shake") and *evertere* ("to turn upside down") are verbs that usually describe earthquakes, storms, or atomic instability in *De rerum natura*. Here they destabilize Lucretius' parody of Plato's cosmos. The irony is that while Lucretius' opponents think it impious to attack religious anthropocentrism (*nec fas esse*, 160), the verbs *sollicitare*, *vexare*, and *evertere* are the actions of atomic nature

[182] On the meaning of the time references see: Ernout-Robin 1962 [1928], vol. 3, *ad loc.* 26.
[183] From οἶκος, "house," and λόγος, "system." Coined by Ernst Haeckel in 1866. Cf. Nash 1989, 55-62.
[184] Jackson 2013, 197.

itself. *Natura*, being physical reality, Lucretius thinks, cannot be impious.[185] It is the anthropocentrists who are impious. Their religion adds false opinions to the natural world by setting up a divine Nature.[186] Lucretius' lines themselves perform the overturning of Plato's ideas by echoing the *ver*-root ("to turn"): **VER**bis/**VE**xa**RE**/**EVER**tere ("with words," "to shake," "to overturn"). There is a progression in this pun that restages the progressive collapse of Plato's idea that the cosmos is divine, pulling the reader's expectations with it along the way. **VER** builds up to **VERE**, and **VERE** could be said to "overturn" its final **E** to make **EVER**: the *veracity* of Plato's cosmos collapses by the end of it. In his attack on divine holism, in favor of the cosmos as an inhuman dark ecology, Lucretius performs a dark ecology of signs, in a parody that is parasitic on the Platonic-Stoic divine ecology whose veracity he is collapsing. In 164, *adfingere* and *addere* ("to make an addition to"), take on a new force in the parodic context to mean "to make a (false) addition to," i.e. to fabricate a fantasy.[187] The words, therefore, not only re-stage Lucretius' opponents' view of ecology, but their psychology as well. Finally, *desiperest* ("it is foolish," 165) "overturns" the whole passage about divine holism.

Lucretius' dark ecology of word and world also overturns Empedocles' Golden Age view that humans and animals lived in harmony under the reign of Venus in the state of nature. Lucretius replaces this with his Epicurean view of pre-human ancestors meeting in ancient forests, driven by an innate *vis* to the first human trysts.

[185] Leonard and Smith 1968 [1942], 660.
[186] Empedocles, frs. 128 and 130; Plato *Politicus* 271e, 272b; Aratus *Phaenomena* 132; and cf. Vergil *Eclogues* 4.22.
[187] *OLD affingere*, entries 1 & 3.

Violence and *Venus in Silvis*

Humans in the state of nature lived as solitary animals, passing their days in the *volgivago more ferarum*.[188] They were dominated by an animal energy, *vis*, a generalized force the ends of which had not yet been determined. For these reasons, the moment when humans first come together in sociality is incredibly important. Protohumans driven by the *vis* of their bodies, are pushed to the first forms of human sociality.

Et ***V***enus ***I***n ***SI***l***VIS*** iungebat corpora amantum;	962	962: **V**enus **I**n **S**il**VIS** ≈
conciliabat enim vel mutua quamque cupido	963	**VIS** **VIS**
vel ***VI***olenta ***VI***ri ***VIS*** atque inpensa libido	964	"force" "force"
vel pretium, vel glandes atque arbita vel pira lecta.	965	**SI**l-**VIS** ≈ **SI VIS,** "if you want"
		964: vel **VI**olenta **VI**ri **VIS** ≈
		VI **VI** **VIS**
		"by force" "by force" "force"
		965: **ARBITA** ≈ **ARBIT**r**A**ri
		"strawberry" "to calculate/reason"
		ETVENVSINSILVIS
		rephrased in
		VIo**LENT**a**VI**r**IVIS**

And Venus was joining the bodies of lovers in the forests; for either mutual desire was uniting each [woman], or the violent force of the man and his urgent lust, or a fee; either acorns and strawberries or choice pears.

Here, the meaning of *vis* ranges from the life-promoting "desire" or "will" to the negative "violence" or "force," just as its manifestations range in Lucretius' dark ecology.[189] Because the world and human nature were not made for the sake of anything, neither

[188] *DRN* 5.932: "wide-wandering manner of beasts." The sounds in *volgivago* bounce around like a lost dog.
[189] *Vis* is a noun derived from the Latin verb *velle, to want*. Lucretius is using it here to show the many forms that yet unpredetermined wanting takes.

were our primal animal energies. Neither in the state of nature nor in civilization is it predetermined that human *vis* will benefit humans.

In the first line above, Venus is "joining," *iungebat*, the bodies of lovers in the primeval forests, *in silvis. iungebat* is commonly used to describe the joining of atoms in *De rerum natura*. The plural in *silvis* may connote the vastness of wilderness before civilization. Lucretius drops the reader into a region of wild animals and human unexceptionalism, where Venus emerges from the forces that dominate the place, just as her name, *Venus*, sounds a summoning of all the whispers of *vis* in the passage. *Silvis* suggests the Greek word ὕλη, the standard Greek word for *forest* but also for "matter." Early humans dwell in this forest of matter as bodies, or *corpora*, of "lovers," *amantum*. *Amantum* recalls *animantum*,[190] "living beings," and may connote *animalium*, "animals."[191] To read this hexameter line correctly, you have to elide the final *a* in *corpora* with the initial *a* in *amantum*: as in *corpor-animantum*. The words, just like the bodies, are a porous enmeshment of lovers, in which bodily boundaries are syncopated just like the words Lucretius uses to recreate the experience. The pulsating and susurating of *vis* add to Lucretius sonic and visual recreation of the flux of human *corpora* under the sway of Venus. The atomic subtext triggered by *silvis* (ὕλη) has the effect of de-solemnifying the origins of human sociality as a turbulence of animal bodies escaping the laminar flow of solitary bodies in lonely forests that proceeded it. It is as if this forest of

[190] Campbell 2008 [2003], 225.
[191] Schiesaro 1990.

solitary bodies (laminar flow) has suddenly, at an unexpected time and place, become a vortex of lovers (clinamen).[192]

Vis/*Venus* propel sociality here, including the calculations of eros. That calculation is the result of the impulsion of Venus, or her counterpart in human nature, *vis*, a kind of attunement between human *vis* and the environment, but not yet reason. As Luciano Perelli puts it,

> Gli uomini vivevano in assoluto isolamento, non esistevano famiglie nè unioni stabili, ma *soltanto* accopiamenti ferini. Nell'ingenua considerazione che le donne, oltre che dal desiderio o dalla violenza, potevano essere attratte all'unione dall'offerta di rustici doni, vi è *un primordiale elemento di calcolo e di riflessione*, che prelude al principio epicureo che l'utile e il fondamento dei raporti umani e della vita associata [my italics].[193]

Perelli notes a primordial element of calculation and reflection in these erotic bodies driven by *vis*. Lucretius presents *vis* as the bridge between protohuman sensation and the first glimmers of calculation and reflection. This bridge between sensation and calculation—i.e. the propulsion of *vis*—is staged by Lucretius in the pun on **ARBITA**. The "strawberry" given as payment for love is very close in the visual and sonic simulacra it triggers to the verb **ARBIT**r**A**ri ("to calculate" "to reason"). The proximity of *arbita* to *arbitrari* in the pun may be meant to recreate in the minds of Lucretius' audience the proximity of the mental experience of the simulacra triggered by the strawberry in the protohumans using it to negotiate for sex. These protohumans use the strawberry as a kind of external mind to "calculate" or "reason." As these protohumans exchange strawberries (*arbita*) the simulacra triggered in their minds slides into the simulacra triggered by the act of calculating/reasoning (*arbitrari*). Lucretius' restaging of

[192] In Chapter Five, "The Animal Revolt," I show history swerving again unexpectedly as a result of a build-up of forces as rebel animals swerve to escape the control of a human civilization dominated by Mars.
[193] Perelli 1967, 163.

the protohuman, mostly sense-based, cognition centered on *arbita* (the strawberry) may also retains sounds in *arbitrari* ("calculation" "reason"). That is, Lucretius may think that the phonemes in the word *arbitrari* (a word from his own advanced stage of language) still contains some of the prehistoric sounds in the *arbita* these early human lovers used to negotiate for sex in the forest. Lucretius is knowingly using late-stage language to recreate the experience of this moment in human prehistory. The pun uses words from an advanced stage of language to recreate the protohuman experience of moving from *arbita* to *arbitrari*, i.e. from thought externalized in a sensual object to mental calculation without intermediaries. What is clear, is that the focus of the passage is the capacity of *vis* in early humans to get them what they want, even if it means propelling them to calculation and quasi-reasoning in their first steps to sociality.

Physical bodies and the simulacra they trigger cycle in the text. Because the scene is a mixing of bodies both violent and pleasurable, this results in a dark ecology of signs.[194] *Vis*, for instance, reverberates throughout the passage. In ***V****enus* ***I****n* ***S****il****VIS***, *vis* is echoed twice. In ***SI****-l****VIS*** there may be an erotic solicitation: *si vis*, "if you want."[195] As the *v*-sounds repeat and the parataxis accumulates in lines 964-5, the sense of force in the text builds, recreating in sound the force of bodies in motion.[196] In ***VI****olenta* ***VI****ri* ***VIS***

[194] "The Book of Nature is more like a Mallarmé poem than a linear, syntactically well organized, unified work. The words spread out on the page: we can't tell whether to read from left to right, nor can we tell which words go with which. The words fluctuate and change position before our eyes. Darwin himself uses the analogy." Morton 2010, 61. Lucretius' *elementa* analogy performs on, i.e. affects, the reader with the aleatory, combinatory power of atoms in the material world. Lucretius both enacts a mimesis in language of the organized, syntactical aspects of the material world as well as the non-linear aspects of the material world in the tension between the linear flow of words in the poetic line and the non-linearity of his puns.
[195] The "i" is long in *vis*, both in its noun and verb form.
[196] Maltby (2006 [1991]) cites *AUG. dilect.* who notes that *vis* in onomatopoetic: *cum dicimus vim, sonus verbi ut dictum est quasi validus congruit rei quam significat* & *quod robusto et quasi valido sono verbum rei quam significat congruit.* Friedlander (2007 [1939], 364-365) notes that Lucretius likes to use the *v*-sounds to stress the natural relationship between the violence of winds and waves and, in a comment on 5.964, the "storm of the lover." West ([1969] 1994, 96) notes that many of Lucretius' puns "appear to be

(964) is the echo is *vi-vi-vis*, as if the the key-word, *vis*, were lunging violently across the line: "by force," "by-force," "force" (*vi-vi-vis*).

It is no mistake that the agents of *vis* here are all men, as Lucretius uses the etymology of *vir* and its relation to *Venus* to recreate his version of prehistory, in which there is a fantasy of the human as male.[197] Lucretius backgrounds women as lovers or victims. In rejection of Empedoclean Golden Age fantasies, Lucretius shows that the sociality of Venus includes violence, as the vortex bodies and *vis* create a dark ecology of vulnerable, porous animal bodies.

Lucretius' Dark Ecology

I have detailed two passages as touchstones for Lucretius' dark ecology. The first claims that the world was not made for our sake, and the second that the first human social encounter was a vortex of violence and pleasure (*vis*). I move now to the last passage, which shows even further the enmeshment of bodies and language in Lucretius' dark ecology. Here, Lucretius describes early humans being regularly mauled and eaten alive by wild beasts in the state of nature. As they are devoured, they watch their flesh, uncannily, being recycled into the flesh of the animal.

Nec nimio tum plus quam nunc mortalia saecla 5.988
dulcia linquebant violenter* lumina vitae. 989
unus enim tum quisque magis deprensus eorum 990

suggested etymologies." None suggest the possibility that these *figurae etymologicae* may also be tools for history.

[197] Campbell (2003, ad. loc.) notes the Lucretius may be engaging in *figura etymologica* in line 5.964. I agree, but it is no mere pun. Just as he takes seriously aspects of the Golden Age myths—which he takes to contain some truth about the deep past—Lucretius is also using the etymology of *vir* to uncover human nature in prehistory.

pabula viva feris praebebat, dentibus haustus, 991
et nemora ac montis gemitu silvasque replebat, 992
viva videns vivo sepeliri viscera busto. 993
at quos effugium servarat corpore adeso, 994
posterius tremulas super ulcera taetra tenentes 995
palmas horriferis accibant vocibus Orcum, 996
donique eos vita privarant vermina saeva 997
expertis opis, ignaros quid volnera vellent. 998

993: **VI**va **VI**dens **VI**vo **S**epeliri **VIS**cera
≈ **VI** **VI** **VIS** **VIS**
"by force" "by force" "force" "force"

996: **VOC**ib**U**s **O**r**CU**m**: VOCU**, **OCU**

997: **VERM**ina **S**aeva ≈ **VERM**e**S**
"twisting pains" "worms"

*989 lamentis OQP: violenter W.S. Watt, Hermes 117 (1989) p. 235: *labentis* Lachmann: *perhaps* tormentis

Nor did mortals much more then than now violently leave the sweet light of life. For each one of them was more likely then to be seized and provide living food for beasts, having been engorged by their teeth, and would fill the groves and mountains and forests with groaning as he saw his living flesh buried in a living tomb. But those that flight had saved, with body eaten up, afterwards held their trembling hands over the hideous sores, calling for Orcus with horrific cries, until savage twisting pains deprived them of life, without help, ignorant of what a wound wanted.[198]

Gordon Campbell thinks that the brutality here paints as harsh a picture of the state of nature as possible, to show how much worse things are now under modern *mores*.[199] This moral reading is important. Lucretius begins by saying "Nor did mortal men much more then than now violently leave the sweet light of life," and a few lines later, "But one day did not send to destruction many thousands of men in the battle-field, ships and mariners were not dashed on the rocks by the turbulent billows of the sea." Campbell is right that Lucretius is implicity comparing the harshness of the state of nature to the even greater violence—and I would add, the deadly efficiency and order—of the wars of empire.

[198] W. S. Watt (1989, 233-66) on reading *violenter* for *lamentis*: "'*Alienissimum est lamentis*,' says Lachmann, and it is indeed a ridiculous reading with nothing but alliteration in its favour. The suggested replacements (such as *labentis*, *languentis*, *clamantis*, *plorantis*) are likewise unsatisfactory, if only because the succeeding context makes it clear that Lucretius has in mind violent, unnatural death. I therefore suggest *violenter*; Lucretius is fond of adverbs in *–ter* (cf. Bailey, *Proleg*. 136f.), and the supposed corruption (*viol-* > *mal-* > *lam-*) would be a well-known type, perhaps aided here by the beginning of *lumina*."

[199] Campbell 2008 [2003], 240-243. Gale agrees with this in her commentary on Book Five (Gale 2009, 183).

However, the following lines deserve emphasis. Lucretius writes: "Then [in the state of nature] blindly, with no purpose, for no result (*temere incassum frustra*), the sea often rose and was savage (*saevibat*), and lightly laid aside its threats (*minas inanis*) without meaning."[200] The immediate point is that there was no sailing in the state of nature, so the sea's ragings were pointless. But Lucretius is not only talking about sailing. He is making the larger theological point encompassing the whole of Book Five: that the violence inflicted by natural entities, whether by water or wild beast, is "to no purpose." The violence of civilization, by contrast with that of prehistory, is mercilessly purposeful. The piling-on of adverbs of purposelessness underlines Lucretius' broader claim about the purposelessness of violence in the state of nature, while retaining the strong moral critique of Roman civilization that Campbell pointed out. In Epicureanism, natural violence is just a morally neutral fact about the world, and in Lucretius' dark ecology, it is simply what it means to be realistic about being enmeshed in the natural world. It is only from an anthropocentric perspective that sea-ragings or wild beast attacks would confirm human importance by having some deep meaning. For Lucretius, they have no meaning at all, and this is meant to be liberating.

The degree of violence in Lucretius' state of nature was so great that humans nearly went extinct.[201] Lucretius claims (5.990 above) that every protohuman ran the risk of dying by wild beast attack: "For each one of them was more likely then to be seized

[200] There is an ecological pun in the recycling of the letters-elements of m**INAS** into **INA**ni**S**, the word for "threats" produce simulacra in the reader of the word "empty." Thus the words themselves be said to be "lightly laying aside" threats in the minds of the readers. *DRN* 5.999-1005: *at non multa virum sub signis milia ducta/una dies dabat exitio, nec turbida ponti/ aequora lidebant navis ad saxa virosque;/ tum <u>temere incassum frustra</u> mare saepe coortum/ <u>saevibat</u> leviterque <u>minas</u> ponebat <u>inanis</u>.* As the Leonard and Smith note, *temere* is linguistically 'connected with *te-mes ("dark"), the root of which also appears in *tenebra*" (Leonard and Smith 1968 [1942], 406). Hence, "blindly" in my translation above.
[201] *DRN* 5.1026-7.

and provide **living food** for beasts" (*unum enim tum quisque magis deprensus eorum/* ***pabula viva*** *feris praebebat*). By focusing on the death of each, *quisque,* Lucretius reminds us of the vulnerability of isolated humans in the state of nature, which will only be resolved by the formation of the first society later. In lines 994 to 998, Lucretius says that those who got away died of their wounds. By promoting *effugium* to the subject of this sentence as a quasi-personification, *at quos effugium servarat corpore adeso,* Lucretius is making an implicit comparison between humans and animals, reminding us of the *fuga,* flight instinct, of deer, that earlier in Book Five kept deer safe since creation so that they not go extinct.[202] Lucretius is, thus, hinting at the weak, negatively exceptional status of early humans in his dark ecology. The world is not only not for our sake, and it is even less for our sake than for other animals.

The degree of violence in this dark ecology is so great that it parodies the topos of the *locus amoenus*.[203] In line 992, Lucretius describes the locale as *nemora ac montis...silvasque* ("groves and mountains and forests"). Lucretius replaces the grass of the *locus amoenus* (the famous ***pabula*** *laeta* of *DRN*) with "living [human] flesh" (***pabula*** *viva*).[204] Instead of animals sipping at rivers, Lucretius depicts wild beasts engorging human beings (*haustus*, 991).[205] Instead of birds or lovers filling the landscape

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[202] *DRN* 5.857-9 and 862-3: *nam quaecumque vides vesci vitalibus auris,/ aut dolus aut virtus aut denique mobilitas est/ ex ineunte aevo genus id tutata reservans;...Principio genus acre leonum saevaque saecla/ tutatast virtus, volpes dolus et fuga cervos.*

[203] It's not clear that the *locus amoenus* has an independent literary existence in Lucretius. Ernst Curtius (1953, 195) offers a set of minimum requirements for a *locus amoenus*: "It is...a beautiful, shaded natural site. Its minimum ingredients comprise a tree (or several trees), a meadow, and a spring or brook. Birdsong and flowers may be added. The most elaborate examples also add a breeze. In Theocritus and Virgil such scenes are merely backgrounds for the ensuing pastoral poetry."

[204] *Pabula laeta*: 1.14, 1.257; 2.317, 2.364, 2.596, 2.875, 2.1159; the formula changes for the first time at 5.944 to *pabula dura*; here it becomes *pabula viva*. (For *pabula praebere*: 1.229; 2.996.)

[205] Cp. *DRN* 5.945-952, where many of the same elements of the *locus amoenus* are present that have been subverted here: *At sedare sitim fluvii fontesque vocabant,/ ut nunc montibus e magnis decursus aquai/claricitat late sitentia saecla ferarum./ denique nota vagis silvestria templa tenebant/nympharum,*

with song, mauled humans fill hill and dale with groans, and human bodies fill beasts with food (*gemitu...replebat,* 992). The soundscape too is a dark ecology. These rhetorical inversions also invert the cliché of early humans as hunters, making early humans just as much the hunted, another form of human negative exceptionalism. Early humans, while alive, watch their own flesh (*viscera*, 993) being transferred into the bodies of other animals, observing themselves becoming the flesh of another animal. But unlike the human victims, the *viscera*—as a quasi-independent body part—remain alive during the transference. They remain *viva* as they are incorporated into another body, or as Lucretius says "buried in a **living** tomb," ***vivo*** *sepeliri...busto*.[206] In this double oxymoron, flesh and the tomb are alive. The oxymora underline the uncanniness of the situation, the impossibility, from the perspective of the dying human, of his body becoming the living flesh of another animal. The flesh itself, the *viscera,* take center stage as a subject of this dark ecology, emphasizing the general idea in Lucretius that *natura* is a process of recycling one body into another. In a posthuman moment, both human *and animal* subjectivity are downplayed in favor of quasi-subjectivity of the flesh.

This moment also suggests the violent recycling of "force" (*vis*) in the play of forces in Lucretius' dark ecology: ***VI****va* ***VI****dens* ***VI****vo sepeliri* ***VIS****cera busto* echoes *vis*—

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quibus e scibant umori' fluenta/lubrica proluvie larga lavere umida saxa,/ umida saxa, super viridi stillantia musco,/ et partim plano scatere atque erumpere campo.

[206] Perhaps Lucretius characterizes predatory animals as tombs because before permanent settlement human corpses were just another part of ecology, nothing permanent remaining. Whereas civilization goes hand in hand with concern for the dead in permanent burial. In the state of nature ecology only is the grave. Consider the violence that burial causes at the finale to *DRN*, 6.1283-6: *namque suos consanguineos aliena rogorum/ insuper extructa ingenti clamore locabant/ subdebantque faces, multo cum sanguine saepe/ rixantes potius quam corpora deserentur*. Cf. Feeney 1978, 15-16: "Lucretius picks out the fear of being mauled by beasts as the real target...once we are free of this fear we will see that we may easily discard our apprehensions of the normal forms of burial. The important point to note in this rather difficult passage [referring to III.871-2] is Lucretius' conviction that bestial mutilation is the fate that man most *naturally* [my emphasis] and deeply fears for his corpse." Cf. Mumford 1989 [1961], 6-10.

"violence," "force," "desire"—multiple times, showing the centrality of *vis* to Lucretius' ecology of prehistory, cycling *vis* through the system of Lucretius' advanced stage of language to perform this ancient dark ecology as a nexus of forces. The sounds in *busto* collide at the end the line. Thus, the repetition of the sights and sounds in *vis* indicate Lucretius' attempt to have his language, and the visual and auditory simulacra it performs for the reader, recreate the simulacral experience of the violent recycling of flesh undergone by early humans in these violent encounters.

In line 997, the writhing pains (*vermina*) of the mutilated protohuman bodies suggest the turning or flow of matter (**VER**), while foreshadowing the worms that will eventually emerge from the decomposed the body. The *vermina*, the pains, will cause the emergence of *vermes*, which Lucretius has already staged with his pun.[207] Both the writhing pains and the worms are part of the same natural process signaled by the repetition of the **VER** root. Lucretius' language, thus, hews closely to the painful enmeshment of his dark ecology. While a knowing fiction, these recyclings of the **VER** root perform the reality of human negative exceptionalism in Lucretius' dark ecology. Since the pains in the mutilated body feel like, and will soon become, the worms that are already sliding into the process of turning the mauled body back into the earth, *humus*, Lucretius' puns stage the posthuman nature of the human body by affecting the reader with the idea that the early human body was essentially atoms all along, essentially compost (*humus*), and now being disarticulated back into earth at death.[208] These *vermina*, the grammatical subject of the line and another quasi-personification, are *saeva*

[207] *Vermes* are natural eaters of corpses in *DRN*. See Feeney 1978, 16. Cyril Bailey notes the play on words in *vermes* in *vermina* (Bailey 1947, Vol. 3, 1481).
[208] Donna Haraway prefers the term compost to posthuman in Haraway 2016.

("savage," "wild"), as if a second animal finishing off the humans who survived the first—another indication that Lucretius' dark ecology is a place of corporal transformation through pain that constantly returns the *humanum genus* back into the *humus* from which it emerged.

The scene is uncanny—as any radically non-transcendent, posthuman perspective on our body is in a world dominated by humanism. This posthuman uncanniness is meant to be challenge ideas of the human. The uncanniness is furthered by the fact that the violence of the wild beasts and the vulnerability of the human body clash at such close proximity—the encounter is zoomed-in so closely—that the protohumans experience the posthuman nature of their bodies as unreal, from an unreal perspective on themselves as bodies deconstructing back into living *viscera*. This posthuman perspective on human bodies is enabled by the human victims seeing themselves at an intensely intimate level of description. Timothy Morton describes how intimate perspectives on experience can reveal our posthuman nature:

> Experience never has a "This is a [insert your name here] experience" running through it like a barcode or a copyright mark or one of those phrases you see in a stick of rock at the British seaside. It lacks this barcode *especially* when the experience is really intimate. Imagine being in a car crash. It's so vivid: it's a trauma. Precisely because of this, there is a feeling of *unreality*. The feeling of unreality goes hand in hand with the less you-scaled, more ego-shattering event.[209]

Lucretius' early humans are having an uncanny, posthuman experience through an intensely close-up, intimate encounter with the ecological forces in their surroundings. Having suffered so much violence through this intense posthuman experience, the

[209] Morton 2018, 145.

survivors want to die. Their bodies automatically emit the name *Orcus* as they "call on Orcus with horrible cries" (*horriferis accibant vocibus Orcum,* 5.996).[210]

To "call on Orcus" is at first glance perplexing, because Lucretius is describing a stage of history before language. What are these prelinguistic humans saying? *Orcus* is not yet a word (*verba*). It is more likely that Lucretius is using the word *Orcus,* a feature of his more advanced stage of language, to describe the automatic emission of a naturally meaningful sound, which Lucretius might believe still contains some of the primal, prehistoric phonemes from this very encounter, when early human cried out inarticulately at death.[211] Using words (*verba*), Lucretius is performing the protohuman sounds automatically emitted upon death that, just like any other animal, describe more the state of the dying pre-human body than any reference in the outer world, like the god *Orcus*. Lucretius is essentially performing, in advanced language, protohuman biosemiotics. Here, elements of the word *Orcus* are released into the air as *sonitus,* or sounds, by the body in pain. The pun **VOC**ib**U**s **O**r**CU**m recreates this sonic history in the sonic experience of the Lucretius' listener by disarticulating the sounds in the word. The *sonitus* that later will make up the word *Orcus* slowly fade, like an echo, into meaningless sounds: **VOCU**...**OCU**.

This contradiction between what the visual and sonic simulacra in *Orcus* mean for Lucretius' audience—for whom those prelinguistic sounds have long ago been shaped by the *daedala lingua* into conventional words—and the phonemes themselves that Lucretius disarticulates in his pun on the name *Orcus,* are brought to life again in an

[210] *DRN* 5.177-178 *natus enim debet quicumque est velle manere/ in vita, donec retinebit blanda voluptas.*
[211] But see Mackey (2015 73) for the possibility that these sounds/names, however clumsy, already constitute language as such.

ecology of language for the listener that reproduce the simulacra of bodies in Lucretius' dark ecology. By disarticulating the protohuman phonemes in **VOC**i**b**U**s** **O**r**CU**m, Lucretius winds back the clock on the name *Orcus* to restage the emergence of its first sonic elements in the ears of his Roman audience. This recreates, in the Latin of Lucretius' day, something like the simulacra of the experience those early humans had when they were mauled to death by wild beasts and emitted the first sounds that became name *Orcus*. Thus, there is no indication that in sounding some of the primal phonemes that later became *Orcus*, these early humans had knowledge of death or the god of death. They are automatically emitted sounds in reaction to the simulacra of their environment, just like any other animal. But presumably the regularity of these animal attacks, as Lucretius indicates with the use of imperfect tense verbs in the passage, would have led to a regularity in the sounding of the sounds in the name *Orcus*. As those sounds would have been seen to have utility in referring to the name and concept of death, they would have been later shaped by the tongue to secure the regularity of those sounds' reference to death.

The fact that the pun on *Orcus* is bilingual may indicate that Lucretius is not talking exclusively about the first steps in the emergence of Latin names. Ὅρκος is an epithet of Hades that transfers into Latin as a reference to the god of death.[212] Lucretius,

[212]Wissowa 1912, 310: "Auch in der lateinischen Poesie sowie in zahlreichen Ausdrucken des gewohnlichen Sprachgebrauches fur den Todesgott gelaufige Wort Orcus is nicht etwa, wie man in alter und neuer Zeit zu glauben geneigt war, eine einheimisch italische Schopfung, sondern eine Herubernahme des griechischen Beiwortes des Unterweltsgottes Ὅρκος." Ennius, *Trag*. 113-116: *Acherusia templa alta Orci/ salvete infera/ pallida leti nubila tenebris/ loca!* And Statius *Hymnis*, fr. 64: *Mihi sex menses satis sunt vitae; septimus Orco spondeo.* And the echo of this in Lucilius XXVI, fr. 659: *qui sex menses vitam ducunt, Orco spondent septimum.* Varro, who according to Wissowa, here transmits a popular etymology, connects Orcus with Zeus in his earth-manisfestation, in *De lingua latina* V.66: *Idem hic Dis pater dicitur infimus, qui est coniunctus terrae, ubi omnia <ut> oriuntur ita aboriuntur; quorum quod finis ortu<u>m, Orcus dictus.* "He is likewise called *Dis pater* in his lowest capacity; he is joined to the earth, where all things arise just as they vanish away; and because he is the end of these arisings, he is called *Orcus*." In this

in recounting this passage, may be relying here on a Greek Epicurean source, even Epicurus' writings themselves. But since we lack that source, one might speculate that Lucretius is either performing, through disarticulating the primal sounds in the Greek and Latin name *Orcus*, the common origin of that name in the sounds emitted in the common experience of death in the state of nature.

Lucretius, thus, presents the state of nature as a dark ecology full of violence and pleasure. As this chapter has shown, this inhuman landscape is characterized by *vis*, or "force," in all its articulations and disarticulations. But is there something more to say about Lucretius' circulation of puns on *vis*? Lucretius is an empiricist—about the mind and its development via interaction with the protohuman landscape. But what drove or guided this process of interaction with the landscape? The repetition of puns on *vis* strongly suggest that whatever it is, it is associated with *Venus*.

This has several positive consequences for the reason or rationality of Lucretius' story of how we became human, or to put it more accurately, of what guided early humans within their inhuman landscape to want to develop faculties like language, and society. Before tackling how Lucretius thinks language and society evolved, one first has to ask *why* protohumans would have *wanted* language and society in the first place. That is the question theories of the origins of language rarely ask. To put this in Lucretius' terms, what need would early humans have been born with such that they would see language and society as having the utility to fulfil that need, and therefore would have wanted to develop those language and society in the first place? Lucretius uses the figure

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respect consider the possible connection to 5.258-60: *et quoniam dubio procul esse videtur/ omniparens eadem rerum commune sepulchrum,/ ergo terra tibi libatur et aucta recrescit.* "And since beyond all doubt the mother of all is seen also to be the universal sepulchre, therefore you see that the earth is diminished and is increased and grows again."

of *vis*/*Venus* to answer these most primary questions. As I have shown in this chapter, *Venus* and *vis* link a number of tendencies that Lucretius describes as already there, innate, in the *genus humanum* at time-zero. The poetic figure of *Venus* seems to indicate for Lucretius an innate drive (*vis*) for cooperation, altruism, eros, and mixing of all kinds, including the violent mixing of bodies.

Early humans, on Lucretius' account, were driven by all that is associated with the forces of *Venus*, and the poetic logic of Venus solves these questions in a parsimonious and rational way. First of all, the idea that a generalized force (*vis*) associated with Venus guided humans to find utility in some things in the landscape rather than others is not as domain-specific as Platonic theories of innate knowledge, such as one finds in the *Meno*, or in contemporary theories of the "language instinct" or theories of instinct for religion, music, art, kindness, etc.[213] Lucretius' view is more rational because rather than imagining humans as born with an array of targeted faculties, like a series of apps—the very problem many of the animals who went extinct after the creation had (too specialized)—Lucretius describes a very general drive (*Venus*/*vis*) that collocates a number of tendencies in the figure of Venus that are general or neutral enough to make early humans highly adaptable animals. Such adaptability, such a general drive like *Venus*/*vis*, would have been necessary for humans to survive in the flux and uncertainty of the dark ecology that Lucretius describes.

Too narrow a set of instincts would have made early humans less adaptable, already over-programmed for an uncertain environment. Narrow instinct theories might work in a world that is itself preprogrammed for human life. Otherwise, narrow instincts

[213] For a recent attack on innate "instinct theories" of various human capacities, like language and religion, see Everett 2008 and 2012.

are too specific for the uncertainties of prehistory. Only a god could have created such humans for such a world. Lucretius is adamantly against creationism and Platonic innatism. Thus, he describes early humans as born only with a very general innate "force" of "faculty," a very general adaptive structure, that drove protohumans—who were more body than mind—through bodily desire to see as useful (*utilitas*) the things in their world that could fulfill their instinctual need for all that is associated with Venus. In short, for Lucretius, humans are incredibly Venusian animals. We are born that way, and thus the answer to the question why did humans want to develop language or society at all is because it fulfilled humans' innate Venusian desires—for cooperation, association, eros, love, mixing of all kinds. Those desires (*vis*) are innate in us, and we use language, society, strawberries, acorns, pears, and their modern equivalents to fulfill those instinctual wants.

Lucretius' dark ecology, thus, stages an encounter between early humans who were driven by a very general Venus instinct and an inhuman world not made for us. The Venus instinct, and all its poetic logic, is associated with altruism, care, cooperation, sociability, eros, and love. It helped early humans survive their inhuman world. As our world too becomes more hostile, unpredictable, and inhuman, this too is a fable for our time.

Chapter Three: The Animal Contract

> "In the simplest terms, our relationships with animals were once contractual. If we could reestablish an atmosphere of respect in our relationships, simple awe for the complexities of animals' lives, I think we would feel revivified as a species."
> -Barry Lopez, "Renegotiating the Contract"

What is the basis for community between species? In *Interspecies Ethics*, Cynthia Willett asks a similar question, "What basis is there for trans-species communitarianism and cosmopolitanism?" She puts the problem this way,

> 'Response ethics,' also known as 'alterity ethics,' turned philosophical attention from laws and principles examined through solitary reflection or rational argument to the *pathos* of an appeal from the vulnerable stranger—the Other whose singular identity exposes the epistemic poverty of language and concepts….but [response ethics] has yet to generate *multifaceted norms or guideposts* for the expansive biosocial structures required for an interspecies ethics. Response ethics may serve to urge humans to respond to the alterity of animals and animal suffering. *But responding to alterity is not living with those other creatures* [my italics].[214]

In this chapter, I present a Lucretian response to Willett's call for frameworks for living with other animals by offering a close reading of the "animal contract" in Lucretius' *De rerum natura*. The animal contract is the idea that the relationship between humans and animals is contractual, and has been since early human culture. The animal contract is introduced in Book Five of *De rerum natura* to show how humans and companion animals collaborated in in the past to survive an increasingly inhuman natural world.[215]

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[214] Willet 2014, 9.

[215] Lucretius does not name the passage "the animal contract" but simply describes it as such. Epicurus, however (*Principle Doctrines* 32), discusses a *suntheke*, the Greek word for covenant or contract, between animals. It is a matter of scholarly debate, however, whether Epicurus thought nonhuman animals capable of participating in contracts.

As well as ensuring mutual survival, the animal contract also ensures mutual pleasure between the species through reciprocal giving. There is no sustained work on the animal contract in scholarship aside from an important article by Jo-Ann Shelton that details how the animal contract in Lucretius contributes to the Epicurean goal of tranquil pleasure, or ἀταραξία, in humans.[216]

This chapter offers a close reading of the animal contract to show what it has to offer animal studies for thinking about interspecies ethics and human-animal communitarianism. To that end, I will also investigate internal contradictions in the category of "companion animal" that the animal contract sets up by reading the animal contract alongside Donna Haraway's critique of the companion animal in her *Companion Species Manifesto*.[217] Along the way, I will also unearth assumptions about companion animals that are built into the animal contract and that we no longer share, for better or for worse.

Lucretius' insight that the social contract need not be based on reason has benefits. Unlike Enlightenment contractarianism (for instance, in Locke or Rousseau), the animal contract in Lucretius is based not on reason but on the pleasure of reciprocal giving.[218] This basis in giving is important because it does not require of animals that they demonstrate the human-like capacities of reason, language, or autonomy to become

[216] Shelton 1996, 52.
[217] I do not call contract animals in Lucretius "domesticates" because that term includes animals whom we eat, which Lucretius avoids mentioning in the animal contract. I take him to be discussing companion animals, not only domesticates.
[218] See Mitsis 1988, 79-92. Mitsis does not mention the fact that the Epicurean contract's basis in pleasure opens it up, at least in principle, to participation by nonhuman animals.

members, and receive the protections, of community. The animal contract simply asks that animals be able to give, receive, and feel the bonds that arise from reciprocal giving.

However, Lucretius is blind to the violence that the animal contract commits by framing companion animals as instruments of human intention, what Cary Wolfe calls "originary violence." [219] As an account of the emergence of the category of "companion animal," the animal contract is, therefore, not only a story of interspecies harmony but also a record of domination and exclusion, of making live and letting die. Animals who could not benefit us were excluded from the contract community, and those who could were made to live as biocapital. Both of these aspects—altruism and domination—are inextricably enmeshed in the ethics of the animal contract.

As one of the most consciously biopolitical paradigms that we have from antiquity, then, the animal contract contains insights and contradictions that resonate with ecological thought. Faced as we are with the threat of the extinction of up to half of animal species by 2050, as Elizabeth Kolbert relates in the *Sixth Extinction*, we have a more critical vantage-point than ever for reading the animal contract in ways that are newly legible for thinking about interspecies community in the midst of ecological crisis.[220]

Contextualizing the Animal Contract

The animal contract is an approximately twenty-line section from the last third of Book Five of *De rerum natura* (printed below). It explains how pre-rational, pre-linguistic

[219] See Wolfe 2013, 8.
[220] Kolbert 2014, 2-3, 167.

humans and nonhuman animals were driven by pleasure to forge a contract for survival in the state of nature. The terms of the contract arose implicitly: humans received what contract animals produced naturally "without labor on their part" (*suo sine…labore*, 869), and contract animals were given over to human guardianship (*tutelae tradita nostrae*, 861). Collaboration was necessary, Lucretius thinks, because the state of nature was not the creation of caring gods but of a *natura* that, while initially nurturing, over time became increasingly indifferent to all animal life. Such indifference is the result of a world, Lucretius believes, that was not the creation of gods but of an inhuman, chance "compact" of atoms.[221]

The animal contract is the first contract that Lucretius describes in his account of prehistory; the human social contract comes later. But while it is an account of the creation of interspecies society, the animal contract is also a repetition or reactualization of the original "compact" of atoms at the creation. As such, the temporality of the animal contract and the contract of atoms at the beginning of the world, at least in part, fold over to resemble one another. Contracts in Lucretius are not purely political constructs but, in part, similar in atomic construction to the atomic cosmogony; they are also responses to religion-based accounts of the origins of society and of the world. Contracts, for Lucretius, therefore, are much more than rational agreements between disinterested parties. They are material repetitions of the temporality of the creation—not of a divine creation but of the creation through atomic physics.[222] Contracts are also a means of survival; the reasoning involved is, therefore, never abstract but always bound up in the

[221] See Cabisius 1984, 114.
[222] For the classic formulation of "sacred time," see Eliade 1987 [1961], Ch. 2 and 2005 [1954].

partial perspectives and commitments of those collaborating to live. In short, contracts, for Lucretius, supplant the votive contract between humans and creator gods with a naturalized contract that is materially similar to the compact of atoms in the cosmogony. This is why the physical motions of humans and animals in the animal contract resemble the material dynamics of atomic cosmogony.

Early humans in Lucretius' state of nature were well-attuned but unexceptional animals, wholly immersed in the struggle for life. His state of nature is neither a Golden Age nor a dystopia but an animal place tracked by animal knowledge. Like water in water, humans in prehistory had not yet emerged as products separate from the forces of *Venus* and *natura*. Psychological and social differentiations were the effects of pleasure (*voluptas*), desire (*voluntas*), and force (*vis*). In classic empiricist fashion, learning is a matter of simulacra patterning onto the protohuman body through constant interaction with the natural environment, the body functioning as a relay station between the physical films flowing of objects in the state of nature and the human mind that emerges by first using those objects as an external, physical mind.[223]

Early humans, Lucretius thinks, were bigger and tougher than their Roman descendants, as well as promiscuous violent solitaries living *volgivago more ferarum* ("in the wide-wandering ways of wild beasts," 5.932). There was no hierarchy besides eater and eaten, and protohumans regularly enjoyed the equality of being devoured by wild

[223] The process of learning through interaction with nature is spelled out by Epicurus in *Letter to Herodotus*, section 50: "And every image (*phantasian*) which we obtain by an act of attention on the part of the mind or of the sense-organs, whether of shape or of properties, this image is the shape of the concrete object, coming about by the constant repetition of the image or the impression left behind." For the culture story as concerned with the growth of ideas through interaction with nature, see Asmis 1996.

beasts.[224] Humans were still ignorant of custom and the common good, and fathers could not recognize their own children. But there was also no concept of property to incite envy or war.[225]

Early humans, Lucretius says, *gave* their naked bodies to the earth (*membra*/*nuda dabant terrae*) like bristly hogs in sleep wherever they tired, and sufficed with the *gift* (*donum*) that sun, rain, and earth *gave* (*dabant*) in return.[226] This reciprocal giving between *terra mater* and the early human body is part of Lucretius' rewriting of the votive contract between humans and creator gods, in which humans were thought to owe prayer and sacrifice in return for the gods having created the world for us, "for the sake of human beings" (*humanum causa*, 5.156). Lucretius replaces this votive contract with reciprocal giving between human bodies and the earth for the sake of life, which he further develops in the reciprocity of the animal contract.

The animal contract is described at the beginning of the "culture story" (or *Kulturentstehung*) in Book Five of *De rerum natura*, a genealogy of humanity's descent

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[224] *DRN* 5.988-998.

[225] *DRN* 5.958-961: "Nor could they look to the common good (*commune bonum*), they did not know how to govern their intercourse by custom and law (*ullis/ moribus inter se scibant nec legibus*). Whatever prize fortune gave to each, that he carried off, every man taught to live and be strong for himself at his own will."

[226] *DRN* 5.937-8: *quod sol atque imbres* dederant, *quod terra crearat*/ sponte sua, *satis id placabat pectora* donum, "What sun and rain had *given*—what the earth had created of her own will—that was *gift* enough to satisfy their minds." *DRN* 5.970-1: *saetigerisque pares subus silvestria membra/ nu*da dabant *terrae nocturno tempore capti*, "And when night time took them, they *gave* their woodland bodies naked to the ground, like bristly hogs." Plants are a gift of *terra mater* at *DRN* 5.783-7. Animal life (the *mortalia saecla*, "mortal generations") is also a gift of *terra mater* at *DRN* 5.805. At *DRN* 5.807 *natura* gives newly emerged animals a place to grow. (On *mortalia saecla* as including humans, see West 1994 [1966], 100). Sacrifice as a gift to the gods is famously attacked at 1.100-1: *exitus* ut *classi felix faustusque* daretur./ *tantum religio potuit suadere malorum.* At 5.20 Epicurus gives *dulcia solacia vitae*, "sweet consolations of life," and at 5.49-54, Epicurus' teaching is described as a divine gift to subvert creationism. At 6.1-8, Epicurus is the gift of "illustrious Athens," who himself pours forth *divina reperta*, "divine discoveries" for humankind.

from prehistory to the Roman Republic.[227] In the culture story, humans discover fire, craft language, build cities, and establish laws, in increasing reciprocity for the sake of immunity from nature. The culture story ends with humans abusing their former animal companions by turning them into technologies for war.

Because it is a story, the animal contract hovers between a description of a biological process, like symbiosis or altruism, and a myth of human-animal society. It also hovers between describing multispecies society, and affecting the reader with visual and sonic effects of the language Lucretius uses to recreate the experience for his audience. After first relating how animal species that failed to either reproduce or protect themselves went extinct, Lucretius turns to the animal contract to show how weak animals overcame extinction by entering into a social contract with human beings at a stage of culture developed enough to protect them. Lucretius says,

Multaque tum interiisse animantum saecla necessest	855	And many generations of living beings must have become extinct at that time, unable to forge out offspring by procreation: for whatever species you see feeding on life-giving air, either cunning or courage or at least quickness must have *guarded* and kept that kind safe since it entered into existence; and many still exist, which having been entrusted to us because of their *usefulness* remain given over to our *guardianship*.
nec potuisse propagando procudere prolem.	856	
nam quaecumque vides vesci vitalibus auris,	857	
aut dolus aut virtus aut denique mobilitas est	858	
ex ineunte aevo genus id **TUTAT**a reservans;	859	
multaque sunt, nobis ex **UT**ili**TAT**e sua quae	860	
com**MEN**data **MAN**ent **TUT**elae tradita nostrae.	861	
Principio genus acre leonum saevaque saecla	862	To begin with, the fierce species of lions, that savage tribe, has been *protected* by courage, the fox by cunning, the stag by swiftness. But the intelligent dog, so light of sleep and so true of heart, and all the various kinds which are born from burden-bearing seed, wool-bearing sheep also, and horned breeds of oxen, all these have been entrusted to the *guardianship*
TUTATAst virtus, volpes dolus et fuga cervos.	863	
at levisomna canum fido cum pectore corda,	864	
et genus omne quod est veterino semine partum,	865	
lanigeraeque simul pecudes et bucera saecla,	866	
omnia sunt hominum **TUT**elae tradita, Memmi;	867	

[227] As a genre, the culture story goes back to Democritus. Lucretius' is the longest example of the culture story genre to survive from antiquity. See Cole 1990, 25-46, 60-3, and 70-9.

nam cupide fugere feras pacemque secuta	868	of human beings, Memmius. For these have of their own desire fled from the wild animals and have sought peace and the plentiful fodder that has been procured by no labor of theirs, which we give them as rewards for their *usefulness*.
sunt et larga suo sine pabula parta labore,	869	
quae damus **UT**ili**TAT**is eorum praemia causa.	870	
At quis nil horum tribuit natura, nec ipsa	871	But those to which nature has given no such qualities, so that they could neither live by themselves at their own will, nor give us some *usefulness* for which we might let them feed under our protection and be *safe*, these certainly lay exposed to others for prey and profit, all being hampered by their own fateful chains, until nature reduced that race to extinction.
sponte sua possent ut vivere nec dare nobis	872	
UTili**TAT**em aliquam quare pateremur eorum	873	
praesidio nostro pasci genus esseque **TUT**um,	874	
scilicet haec aliis praedae lucroque iacebant,	875	
indupedita suis fatalibus omnia vinclis,	876	
donec ad interitum genus id natura redegit.	877	

Lucretius begins by claiming that many animals went extinct in prehistory because they either failed to reproduce or to protect themselves: these are Lucretius' requirements for species success. Lucretius then turns his attention to the animal survivors, to trace their species history by distinguishing between those with inborn protections—cleverness (*dolus*), courage (*virtus*, "man-liness"), and mobility (*mobilitas*, 858)—and those who out of their own desire fled to humans for protection (*cupide fugere*, 868). Lucretius concludes the first part of the animal contract by zeroing-in on the key contractual moment, with the statement that those animals who fled to us for protection, "have been *entrusted* (*commendata*) to us…and remain *given over* (*tradita*, 861) to our guardianship." It is this phrase that sets the animal contract in motion, and that requires unpacking.

It is a peculiar phrase. Lucretius says that contract animals *give* us goods but were themselves *given over* to our protection, passively, giver not specified. Brooke Holmes has suggested nature itself as the giver: "the agency of *natura* is faintly at work when

Lucretius speaks of animals 'commended to us' and 'entrusted to our protection.'"[228] I would add that it was this same agency, *natura*, that was earlier active in the "compact" of atoms at the creation, and is the same force that is being physically re-actualized in the reciprocal giving of the animal contract. In both contracts then—the atomic pact and the animal contract—the language of giving, giving over, and entrusting, takes center stage, and for reasons that I have already mentioned: Lucretius is replacing the votive contract with naturalized contracts: the compact of atoms at creation, the animal contract, and the human social contract eliminate the need for pacts with the gods, i.e. *religio*.

In the beginning, Lucretius claims, *natura* took on the role of *terra mater* as protector of all animal life. The faint agency of *natura*, then, that is felt in *commendata* and *tradita* ("commended to us," "entrusted to our protection," 861), is best seen as marking a transition in Lucretius' narrative, a transition between *natura* as protector of animals to protohumans becoming their protectors. Responsibility for other animals is effectively thrust upon humans by *natura*, i.e. by the contingent forces of natural history. As Holmes puts it, "What Lucretius has done is effectively shift human beings into the position properly occupied by nature by making them capable of determining the survival of *other* species."[229] To see that it is *natura* giving weak animals into human hands explains why Lucretius described animals so passively in line 861, saying that they have been "**given over** to our guardianship" (*tutelae* ***tradita*** *nostrae*).

The fact that *natura* places animals into human *hands* is significant because *manus*, "hands," symbolize trust. This is, in fact, what *commendata* means: to give into

[228] See Holmes 2013, note 25.
[229] See Holmes 2013, 164.

another's hands, from *co-manus-dare*.[230] But what is given over is more than the role of protector; it is a position or role in a relationship of trust. *Commendata* also has other connotations, since it suggests a very unequal power relationship between humans and animals. This trust, *for the contract animals*, is, in fact, a much a riskier proposition than for their human protectors, since the animals entered into the contract from a position of helplessness and weakness and, therefore, had much more to lose than the human protectors did, who entered into the contract from a position of strength.

At the same time, *commendata* suggests a much deeper bond than mere exchange or self-interest, almost one of care, since the latter entail obligations that do not necessarily extend beyond the present, whereas *commendata* suggests a relationship oriented towards the future that, like promising, implies, and even invites, trustworthiness in the trustee: in the animal contract, the animals invite or prompt trustworthiness in their human protectors, as real animals in fact sometimes do. Lucretius is essentially saying that *natura* trusted humans with the protection of weak animals by putting responsibility for these animals into our hands. By fleeing to humans out of desperation, contract animals are forced by circumstances to take a great risk, placing an uninvited trust in human beings that it may not be in the nature of humans to live up to. How would the animals know? Hence, the risk for them. As it happens, humans do betray contract animals.[231]

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[230] See Leonard and Smith (1968 [1942], *ad loc*. 718), who claim that *commendata* means "entrusted," not simply "given," and that *manent* should be rendered closely with *tradita*, meaning something like, "they continue to live entrusted to us."
[231] See Chapter Five, "The Animal Revolt."

It is significant that this trust is uninvited. Are we obligated to a trust that we did not invite? Do we have responsibilities simply by being human, by being implicated in human biopolitical history, for the care of other animals? This problem is not limited to Lucretius, since, as the ecological crisis expands, it might be increasingly the case that we owe more care to other animals because of how the history of our species brought other animals into this mess. While Lucretius is clear that the animals came to us (*cupide fugere…pacemque secuta*, 868), he is also clear that the contingency of our biopolitical history does not erase the responsibility we have for animals who depend on us to survive. To be human, Lucretius thinks, is to be responsible for animals who, even uninvited, look to us for survival. To be human is to be responsible for the survival of contract animals at the very least.

It is precisely because humans were the stronger animals to the contract that violating the trust of the weaker animals will be a horrible betrayal. A contract between equally powerful parties would lack this character of responsibility, the kind of responsibility that the vast power differentials between humans and animals in the animal contract entail, precisely because they are so vast. By fleeing to humans for survival, contract animals opened themselves up to vulnerability and harm at the hands of human beings. For humans to betray these animals, then, coming to us, as they do, out of a position of weakness, desperation, and the will to survive, would be deeply to infringe on the need for equality in justice; it would be to treat the much larger amount of goodwill (868) that contract animals invested in us as nothing, while showing that humans had all along invested little or none at all.[232] Since goodwill is a value, to betray it in weak

[232] For a classic article on the role of goodwill in trusting and betrayal, and its difference from mere reliance, see Baier 1986, 231-60, especially 234-5.

animals who are at the mercy of the natural world would be to introduce a deep moral taint into our biopolitical history.

But a violation of the animal contract would not only be a moral betrayal, since the animal contract is also a matter of survival. This raises the stakes, since violating the animal contract would threaten the survival of all sides involved, humans and animals both. While Lucretius is clear that we did not need the animals as much as they needed us, nonetheless, he still thinks that they are crucial for our survival. That is, there is an element of instrumentalism in the animal contract. Hence, the complex, biosocial nature of the interspecies ethics of Lucretius' animal contract, addressing as it does so many biological, evolutionary, moral, and communitarian questions all at the same time.

In the second section of the animal contract, Lucretius describes the contract as not exploited. They, "sought peace and the plentiful fodder […] procured **by no labor of theirs**," which, "we **give** them as rewards for their usefulness (*utilitatis*, 870)." Lucretius' emphasis on the harmony and peacefulness of the animal contract could be called white-washing, but could also be seen as reflecting the way reciprocal giving is imagined in archaic societies. Lucretius' goal, after all, is not so much to render a true account of humans at an early stage of culture, as to represent what was valued, or imagined as valuable, prior to advanced civilization.

It is often said that those living in archaic gift-societies do not think of themselves as motivated by self-interest, gain, or exploitation. They, "give without counting," in anthropologist Maurice Godelier's phrase, and, whether self-deceived or not, imagine themselves to be motivated by friendship, loyalty, or care.[233] Thus, Lucretius may be

[233] On the ideology of the "absence of calculation" in gift-giving societies see Godelier 199, 5. For its upshot in Lucretius, consider the difference between the *praemia* ("gift of merit") that humans gave

focalizing the animal contract from the perspective of the humans forging it, using language that recreates how they understand their motivations. To call such rhetoric white-washing or overly idealistic would assumes that Lucretius really knows the truth of prehistory but distorts it, rather than seeing Lucretius as attempting to record the values and ideology of life at the early stages of human culture. A mythology of non-exploitation would, after all, be useful for maintaining cohesion in small, primary societies, which the ideology of self-interest would threaten to fragment. Epicurus himself noted that the gratitude produced by reciprocal giving is not only beautiful but immensely pleasurable.[234] Something of this valuing of the pleasure and beauty in reciprocal giving seems to stand behind Lucretius' poetic logic of non-exploitation in the animal contract.

Lucretius' fiction of the voluntariness of the animals entering into the contract also seems to play a role in the contract's mythical quality. While reciprocal giving, in itself, can be simultaneously, or increasingly, violent or generous, Lucretius strategically plays up the voluntariness of early humans in honoring the contract. This emphasis on voluntariness makes sense, since reciprocal giving, to be genuine, must be in some sense voluntary. Otherwise, it would immediately seem like a form of taxation or extortion. Lucretius presents all parties involved in the animal contract as wanting to engage in it and finding pleasure in it.

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animals for their usefulness in line 870 (avoiding calculation as part of the animal contract) and *haec aliis praedae lucroque iacebant* in line 875 ("these lay exposed to others for *prey* and *profit*"), which imagines non-companion animals going extinct from the "exploitation" of the wild. No one has noticed the strangeness this language of calculative exploitation in line 875, but Godelier offers a possible insight that would help to explain why Lucretius thinks that animals who did not enter the animal contract with humans were prey to "profit" (*lucro*) in the wild. According to Godelier, in gift-societies any group not bound by the ideology of voluntary and personal giving is imagined as necessarily living by its opposite: taxation or extortion (14).

[234] See Usener, fr. 544, 325.

The animal contract ends with a focus on the consequences for animals who failed to enter the contract. In a rare moment in classical thought the idea of extinction emerges, which atomism, with its commitments to an inhuman nature and ceaseless physical change, makes thinkable for the first time.[235] Lucretius tells us that *natura* reduced non-contract animals, "hampered by their own fateful chains…to extinction (*ad interitum*, 876-7)"—a warning that *any* animal who can neither live on its own or collaborate for survival will go extinct.[236]

The Emergence of *Utilitas*

Now that I have outlined some of the themes of the animal contract, I want to take a closer look at Lucretius' text, to show how his words (and the letters of his words) both describe the emergence of the utility of reciprocity and perform it.[237] Afterwards, in the last part of this chapter, I will critique the internal consistency of the category of "companion animal" that the animal contract in Lucretius sets up, and conclude this chapter by suggesting some aspects of the animal contract for recuperation, to establish the "multifaceted norms or guideposts…required for an interspecies ethics" that I quoted

[235] The idea of extinction in the passage is not as straightforward as it at first may seem. While, for us, extinction is usually thought to be a loss for all time, Epicureans believed in an infinite universe populated by infinite worlds. When Lucretius talks about extinction, then, he is committed by Epicurean physics to meaning extinction on only one of infinite worlds. This is because of the Epicurean doctrine of *isonomia* ("equality," "balance"), which posits that the cosmos always maintains an equal number of animal species in existence. While a species may go extinct on one world, in the Epicurean view its kind is alive elsewhere in the cosmos, which maintains the balance, or *isonomia*, of the cosmos.
[236] A warning that Lucretius repeats when describing the human social contract at *DRN* 5.1011-27.
[237] Shearin (2015, 8-9) notes, following Derrida, that there is always a tension between the constative utterance and the performative, and that what the performative does changes with the context of the performative, as the context here changes what Lucretius is doing with his pun.

from Cynthia Willet at the beginning of this chapter. But first, a short digression on materialist poetics and the performative in Lucretius.

One of the most striking features of the animal contract is Lucretius' puns on its key words: *tutata*, *utilitate*, and *tutelae* ("having guarded," "usefulness," and "guardianship"). These puns have gone unnoticed, but they are important for seeing how the reciprocities of *natura*, language, and society are enmeshed in what Lucretius' is both doing and describing with his poetry. To emphasize this interconnectedness, Lucretius has the key words of animal contract re-enact the key benefits, or utility, that humans and animals rendered each other in prehistory. This takes the form of a series of anagrams.

T**UTAT**a
UTili**TAT**e
TUT*el*ae

UTili**TAT**e is an almost perfect anagram of **TUTAT**a. The "t" and "u" at the beginning of **TU**tata exchange position with the "u" and "t" at the beginning of **UT**ilitate. **UT**ili**TAT**e adds an "l" and "e," which recombine in tut***EL***ae. T**UTAT**a, **UT**ili**TAT**e, and **TUT***el*ae all occupy more or less the same position at the end of their lines; and the caesura in line 861 divides the line perfectly in half. Such careful distribution of rhythm and language renders a sense of balance to the emergence of the animal contract and the idea of utility that recreates, as pictures and sounds in the mind of the reader, the *isonomia*, or "equality," that the animal contract seeks to establish.

Such puns are a regular feature of Lucretius' materialist poetics called the "*elementa* analogy." In standard descriptions of the *elementa* analogy, Lucretius arranges the letters of his words—the *elementa* of the text—to mirror the behavior of the atoms

that those words describe—the *elementa* of the universe.[238] It is called the *elementa* analogy because, in Latin, *elementa* mean both "letters" (the elements of the alphabet) and "physical elements" (the atoms of the universe). *Elementa* is also a term Lucretius regularly uses for "atoms" in *De rerum natura*. The *elementa* analogy in Lucretius a tactic—for seducing listeners into believing that, just as the hidden *elementa* of the textual universe (the puns) are the building blocks of the *res* (or "things") of the poetic line, so too the unseen atoms of the universe are the building blocks of the *res* (or "things") of *natura*. The point of the *elementa* analogy, both in Lucretius' text and in the universe, is to make the invisible visible. Such is the usual account of the *elementa* analogy.

But it might be better to think of the elementa analogy less as an analogy that as a performance in language of what Lucretius is describing. But what Lucretius' language is actually doing will depend on the context. While the *elementa* analogy might be thought to makes the letters of words mirror atomic motion, Lucretius does something different with language in the animal contract. Here, the letters of words recreate the exchange of *tutela* ("guardianship"), *utilitas* ("utility"), and *tutata* ("protected [animals]"), and also reroute those words back into the reality of their material origins in the moment of the animal contract, while guarding against the word *utilitas*, in advanced language, drifting too far from the materiality of its emergence. Here, Lucretius may be showing how "guardianship" (tutela) and the protected animals (*tutata*) combined the to create the

[238] For the classic definition of the *elementa* analogy in scholarship, see Synder 1980, 31-51. For a slightly broader take on analogy in Lucretius (not specifically the *elementa* analogy), see Schrijvers 1970, 255-288. Schrijvers explores how Lucretius uses what he calls a "root analogy" to model the behavior of not only atoms but of large-scale cosmic phenomena as well as operations of the soul—of, in general, unseen natural processes. Cabisius notes that Lucretius uses metaphors to force the reader to see atoms in terms of human life and human life in terms of the creative and destructive cycles of atomic activity (Cabisius 1984, 110-11).

concept of *utlitas*. The fact that atoms in *De rerum natura* are sometimes said to "reciprocally give and receive motions" (*inter se dent motus accipiantque*) further assists Lucretius use language to describe the animal contract in a way that hews closely to materiality of the motions of the natural contract of atoms.[239]

It is because reciprocal giving is already in the atoms that Lucretius thinks that the reciprocity of the votive contract with the gods, often believed in Roman culture to lie at the origins of language and society, is unnecessary. Reciprocity, in Lucretius' view, is part of the system of nature. This helps to account for the fact that so many levels of reciprocity are enmeshed in the animal contract—atomic, social, and linguistic. Lucretius is deliberately collapsing these levels into a shared material basis. The sense of interspecies equality and connectedness that results from so many enmeshed levels of reciprocity in the animal contract is, in fact, just one part of Lucretius' larger project to naturalize, and therefore to undermine, the reciprocal basis of Roman religion. Having made his key words perform these reciprocities, Lucretius then cycles them throughout the rest of the passage: *tutatast* (863), *tutelae* (867), *utilitatis* (870), *utilitatem* (873), *tutum* (874). Perhaps, in repeating the words, Lucretius is restaging a kind of statistical ability in these humans and animals that would be the cognitive precursor for seeing the

[239] For the "natural contract," see Serres 1995. Cabisius (1984, 111) notes that: "[The atoms] engage in a mutual process of giving and receiving: 'inter se dent motus accipiantque' (I.819)." The motif of atoms "giving and receiving motion" (*et quos inter se dent motus accipiantque*) is repeated multiple times in the formulaic line at *DRN* 1.819, 1.910, 2.762, 2.1009. There is slight variation at 2.885, *et* commixta quibus *dent motus accipiantque*. Atoms reciprocally give motions of joining or juxtaposition (*convenientia*) at 5.444-5 *quod non omnis sic poterant coniuncta manere*/*nec* motus *inter sese* dare *convenientis*. Atoms *give motions* and, thereby, form a pact at 1.1023 and 5.421: *nec quos quaeque* darent motus pepigere *profecto*. While Lucretius is adamantly against the anthropomorphizing of atoms (1.915-20, 2.973-990), he risks the metaphor of atoms giving and receiving motions in order to attack the reciprocal basis of Roman religion: there is no need to explain the origin of society or of the world by religious reciprocity, because reciprocal giving is already in the atoms.

utilitas of something, such as the animal contract, and not just performing the words multiple times to mimic exchange.

Up until now, the terms reciprocity and reciprocal giving have been used interchangeably when discussing the animal contract; it is time now to be more specific. I will argue that the reciprocity that Lucretius has in mind is best understood as reciprocal giving or even gift-exchange. That Lucretius is talking about specifically interspecies reciprocal *giving* comes out most clearly in his repeated use of the verb *dare* ("to give") in the animal contract. In line 861, at the crucial contractual moment, companion animals are *commen**DATA*** and *tra**DITA***. Both suffixes are past participles of *dare*. *Commen**DATA*** means literally "given over into our *hands* (*manus*)" (as mentioned above, from *co-manus-dare*). There is also a subtle pun that has not been noticed: the idea of *manus* ("hands") in *com**MEN**data* is repeated in the sound *MAN-* in the very next word, *manent* ("they remain"). The "they" are the contract animals who did not go extinct. Lucretius's pun—*com**MEN**data **MAN**ent*—emphasizes that companion animals remain in existence (they *MANent*), because *natura* gave them into our *hands* (*MANus*). This further underlines the theme of trust that *manus*, "hands," symbolizes, as well as the connection between interspecies trust and the continued existence of contract animals.

Lucretius also alludes to reciprocal giving in the compound word *lani-gerae* ("wool-bearing," 866). The suffix *–gerae*, in *lanigerae*, is from *gerere*, a verb that means "to bear," "to wear," or, "to have as a permanent feature," but that can also mean "to bring" or "to produce" (like a crop).[240] Despite the fact that Lucretius is discussing wool-

[240] Lucretius often uses *gerere* to describe the motion of atoms. It is particularly applicable to sheep, because the movements of sheep, when seen from afar (in a famous analogy in *De rerum natura*, 2.317-322, where Lucretius calls sheep by the same epithet he uses here, *lanigerae pecudes*), help the reader to

bearing *sheep*, he avoids actually calling them "sheep," but instead calls them wool-bearing *livestock* (*lanigerae…pecudes*), as if to highlight the naturalcultural hybridity of these animals. Their uniqueness as sheep has been linguistically abstracted and replaced with human intention. At the same time, Lucretius wants us to imagine their "bearing" of wool as their "bringing" of wool, because, they do it, he says, non-exploitatively, "without labor on their part" (*suo sine…labore*, 869). Sheep just happen to be the kind of animal who bring their benefits wherever they go. For Lucretius, sheep are natural givers, entering into history ready for use. This is reflected in Lucretius' language: instead of calling them sheep, he instrumentalizes them as "wool-givers."

Lucretius then, in line 870, shifts the horizon of the animal contract to the present tense with the verb *damus* ("we give"); and also shifts from the third-person to the second-person plural. All of a sudden, Lucretius is talking about what "we give" now, the "we" presumably referring to the entire human race. The mood of the verb is also somewhat strange. While *damus* is in the indicative, it functions almost like a subjunctive, as if Lucretius were discussing not just what we give but what *we should give*, not just historical facts but values as well. These changes in voice, tense, and horizon, suggests that Lucretius had been thinking about the animal contract all along not as an isolated historical event but as an origin for interspecies obligations that emerged in the past but remains valid in the present, and though they are based in the instrumentalism of giving, are not seen by Lucretius as exploitative, however much we now might see them that way now.

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understand the stability of macroscopic objects with invisible microscopic components, i.e. atoms. See West 1994 [1969], 13-14.

This shift to the present tense to address humans' present relational duties to animals, also aligns with the more general discontinuity of where the animal contract fits in Lucretius' prehistory. While Lucretius at first seem to be talking about prehistory, the humans who partake of the contract are already living at a stage of culture advanced enough for them to protect the animals who flee to them from the state of nature.[241] By describing the animal contract out of chronological order in this way, I would suggest that Lucretius presents it as taking place from a kind of "original position," i.e. from an abstracted time and place.[242] The discontinuity and abstract nature of the animal contract in fact lends it an objectivity. It raises what is a story to the level of an ethical principle, just as Lucretius raises events described in the past tense at the beginning of the animal contract to the present tense, and to our present obligations, with the verb *damus* (870 above). Thus, a discontinuous narrative moment in Lucretius' prehistory, becomes an outline of a utilitarian rule for animal ethics. The animal contract presents *procedure* for justice towards animals framed as an abstract and out of place story, in which humans and animals maximize the pleasure and benefits each offer to the other for the sake of survival, which is what ethics in Lucretius is: a benefit-oriented, survivalist ethics.[243] While Lucretius nowhere directly describes animal ethical principles *per se* in *De rerum natura*, he does present us with this story of the animal contract as taking place in an

[241] I am thinking of John Rawls' use of the "original position" in *A Theory of Justice* (2009, section 23), which itself is a self-conscious raising of a social contract thought-experiment to the level of an abstract principle.

[242] For the discontinuity of the animal contract in the order of Lucretius' prehistory, see Holmes 2013, 164-165.

[243] Rule utilitarianism differs from act utilitarianism, in that rule utilitarians seek to discover rules or laws that will maximize pleasure, whereas act utilitarians analyze the predominance of pleasure or pain of each particular act. The historical discontinuity may also be related to Lucretius' idea that historical events have no independent existence apart from the atoms the make them up. For other instances of Lucretius going out of his way to divorce events from their historical context, see Gale, 1994, 113.

abstract enough time and place, so that, while remaining a story, it verges on an ethical principle for procedural justice towards other animals.

By shifting the horizon of the animal contract to the present and to the threat of extinction, Lucretius also orients his narrative to genealogical ends: it is revealed as an account of the past that partly vindicates and partly undermines what he takes to be Roman culture towards animals. In returning to the early stages of culture to find alternatives for living with other animals, Lucretius comes close to Barry Lopez's claim that, "our relationships with animals were once contractual. If we could reestablish an atmosphere of respect in our relationships, simple awe for the complexities of animals' lives, I think we would feel revivified as a species." [244] And in contrasting a more humane past with a present dominated by betrayal and extinction, Lucretius seems to prefigure Gary Snyder's statement that "creatures who have traveled with us through the ages, are now apparently doomed, as their habitat—and the old, old habitat of humans—falls before the slow-motion explosion of expanding world economies." [245]

Before bringing this close reading of the animal contract to an end, it is important to give a sense of the fate of the animal contract in Lucretius' narrative. Towards the conclusion of Book Five, Lucretius relates a long series of abuses against animals that culminates in humans making animal bodies into war machines. When their human masters lead the animals onto the battlefield, however, the animals revolt, and the contract breaks down completely. The animals turn on their "armed teachers and savage masters" (*doctoribus armatis saevisque magistris*, 1311) and massacre them. These so-called "teachers" (*doctores*) are the human trainers who, as Lucretius says with deep

[244] Lopez 1983, 4-19.
[245] Snyder 1990, 4-5. For "slow violence," see Nixon 2011.

irony, "taught" (*docuerunt*) the animals "to suffer the wounds of war" (*belli docuerunt volnera…sufferre,* 1303). No "teaching," however, could be more at odds with the Epicurean life of pleasure and reason according to nature.[246]

At the height of the revolt, the language of reciprocal giving that Lucretius used earlier in the animal contract turns into the language of gift-attack against the animals' "savage masters." Abused she-lions, Lucretius says, **"**enmeshed (*deplexae*)[their human abusers] and **gave** (*dabant*) them to the ground conquered by wounds" (*deplexaeque dabant in terram vulenere victos*, 5.1321), and wild boars, "thoroughly entangled (*permixta*) and **gave** (*dabant*) destruction to horsemen and footmen" (*permixtaque dabant equitum peditumque ruinas,* 5.1329). The animal revolt becomes, in part, the revenge of *natura* on human history to bring it back to its natural limits. The animals are aware of the abuses they have suffered over time, and reciprocate that savagery back onto their masters with perfectly calibrated poetic justice. As the contract continues to disintegrate, the materiality of the chaos returns to human and animal to the temporality of the state of nature and the precarity of its violence.

Originary Violence

Violence was always just beneath the surface of the animal contract. As an account of the emergence of the companion animal, the animal contract shares much of the instrumentalizing logic of contemporary mythologies of companion animals, in which companion animals are framed as the inevitable outcomes of history. No one has

[246] Shelton 1996, 62.

criticized the contemporary mythology of the companion animal more than Donna Haraway.

> The term "companion animal" enters US technoculture through the post-Civil War land-grant academic institutions housing the vet schools. That is, "companion animal" has the pedigree of the mating between technoscientific expertise and late industrial pet-keeping practices, with their democratic masses in love with their domestic partners, or at least with the non-human ones. Companion animals can be *horses, dogs, cats, or a range of other beings willing to make the leap to the biosociality* of service dogs, family members, or team members in cross-species sports. Generally speaking, *one does not eat one's companion animals (nor get eaten by them)*; and one has a hard time shaking colonialist, ethnocentric, ahistorical attitudes toward those who do (eat or get eaten).[247]

Technoscientific manipulations, service animals, team members, domestic partners, loved ones: as a single category, the companion animal in Lucretius is just as unstable and biased as what Haraway criticizes above. The root of the problem for the animal contract in Lucretius is its narrow concern for only animals who benefit humans. This is simply a part of Epicurean benefit-based ethics. The animal contract is not a paradigm of justice or protection for all animals, but only for those who "sought peace" (*pacemque secuta*, 868) and give us benefit (*ex utilitate sua,* 860). While this aspect of the animal contract is not problematic in Lucretius' eyes, in Haraway's critique, the companion animal category creates a rigid binary that separates animals into friends and enemies. From an animal studies vantage point, Lucretius sets up a similar binary that is, likewise, aggressive towards animals outside the contract and that establishes an us-versus-them mentality. By dividing animals into friends who have "sought peace," and everyone else—enemies, the wild—Lucretius taps into the theme of the "war of the animals" that plays no small part in his description of the state of nature, of which there may even be a faint trace in our

[247] Haraway 2003, 14.

current, "colonialist, ethnocentric, ahistorical attitudes toward those [animals] who do (eat or get eaten)," in Haraway's description of non-companion animals above.[248]

In Haraway's account, companion animals are thought to distinguish themselves from non-companions by being "willing to make the leap to the biosociality." Companion animals are imagined as having willed their hybrid, human-oriented status, and to have always wanted to become our companions. In this regard, Lucretius is similar. Contract animals' desire for peace and protection (*cupide fugere feras pacemque secuta*, 868) is thought to have motivated them to contract with us and to become our companions through biosociality with our human ancestors.[249] In both Haraway and Lucretius, then, companion animals are mixtures of naturalcultural attributes that come into being through "becoming with" human beings.[250]

However, what companion animals become in Lucretius ends up having little to do with their needs and everything to do with ours. Again, this is simply a feature of Lucretius' benefit-based Epicurean ethics. For Lucretius, it is human need that grounds the category of companion animal. This is why the animal contract reads almost like a list of human benefits, with little interest in the intrinsic value of companion animals, their freedom, or the complexity of their lives. Companion animals get protection and status based on what they have to give, but Lucretius is clear that it is not the intrinsic value of these animals but the instrumental value we attach to them for human survival that really

[248] For "war against the animals," see Wadiwel 2015. For the war of the animals in Lucretius, see *DRN* 5.39-42, where humans are said to be better off avoiding wild animals; *DRN* 982-7, where wild animals regularly ambush humans; and *DRN* 5.988-998, where humans are regularly devoured by wild animals. For ecophobia towards wild animals due to the traumatic experiences of prehistory, see Feeney 1978, 15-22.
[249] For "ontological choreography," see Haraway and Wolfe 2016, 224.
[250] For "becoming with," see Haraway 2008, 19.

matters. Maybe such a survivalist ethics is more realistic; either way, it has to be pointed out.

It is this fundamental orientation towards the human that makes the companion animal in Lucretius an internally inconsistent category. Companion animals like "the intelligent dog, so light of sleep and so true of heart (864)" are lumped together with commodity animals like "wool-bearing livestock (866)" and work animals like "the various kinds which are born from burden-bearing seed (865)" or the "horned breeds of oxen (866)," i.e. plow animals. Domestic partners, laborers, and commodities are all put into the same box, protected by the same teddy-bear speciesism that rewards them with status of companion.

Lucretius has to work overtime to arrange all these animals under the same banner. What he ends up doing is turning these animals into what Carol Adams has called "absent referents." In *The Sexual Politics of Meat*, Adams noticed that animals (and women) are often made absent behind the signifier " meat," which stands in, metonymically, for the complexity and actuality of individual animals' lives.[251] In Lucretius' case, labor, service, and production stand in for the animals as signs; the animals themselves become free-floating signifiers for meat, labor, and clothing, their dignity and individuality reduced to markers of use-value.

In an ironic comment, Haraway notes that "generally speaking, one does not eat one's companion animals (nor get eaten by them)." Lucretius also leaves out the fact that humans tend to eat the animals of the animal contract, which contradicts an earlier statement Lucretius makes about the food chain in Book Two of *De rerum natura*, where

[251] Adams 2010 [1990], 13, 66-71.

he says that it is natural for humans to eat animals.[252] It is unclear whether Lucretius fails to mention this fact because it contradicts his picture of non-exploitation in the animal contract or whether he simply shares inconsistencies Haraway has voiced about how people think about companion animals. On the one hand, the animal contract admirably attempts to ground animal justice in natural history. On the other hand, the survival-of-the-fittest atmosphere of Lucretius' state of nature exerts pressure on Lucretius' narrative to be not only a justice-oriented, but also a solution-oriented, account of how humans and certain animals survived prehistory.

In his commitment to an inhuman portrayal of prehistory, it would be un-Epicurean of Lucretius to avoid injecting at least some degree instrumentalization into his account of the emergence of contract animals. In the end, what is a tension in animal studies—between survivalism and ethics—is not a problem for Lucretius in his description of the animal contract. This is simply Epicurean ethics applied to animals. As a benefit-oriented account of animal ethics, Lucretius also reduces the complexity of companion animals by making them resemble "furry children." [253] Companion animals are framed as children because, as Lucretius says at line 861, they are under our "guardianship" (*tutela*). *Tutela* is a recognizable Roman legal term that suggests a

[252] For Lucretius' description of the food chain, see *DRN* 2.875-880.
[253] On companion animals imagined as furry children, Haraway notes, "Contrary to lots of dangerous and unethical projection in the Western world that makes domestic canines into furry children, dogs are not about oneself. Indeed, that is the beauty of dogs. They are not a projection, nor the realization of an intention, nor the telos of anything. They are dogs; i.e. a species in obligatory, constitutive, historical, protean relationship with human beings. The relationship is not especially nice; it is full of waste, cruelty, indifference, ignorance, and loss, as well as of joy, invention, labor, intelligence, and play. I want to learn how to narrate this co-history and how to inherit the consequences of co-evolution in natureculture." See Haraway 2003, 11-12.

relationship between humans and animals as one of free citizen to helpless child.[254] A late-antique source on Roman law, the *Digest,* provides helpful definition of *tutela*.

> *Tutela est, ut Servius definit, vis ac potestas in capite libero ad tuendum eum, qui* ***propter aetatem sua sponte se defendere nequit****, iure civili data ac permissa.*
>
> Guardianship is, as Servius defines it, force and power granted and permitted by civil law to a free person for overseeing him, who on **account of his age cannot protect himself of his own will**.

As this comparison with the *Digest* makes clear, in describing companion animals as under our guardianship, Lucretius portrays them as children in two ways. First, companion animals are described as unable to live *sua sponte*, "on their own will (872)." This is what distinguishes them from wild animals, who do live *sua sponte*, i.e. autonomously. Those who cannot live autonomously, in the logic of the animal contract, need our guardianship (*tutela*) to survive. They need it because, the thought goes, without human protection and instruction they would not be able to defend themselves. The guardianship of animals in Lucretius, however, differs from that of children in the *Digest*, since in the *Digest* children are protected only on the grounds that they cannot live on their own will, (*propter aetatem sua sponte se defendere nequit*, "on account of age [the child] cannot protect himself of his own will"); whereas in the animal contract, companion animals are protected both because they cannot live on their own will and because they "give us usefulness" (*dare nobis/utilitatem*, 872-3). In the end, from an

[254] See Goldschmidt 2002, 52-3. *Tutela* (*impuberum*) is a Roman legal term for, "guardianship over persons *sui iuris* (not under paternal power) who were below the age of puberty…The guardian had to protect the person and the property of the ward (*pupillus*) and his functions are qualified as a power (*potestas*) although it was not so extensive as paternal power (*patria potestas*)…Guardianship was considered a *munus* (a charge); under the Principate it was designated as a *munus publicum* (= a public service) inasmuch as the protection of young people (in Lucretius' case, of other animals) unable to manage their affairs was also in the public interest (See Berger 2004, 747). The *Digest* notes, "A tutor does not only administer the property of the ward (*res pupilli*) but he also has to take care of his *moral behavior* (*Digest* 26.7.12.3) [my italics]." On *tutela* in Roman law, see also Thomas 1976, 453-468.

animal studies point of view, Lucretius' companion animals are worse off than furry children; they are furry children instrumentalized by human reason. But from Lucretius' point of view, these are just facts about contract animals that need to be taken into account, and that is most realistically done by thinking about contract animals in terms of instrumental benefits and their need for our protection. Such ethics work better at the early stages of culture, where survival is key, than in more advanced stages of society. Maybe—since at our own advanced stage of society, the discourse around animals is becoming increasingly oriented to their survival as the Sixth Extinction Event proceeds apace. It may be necessary to begin thinking about an animal ethics more along a Lucretian instrumentalist and protection-based approach, since there is little doubt that the animals we use and eat will not go extinct, but the ones most humans get no benefit from are increasingly endangered.

Lucretius' various ways of instrumentalizing animals are, in fact, bound up with his attack on creationism. While the animal contract detaches the religious story of creation from the origin story of companion animals, the animal contract at the same time retains creationism's static, mythologizing description of what companion animals are. Lucretius' non-religious mythology of the companion animal, therefore, comes to nearly the same end as the creationist mythology he is attacking, since Lucretius' classification of companion animals makes their ontology almost as static as creationism does.

This is most clearly seen in Lucretius' description of sheep as "wool-bearing livestock," (*lanigerae…pecudes*, 866), and oxen as "horned generations" (*bucera saecla*). Calling sheep *pecudes*, rather than *oves* (the normal word for sheep), clearly

connotes *pecunia*, "money"/"property." [255] It is, therefore, not too anachronistic to say that the animal contract frames companion animals as biocapital, their hybridity underlined by compound words like *lani-gerae* (*lana*: wool; *gerere*: wear, bear) and *bu-cera* (*bous* = Greek for "cow;" and *keras* = Greek for "horn"). But however lamentable this portrayal of companion animals is, it is the "naturalness" as underwritten by natura compelling the animals to come to us that at the same time gives the animal contract its moral authority, since who they are and what we owe to them is linked to the authority of nature.

Just like creationism, the animal contract relies on the givenness and naturalness of what companion animals are. In both creationism and in the animal contract, companion animals enter onto the stage of history as ready-mades "for the sake of human beings" (*humanum causa*, 5.156), the very kind of teleology Lucretius had been criticizing throughout Book Five. In the end, the animal contract substitutes a religious framework for what is basically a utilitarian one that erases the animality of the animal to replace it with a signifier that takes the animal's place, in order to guarantee, just as in creationism, the survival of the human race in advance.[256]

But just as in contemporary accounts of domestication, it is unclear in Lucretius whether humans alone were responsible for the emergence of companion animals. This is especially true of the dogs, sheep, oxen, and horses (mentioned elsewhere) who Lucretius talks about.[257] Lucretius is clear in the animal contract that companion animals, "have *of*

[255] See Campbell 2008 [2003], 134.
[256] Holmes 2013, 164-5.
[257] Stephen Budiansky, in *The Covenant of the Wild: Why Animals Chose Domestication* (1999), claims that, "animals chose us because we were a better deal in an evolutionary strategy of adaptive significance," and "The domestic alliance is an evolutionary strategy of adaptive significance." Cited in Shelton 1996, note 4.

their own desire fled wild animals (*cupide*, 868)," which suggests that they had a degree of agency and choice in their own domestication. It also suggests that they co-domesticated us. The similarities here between contemporary accounts of domestication and the emergence of companion animals in Lucretius are striking. To use Haraway's phrase, both are instances of "becoming with."[258] For Lucretius, as in contemporary accounts of domestication, human nature is revealed as, in part, an interspecies relationship. Humans in the animal contract are companion animals too—a category that even now we tend to reserve for *other species*, not ourselves.

Is the animal contract, in the end, a moment of originary justice or originary violence? According to Cary Wolfe, originary violence is the way that the law "installs its frame for who's in and who's out" of the human community, and for who gets its protections. In Wolfe's view, the law installs its frame by establishing origins that justify what is killable and what is not.[259] Reading the animal contract alongside Wolfe, then, Lucretius seems to be not so much justifying what society protects as what it makes live and lets die. As an origin story, the animal contract, following Wolfe's framework, establishes a foundation that only masquerades as ontology. It pretends innocently to represent what companion animals are now based on the way they were at their origin. While the animal contract, at first, appears to describe the birth of contractarian justice for animals, it also justifies an instrumentalizing logic that, it has to be said, erases some of the complexity of companion animals' lives. In short, the animal contract establishes a

[258] Haraway 2008, 19: "To knot companion and species together in encounter, in regard and respect, is to enter a world of becoming with, *where who and what are is precisely what is at stake* [my italics]. In *Unruly Edges: Mushrooms as Companion Species*, Anna Tsing writes, 'Human nature is an interspecies relationship.'" Lucretius also seems to show human nature, whatever it is, as bound up in the becoming with other animals.
[259] For "originary violence," see Wolfe 2013 8-9.

paradigm for interspecies ethics that has positive and negative aspects that are inextricable and that must be confronted. While the animal contract does provide a not-exclusively-human basis for interspecies ethics and community through reciprocal giving, it also contains aspects that are instrumentalizing towards those animals within the contract and ignore those outside of it.

Companion Animals and Gift-Exchange

And yet, Lucretius' insight that an interspecies community based on reciprocal giving might be possible should not be lost amidst concerns about the animal contract's epistemological violence. That there could be a basis for interspecies community at all is an aspect of the animal contract worthy of recuperation, since it represents a less explored direction for thinking about interspecies ethics.[260] The animal contract offers a framework for norms and guideposts that are both determinate, and yet flexible enough, for thinking realistically about living with other animals. And part of that realism may be Lucretius' instrumentalist and protectionist views of animals. Guidelines that are too rigid would not allow enough scope to the multifariousness of animals' lives, and guidelines that are too flexible would risk lacking content. The animal contract's basis in reciprocal giving both avoids the false precision of unrealistically demanding that other animals be too much like us, mentally or emotionally, and at the same time remains more open to capacities in animals we have not yet recognized: animals need only to have something to give and to be able to feel the bonds of trust that arise from receiving.

[260] Carruthers 1992 is the only sustained exploration of contractual ethics for animals I know of.

In basing interspecies community on reciprocal giving, Lucretius comes close to Marcel Mauss' idea, in *The Gift*, that gift-exchange formed the contractual basis for society in prehistory. But neither Mauss, nor any anthropologist I know of, ever imagined animals engaging in gift-exchange. It is Lucretius' moral imaginativeness that we have to thank for this insight. In his classic statement on gift-exchange as the basis of society, Mauss says,

> Exchanges and *contracts* take place in the form of presents; in theory these are voluntary, in reality they are given and reciprocated obligatorily….This embraces an enormous complex of facts. These in themselves are very complicated. Everything intermingles in them, everything constituting the strictly social life of societies that have preceded our own, *even those going back to protohistory*. In these *'total' social phenomena*, as we are proposing to call them, all kinds of institutions are given expression at one and the same time—religious, juridical, and moral, which relate to both politics and the family [my italics]. [261]

The animal contract in Lucretius takes gift-exchange beyond the human, and in some ways predates even human sociality, by making gift-exchange an "overlapping possibility," to borrow Cary Wolfe's phrase, that is rooted not only in animal behavior but in the structure of nature itself.[262] Lucretius imagines humans as potentially having engaged in gift-exchange with other animals before humans did so with themselves. This focus on reciprocity makes the animal contract an admirably horizontal framework that is also not unrealistically egalitarian. It stays with the difficulty of thinking about animal ethics within the very real power differentials between humans and animals that now threaten to destroy so much.

As Lucretius tells the story in Book Five of *De rerum natura*, these power differentials only worsen as civilization declines into war and violence. From our

[261] Mauss 2000 [1925], 8.
[262] Wolfe 2003, 84.

vantage-point in the Anthropocene, the story is not unfamiliar. The power differentials that Lucretius is talking about have become for us now almost absolute, to the point where it is now humans and not nature controlling the fate not only of other species but of the biosphere itself.

In a time of ecological crisis, Lucretius offers the important insight that it is the power differentials themselves between humans and animals that have, over the course of history, put humans in a position of more—not less—responsibility for the protection and continued existence of other animals. This would not necessarily entail a simplistic view of animal protection, for instance relocating all animals to zoos to ensure their survival. And in fact, a benefit-based approach to animal ethics, as depicted by Lucretius in the animal contract, could be the seed of a framework for protecting animals in a way that includes human self-interest in their surviving in ways more beneficial for them than "life" in captivity. If it could be established that it is in our interest, or to our benefit, that animals survive in their habitats, this might be a more psychologically realistic way of thinking about how to offer animals protection—a model of protection based on Epicurean rational hedonism. While there is always a risk of anthropocentricism and of privileging the human when applying human paradigms like contractarianism and reciprocal giving to others animals, the animal contract, nevertheless, points the way to a new, not-exclusively-human basis for thinking more responsibly about the survival of the very animals who did the most to make us human, and to whom we still owe something for that.

Chapter Four: Garden and Empire

> *Omnia ista ratio quidem, sed non recta ratio commenta est. Hominis enim, non sapientis inventa sunt.…Non arma nec muros nec bello utilia molitur, paci favet et genus humanum ad concordiam vocat.*
>
> "Reason did in fact invent all these things, but it was not right reason. They are inventions of humanity, not of the wise….Wisdom does not labor over weapons or fortifications or instruments of war. It fosters peace and summons the human race to live in harmony."
>
> -Seneca, *Epistles*

What if *De rerum natura* had been the great poem of Rome? Would our relationship to the natural world be different?

The ecological crisis is not primarily a problem of science and technology but of culture. Lucretius' *De rerum natura,* while a work of its time, is untimely in this regard. As part of his all-encompassing reason, his *ratio naturae,* Lucretius describes an Epicurean culture that observes nature's limits. Lucretius contrasts this culture with another culture in his own time of increasing instrumentalism towards animals and the natural world that has become even more problematic in our time.

While Lucretius contrasts these two cultures throughout *De rerum natura,* he does so most intricately an important analogy in Book Two that works almost like a diptych that sets the culture of the Epicurean Garden against the culture of empire. Both cultures use technology and both use animals, but the Garden employs them in a sustainable, mutually beneficial way, working with the grain of their natures. In a similar vein, Peter Sloterdijk, the Epicurean sympathizer and cultural critic, has recently argued that there are two different human stances towards technology and the nonhuman world.

The first Sloterdijk calls "homeotechnics." This is a cooperative and sustainable way of interacting with the the natural world. In a homeotechnic society, living beings and technology become partners for increasing mutual health. A gain for one is no loss for the other. Sloterdijk concedes that: "These interventions and aids would have to happen at such an elevated level of insight into the biological and cultural 'nature' of the human being [and nonhuman being] for them to become effective as authentic and successful co-productions with evolutionary potential." For Sloterdijk, a homeotechnic relationship with the natural world could only progress on the principle of the "non-violation of what is present," and succeed only "as non-ignorance vis-à-vis embodied information." In other words, a homeotechnic society would have to have reliable knowledge about the natural world and work with it rather than against it.

For Sloterdijk, homeotechnics "must draw on co-intelligent, co-informative strategies," for "it has the character of cooperation rather than that of domination, *even in the case of asymmetrical relations* [my italics]."[263] As we will see, Lucretius envisions the Garden in a way that resembles Sloterdijk's notion of a homeotechnic society,

[263] Sloterdijk goes on to imagine what a homeotechnological world would look like: "One may even ask whether homeotechnological thought—announced up to now by titles such as ecology and complexity science—does not possess the potential to open up an ethics of relations that are free of enemies and domination. It virtually bears this tendency in itself, since it is arranged less for the reification of the other than for insight into the internal conditions of what coexists with it [*des Mitseienden*]. While in the allotechnological world domineering subjects are in command over raw materials, in the homeotechnological world it will hardly be possible for raw-masters to exercise power over the finest materials. The very condensed contexts of the interconnected world no longer favorably receive domineering inputs—here only that which also benefits countless others can successfully spread….Here emerges the matrix of a humanism after humanism. Domination must tend in the direction of ceasing because, as crudeness, it makes itself impossible. In the interconnected, inter-intelligently condensed world masters and violators only still have chances for success that last little more than a moment, while cooperators, promoters, and enrichers—at least in their contexts—find more numerous, more adequate, more sustainable connections. After the abolition of slavery in the nineteenth century a more extensive dissolution of the remnants of domination looms for the twenty-first or twenty-second—no one will believe that this can happen without intense conflicts. One cannot rule out the possibility that reactionary domination will once again band together with the mass *ressentiments* of losers to form a new mode of fascism. The ingredients for this are above all present in the mass culture of the United States of America. But like their rise, the foundering of such reactions is foreseeable (Sloterdijk 2017, 146-7)."

grounded on the Epicurean knowledge of nature and an Epicurean ethics of working in harmony with the nonhuman world.

By contrast, Lucretius depicts the culture of empire throughout *De rerum natura* as what Sloterdijk would call an "allotechnic" society, the rival of a homeotechnic society. Allotechnics, according to Sloterdijk, "carry out violent and counter-natural incisions into that which is discovered," and aim at "ends that are indifferent or alien" to the materials or living beings they use. In an allotechnic society, a gain for one is a loss for the other. Instead of increasing mutual health, allotechnics ramps up the struggle for domination between groups.

As Sloterdijk defines it "[Allotechnics] proceeds on the assumption that relations between human beings as well as between humans and things would forever have to follow the historical pattern of bivalent domination or of the primitive subjective disposal over alienated materials." In other words, an allotechnic society sees the world as a struggle for dominance between us and them, friend and enemy, animal and human, and it sees nonhuman animals and natural systems as "alienated materials" that can be disposed of in this competition. Such a culture, Sloterdijk says, is "wed to suspicion as a way of thought." It is a culture of paranoia, since "there is no technology that cannot be suspected of being a resource in the hands of an enemy."[264] Lucretius will describe the

[264] Sloterdijk 2017, 143-8. Sloterdijk believes that the allotechnological use of the natural environment is everywhere to be found in the history of humanism, and peaks in the technological disasters of the twentieth century. These disasters, Sloterdijk thinks, have had the unfortunate consequence of creating an irrational mood of suspicion towards all technology, even the homeotechnical kind: "The assumption that the suspicious mood will remain the realistic one in the future is most strongly confirmed by the actions of US strategists, who in August 1945 did not refrain from employing the most extreme alltechnological weapon, the atom bomb, directly against humans. In doing this, they provided an epochal argument for the suspicion against the alliance between the highest technology and the most lowly subjectivity. Due to Hiroshima, humans have reason to believe that the most advanced technologies are uninhibited and reason to distrust the Oppenheimers and Trumans of genetics (145)."

culture of empire in many similar ways, not only in the contrast he presents in the lengthy analogy in Book Two, but also in the animal revolt discussed in Chapter Five of this dissertation.

The Two Cultures

Throughout *De rerum natura*, Lucretius tells the story of two cultures. The first is a small agricultural community, a homeotechnic society, an Epicurean Garden of peace, tranquility, and mutually beneficial use of one species by another. The second culture is a culture of Mars, a culture gripped by war and excessive instrumental reason. This is the culture of empire. It resembles what Sloterdijk calls an allotechnic society. In Lucretius' story of these two cultures, as new technologies emerge into history, the culture of empire seizes on them, first for self-defense, then for a self-eviscerating quest for security that ends in chaos on the battlefield. As history rolls along, one desire builds upon another as the culture of empire becomes increasingly enthralled to instrumental reason and the lust for conquest under Mars. More and more the culture of empire is unable to limit itself to what is natural and necessary, and takes on a runaway-train logic headed straight for disaster.[265]

[265] The war culture in Lucretius resembles what Joseph Tainter has called the "runaway train" model of civilizational collapse. As he puts it, the runaway train model of collapse differs from the "Dinosaur model" of collapse, in that in the Dinosaur model shows a complex society "as a lumbering colossus, fixed in its morphology, and incapable of rapid change….Complex societies seen thus present a spectacle of power that evokes both wonder and pity." The runaway train model "may be a variant of the Dinosaur model, but it has its own distinct characteristics. A complex society is seen as impelled along a path of increasing complexity, unable to switch directions, regress, or remain static. When obstacles impinge, it can continue in only the direction it is headed, so that catastrophe ultimately results." Lucretius seems to depict the war culture along the lines of the runaway train model of collapse, in the grip of an instrumental reason unwittingly galloping towards self-destruction. See Tainter 1990 [1988], 59.

Lucretius foreshadows the collapse of empire with an elaborate analogy from Book Two that, I argue, stages the conflicting values of the two cultures through the conflicting visual and auditory effects, or simulacra, of the text. In this analogy from Book Two, Lucretius is ostensibly describing how the two cultures appear from afar to highlight the reality of the atomic world beneath the threshold of perception. Lucretius claims that while the world as it appears to us on the surface—what Lucretius calls the *summa* of atoms—seems at rest, this surface world only seems at rest because the world of the atoms churning beneath it exists far below our senses. Lucretius says the atoms "conceal" or "steal" their motions from us. For Lucretius, the "world as it appears to us," the *summă* (noun), only reveals to us its "surface," *summā* (adjective). But beneath that surface, there is another world of atoms ceaselessly fluctuating between "war" and "peace." Below is the first part of a three-part analogy, in which Lucretius differentiates between this surface world and the atomic world beneath it.

Illud in his rebus non est mirabile quare	2.308
omnia cum rerum primordia sint in motu,	309
summă tamen **summā** videatur stare quiete,	310
praeterquam siquid proprio dat corpore motus.	311
omnis enim longe **nostris ab sensibus** infra	312
primorum natura iacet; quapropter, ubi ipsa	313
cernere iam nequeas, motus quoque **surpere** debent,	314
praesertim cum, quae possimus **cernere**, **celent**	315
saepe tamen motus spatio diducta locorum.	316

> In these matters it is no marvel why—when all the first-beginnings of things are in motion—the whole (*summă*) seems to stand at supreme rest (*summā…quiete*), except for anything that produces motion (*dat…motus*) with its own body. For the whole nature of first-things lies far below, away from our senses (*nostris ab sensibus*). Therefore, where you cannot now see [the atoms] themselves (*ipsa*), they must necessarily steal (*surpere*) their motions, especially when the things we can see nevertheless often conceal (*celent*) their motions when withdrawn [from our senses] (*diducta*) by the space between places (*spatio locorum*).

Lucretius begins by echoing Heraclitus' famous statement that "nature loves to hide" (φύσις κρύπτεσθαι φιλεῖ). The idea is perhaps as old as Homer.[266] Heraclitus' aphorism, however, could also be understood to say "nature loves to *hide itself*," since "to hide," κρύπτεσθαι, is the in the middle voice. This alternative reading would take the infinitive κρύπτεσθαι to be a "direct reflexive middle," that is, when the subject of the verb acts directly on itself as the direct object.[267] This alternative reading is important because Lucretius seems to be manipulating his discourse about the atoms in the passage above to conform with this alternative reading of Heraclitus. While Lucretius does not think that atoms actually "hide themselves," he hews to the language of Heraclitus by personifying the atoms, as if they really do "hide themselves" (*surpere debent*, 314; *celent*, 315).[268] Nonetheless, it is clear from the last line of the passage above that Lucretius does not really think the atoms hide themselves, where he says that it is really the *spatio…locorum*, "the interval between places," that hides the atoms from our view. Lucretius' point, in the intertext with Heraclitus, is that reality is not what it seems.

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[266] Don Fowler has suggested (2007 [2002], 389): "For the metaphor cf. perhaps Heraclitus' φύσις κρύπτεσθαι φιλεῖ (B 123 DK = fr. x Kahn)." The first instance of "nature" (φύσις) in extant Greek literature is in Book 10, lines 302-309, of Homer's *Odyssey*, where, before entering Circe's house, the god Hermes suddenly appears to Odysseus to give him a magical plant, the Moly flower, and Hermes "shows him its φύσις." Thus, early on, φύσις takes on the meaning of something hidden that has to be revealed, in the case of Hermes in the *Odyssey*, by a god. The translation of φύσις in this famous fragment of Heraclitus is disputed: "stuff" (Burnet), "Nature" (Diels-Kranz), "Nature/Being" (Kranz), "Becoming/Growth" (Gigon). See Kirk 2010 [1954], *ad loc*., for discussion. However, if Lucretius is enacting a reception of this idea in Heraclitus, that reception would seem to shade more towards φύσις as the "appearance" of reality. No commentator, to my knowlede, has suggested reading κρύπτεσθαι in Heraclitus as a direct reflexive middle, although this is probably because most assume it to be a "natural process middle," as often with Greek verbs that describe natural processes, like γίγνεσθαι. For "natural process middles," see Allan 2003.

[267] Smyth, §1717.

[268] See Don Fowler's note on *celent*: "the personification is stronger than English 'hide'," in Fowler 2007 [2002], 389.

Despite this switch—from the idea atoms hiding themselves to distance in space hiding them—Lucretius enacts in the words of his text reality hiding itself. The first act of this textual performance is the repetition *summă…summā* in lines 309-10: "when all the first-beginnings of things are in motion—the whole as we see it (*summă*) seems to stand at supreme rest (*summā…quiete*)" (*omnia cum rerum primordia sint in motu,/ summă tamen summā videatur stare quiete,* 309-10). Lucretius' argument is that, from the human point of view, the sum of things as they appear to us (*summă*), seems to be at rest (*summā…quiete*). Below our senses (*nostris ab sensibus infra,* 312), however, there is a blind world of atoms ceaselessly flowing between war and peace, union and collapse.[269] The movement of the argument in the text, from surface appearance to depth reality, is enacted as one reads across the line by how the meaning of *summă* changes.

The word order in line 310 creates and subverts expectations as the meaning of *summa* changes from the first *summă* (noun) to the second *summā* (adjective). This change in the meaning of *summa* across the line stages the point Lucretius is making: that the *summă* ("sum of things as it appears to us") is not as it seems, and that the more we know about it, the more we have to change our understanding of what we see, just as our understanding of what the line means changes as we read across it.

This works because the first *summă* is a noun, meaning "the whole scene in our view," and the second *summā* is an adjective, agreeing with *quiete* and together meaning "at supreme rest." [270] The crux then is that, as Bailey pointed out, the second *summā*

[269] This assumption of a lofty perspective on the world is taken by both Lucretius and his reader together. As Schrijvers puts it in a footnote about this passage, "C'est dans les images du chant II que se manifeste d'une facon particuliere l'habitude de Lucrece de se mettre lui-meme et le lecteur dans la position d'un observateur qui regarde les choses d'en haut." See Schrijvers 1970, 307 n. 27.
[270] *summus* (adj.) means primarily "highest," whereas *summa* (n.) means "total number, amount, whole." See de Vaan 2008, 600.

(adjective with *quiete*) connotes the idea of "on the surface"—as the adjective *summus, a, um* often does.[271] The movement, therefore, from the first *summă* to the second *summā*, cleverly enacts Lucretius' argument: that at first, the "whole scene before our view" (first *summă*, noun) seems to stand (*videatur stare*) "at supreme rest" (second *summā*, adjective, with *quiete*). It is only when one realizes that the second *summā* (in *summā…quiete*) can also means "at *surface* rest" that the expectations of the first reading ("at *supreme* rest") are subverted. In short, the reader encounters the first *summă* and thinks "the whole scene in our view." He or she then encounters the second *summā*, in *summā…quiete*, and thinks "at supreme rest." Up to this point, the idea is that the "whole" appears to be at "supreme rest." But because the second *summā* can also means "surface," Lucretius is already shifting us, via the ambiguities of language, into his larger argument about the atoms: that the sum of things that we see is not (1) the "whole scene to our view," but (2) only "the surface at rest."

To recap: as the reader moves beyond the surface meaning of *summā…quiete* (i.e. "at *supreme* rest") to the second meaning of *summā…quiete* ("at *surface* rest"), he or she is also being operated on by Lucretius' language to move from the surface world of appearances to the atomic world below. It is as though, through repetition, *summă* ("*sum* of things," noun) has been pressurized into meaning almost its opposite ("*surface-appearance* of things"). Lucretius' language works on the reader in real time to subvert, through the subverted meaning of *summā* (adj.), the popular view Lucretius wants to subvert in the reader.[272] Both in the poetry and in the content, therefore, this pun on

[271] Whereas the notion of "surface" in the noun *summă* is rare. It primarily means "sum" or "whole." See Bailey 1947, *ad loc*., vol. 2, 856.

[272] For the strategy of reading a line according to how each word sets up expectations that may be confirmed, denied, or subverted by subsequent words, see Fish 1982, 30-32. The reading experience that

summă…summā functions as a small, unnoticed detail that attracts attention by interrupting one's initial reading, but later, once understood, shows the passage to hold together in a new way.[273] The pun seems to be important for Lucretius, since he follows it with *enim* ("for," 312), presenting the rest of the passage as explanation of it. I have taken some time to explicate this pun; the basic idea is that an ideal reader of Lucretius would read line 310 in a way that enacts in him or her the larger point that Lucretius is making about the appearance of reality being merely a surface view, but one that nonetheless contains clues the atomic world beneath it.

Lucretius follows this pun with the claim that if you cannot see (*cernere iam nequeas*) the atoms themselves (*ipsa*), it must be because "they steal their motions" from us (***motus*** *quoque* ***surpere*** *debent*). The verb *surpere* is rare; Don Fowler has noted that it is a syncopation of *subripere*.[274] Through syncopation, it is as if *surpere* has already "stolen," so to speak, its letters, or *elementa*, from under the reader's nose. Thus, the syncopated *surpere*, instead of the uncontracted ***sub****-ripere*, stages surface reality as a syncopated version of the atomic reality beneath it. In saying this, Lucretius appeals to the reader in the ideal second person subjunctive—i.e. where "you" means "one" or

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Lucretius' text sets up here, however, seems to me to come closest to Wolfgang Iser's notion (1980 [1978], 34) that texts construct their own reader, in the sense that a text can, through the process of reading, create an ideally "informed reader" suited to become receptive to its effects. Something like this, I would argue, is what Lucretius seems to be enacting with the pun above: setting up or teaching an ideally receptive reader to become sensitive to seeing the full effects of his text, and by extension, of atomic reality. Passages like these show Lucretius not just revealing the Epicurean system but creating readers of *De rerum natura* through the performative use of language.

[273] This is the concept of the *punctum*. See Barthes 2010 [1980], 40-60. Barthes formulated the *punctum* as a way to discuss photography, although he says it is useful in literature as well (49, 53). In Barthes' formlation, the *punctum*, once noticed, has the "power of expansion," and this power "is often metonymic (45)." "It has the capacity, once noticed, to overwhelm "the entirety of my reading; it is an intense mutation of my interest, a fulguration (49)." Barthes compares the *punctum*, once noticed, to a "καιρὸς of desire" in the reader or viewer (59), and formulates it as neither a pure reader-response nor positivistic way to read a text or photograph: "Last thing about the *punctum*: whether or not it is triggered, it is an addition: it is what I add to the photograph and *what is nonetheless already there* (55)."

[274] Fowler 2007 [2002], 389.

"someone"—to reflect on what "you" cannot see (*cernere iam* ***nequeas***), and given Lucretius' puns on concealed or syncopated language this includes what you cannot see on the page as well. The hidden letters in *surpere*, therefore, perform surface reality as syncopated in a way that resembles what you cannot see, but that you know is hidden underneath Lucretius' play of surfaces.[275]

Lucretius then claims, *a fortiori*, that surface reality must all the more not be what it seems, since what we do see "conceals" something of their motions when distanced from us in space. That is, if we already know that what we do see is not the full story, Lucretius' thought goes, then how much more complex must be the motions of what we cannot see: "especially when **the things we can see** nevertheless often **conceal** their motions **when withdrawn** [from our senses] by the space between places" (*praesertim cum,* ***quae possimus cernere***, ***celent****/saepe tamen motus spatio* ***diducta*** *locorum*). Here, Lucretius uses *cernere* twice in successive lines. The verb means "to perceive" in the

[275] *s**u**rpere*, a rare word, also suggests *s**e**rpere*. In an intertext with Book Five of *DRN*, Lucretius says that, when seen from a distance, stars appear to "creep" (*s**e**rpere*) like sheep—stars who when "called" and "invited" by their fiery food "can *crawl* about unaided wherever their food *calls* and *invites* them (*vocat atque invitat*) as they *go feeding* their fiery bodies through the sky" (*ipsi* ***serpere*** *possunt,/quo cuiusque cibus euntis,/flammea per caelum* ***pascentis*** *corpora passim*, 5.523-5). The stars in Book Five, therefore, are like starry, fire-eating sheep, whose behavior closely imitates the sheep here in the analogy in Book Two. The link with the first part of the analogy,with the atoms that *s**u**rpere*, the sheep in the second part of the analogy who *s**e**rpere*, and the stars in Book Five that, like the sheep, also *s**e**rpere*, is, as David West has argued, and as Lucretius says in the analogy here, that: "the wool-bearing sheep *crawl* (*reptant*) where the grass gemmed with fresh dew, *calls* and *invites* (*vocantes atque invitant*) each" (*lanigerae* ***reptant*** *pecudes quo quamque* ***vocantes****/****invitant*** *herbae*, 318-19). I would argue that all three passages have in common the idea that objects at a distance appear to move slowly/stealthily because of concealment of their motions. The atoms and the stars have in common (*s**u**rpere*/*s**e**rpere*) that, unlike the sheep, they are both are maximally distant from human vision. There is, therefore, a complex intertext between the *s**u**rpere* ("to hide [motions]") of the atoms in the first part of the analogy, with the foreshadowing of the sheep in the second part of the analogy who *reptant* ("crawl") such that their legs cannot be seen, with the foreshadowing of the movements of the stars in Book Five that *s**e**rpere* ("crawl/glide," 5.523-5). That is, the atoms *s**u**rpere* ("steal [motions]," 2.314) → sheep *reptant* ("crawl," 2.318) → stars *s**e**rpere* ("crawl/glide," 5.523). Thus, while things from a distance (sheep/stars) may appear to "crawl" (*reptant*) or "glide" (*s**e**rpere*) the truth is that the atoms in both cases are really stealing the motions (*motus…s**u**rpere*) of these things from our eyes because of the distance. There is the added irony that the word *s**u**rpere* is a contraction of *sub-ripere,* thus itself stealing its *elementa*, or letters, from our eyes.

sense of separating a vague whole into discrete parts. It is cognate, for example, with *cribrum*, "sieve,"[276] and often serves as an indicator that Lucretius is enacting a pun, i.e. the so-called "letter-atom analogy."[277] Thus, the metaphor embedded in *cernere*—sifting or sieving—is brought to life here given the theme "surface appearance vs atomic reality." Lucretius is saying that only Epicurean reason, only the Epicurean vision of reality, lets us *cernere*, or sift, blurry surfaces from the war or dance atoms oscillating underneath.

This motif of sifting continues into the second half of the analogy in Book Two, where the reader is asked to sift the culture of the Epicurean Garden from the culture of empire—their values and their appearances in comparison to their reality on the ground. In this second half of the analogy in Book Two, the cultural half, Lucretius sets Garden and empire side-by-side, like a diptych, in which the values of the two cultures emerge contrapuntally.

Lucretius first describes the Garden. Fleecy sheep graze on a grassy hillside, enjoying natural pleasures and fight playfully. Then, at greater length, Lucretius describes the culture of empire. The analogy as a whole, then, is a triptych; it has three parts: atoms, Garden, and empire.[278] Lucretius compares (1) atoms, that from the human perspective appear to be at rest (*videatur stare*, 310); to (2) how sheep on a distant hillside appear blurred (*confusa videntur*, 321); to (3) how legions surging across a plain

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[276] The *Oxford Latin Dictionary* says "cf. *cribrum*, Gk. κρίνω, Welsh *go-grynu* 'sift', AS. *hreni* 'clean'."
[277] Snyder 1980, 136-142: "The collocation […] of words such as *cerno*, *certus*, *creo*, and *cresco*, recurs again and again throughout the remainder of the poem, very often in connection with discussions of the *primordia rerum* although sometimes probably only as subconscious repetitions of the intentional *-cer-*/*-cre-* verbal plays. All such plays on the syllable *-cer-* nevertheless serve as reminders of the *elementa* analogy once the reader is aware of the frequency of the particular collocation."
[278] For an analysis of the "triptych structure" of this analogy, see Fowler 2002, *ad loc*., 397-398; Farrell 2007, 83-85.

seem to stand still (*stare videntur*, 332) as the flashing of their armor seems to stand at rest when seen from afar (*consistere fulgor*, 332).[279] Each section of the tripartite analogy repeats two verbs that are central to the idea of the analogy as a whole: *videri* ("to seem") and *stare* ("to stand" or "to be at rest"). The core idea is "seeming to stand still," and this is expanded and articulated in different ways in each part of the triptych. "Seeming to stand still" could be called the analogy's matrix; it is the idea that is transformed and re-articulated in each part of the analogy in different ways, but that holds the analogy together as a whole.[280]

Central to the analogy are the contrasting *landscapes* of Garden and empire. Lucretius maps the contrasting values of the two cultures onto the natural environments in which the two cultures operate, primarily through differences in speed and direction of the two cultures' different literary cartographies, defined by counterpoint, one landscape echoing or reverberating against another.[281] The culture of empire is swift, *linear*, and sharp. Its soldiers throng the plains quickly and chaotically on a forward march. Their armor flashes like lightning seen from a distance. The Garden proceeds slowly, in entangled circles, appearing from afar like a blurry *liquid* harmony (***confusa*** *videntur*).[282] These speeds and lines suggest the different cultural values of Mars and Venus.

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[279] Cp. ***candor*** *consistere*, line 322.
[280] For the concept of the "matrix" in analogies, see Riffaterre [1978] 1984.
[281] For the term "literary cartography" see Tally Jr. 2013, 44-78.
[282] Monica Gale, in commenting on these two passages, agrees with De Lacy (1994 [1964]) that both the creative, harmonious motions of the atoms, and the warlike motions of the atoms, should be seen from a point-of-view of detachment, or *ataraxia*. But Gale also claims that Lucretius wants to extend this value-neutral view of atomic motion to the social level, to be detached about peaceful and warlike *societies*: "Where military imagery is used in these senses, *warfare is regarded, in essence, as value-neutral* [my italics]. The world may be a violent place, but we are not invited to lament the fact, or to worship Love to the exclusion of Strife (as Empedocles seems to urge us to do)…The violence of the military manoeuvres is no more troubling to the detached philosopher than the attractive pastoral images in the first part of the analogy. *Ataraxia* is to be attained only by contemplating strife from the lofty citadel of philosophy, as the sage is represented as doing in the proem to the book." See Gale 2000, 234-6. It is one thing, however, for

Both cultures have animals. Sheep—mentioned in the "animal contract"—are central to the interspecies ecology of the Garden. The war culture has horses, though they play a lesser role in the analogy here than they will in the animal revolt, described in Chapter Five of this dissertation.[283] Lucretius begins in a pastoral mode with the Garden. The brevity of the passage suggests timelessness and enclosure, and recalls Hesiodic life. Lucretius then pivots to the culture of empire, as legions of Mars fill the plains with *simulacra* flowing off their weapons and bodies, as well as the sounds of their shouting and stomping, and recall Homeric warrior culture.

nam saepe in colli ton**DENTES** pabula laeta	2.317
lanigerae ***REPTANT*** pecudes quo quamque vocantes	318
invitant herbae gemmantes rore recenti,	319
et satiati agni ludunt blandeque coruscant.	320
omnia quae nobis longe confusa videntur	321
et velut in viridi candor **consistere colli**.	322
praeterea magnae legiones c**UM L**o**CA** cu**RS**u	323
camporum complent belli **S**i**MULACRA** cientes	324
fulgor ubi ad caelum se tollit totaque circum	325
ae**RE RE**nidescit tellus subterque virum vi	326
excitur pedibus sonitus clamoreque montes	327
ICTI re**I**e**CT**ant voces ad sidera mundi	328
et circumvolitant equites mediosque ***REP***e***NT***e	329
tramittunt valido quatientes im***PET***e campos.	330
et tamen est quidam locus altis montibus unde	331
stare videntur et in campis **consistere fulgor**.	332

Epicurean to achieve *ataraxia* by taking a distant view of *atomic* war and peace. It is another to be "value-neutral" (Gale, 24) about war and peace *in Roman society*. Both in Lucretius' condemnation of the civil wars of his time in the Late Republic in Book One (1.41-3), and in his account of the disastrous consequences of animal instrumentalization that leads to the animal revolt in Book Five, Lucretius obviously holds pro-animal, anti-war values. If *De rerum natura* is to be taken as at least partially representative of Epicureanism, no Epicurean is "value-neutral" about ethics, human or animal, even though one could take a value-neutral point of view on such things, re-describing them in terms of atoms. In short, the level of description matters. Where the atomic level is value-free, the social level is not. After all, Lucretius is a devotee of Venus not Mars. That Lucretius does not view society as value-free is also clear from value-laden language he uses to describe the two cultures of Garden and empire. He portrays the Garden as a utopia or the Golden Age reborn; empire as discord and inevitable disaster.

[283] Horses, though, are important earlier in Book Two of *DRN*, where they star in the first example of the swerve, or *clinamen* (2.263-71).

> For often on a hill, shearing (*tondentes*) the happy pasture, wool-bearing sheep crawl (*reptant*) where the grass, gemmed (*gemmantes*) with fresh dew, calls and invites (*vocantes invitant*) each, and fully-fed lambs play and alluringly flash [their horns] (*blandeque coruscant*). All of which appears to us blurred (*confusa videntur*) from afar, as a sheen at rest (*candor consistere*) on a green hill. Moreover, when great legions fill the spaces of the plains (*loca*/*camporum complent*) in their course, as they set in motion semblances of war (*belli simulacra cientes*) where the flash (*fulgor*) rises to the heavens and the whole earth round about shines back in bronze (*aere renidescit*), and below, sound arises by the force of men's feet and the mountains, struck by shouting, cast back their voices (*icti reiectant voces*) to the stars of heaven, and horsemen speed around (*circumvolant*) and all at once (*repente*) pass through the midst of the plains, shaking them in their mighty rush (*impete*). And yet, there is a certain place high in the mountains, from which they seem to stand still (*stare videntur*) and to be a lightning-flash at rest (*consistere fulgor*) on the plains.

This part of the analogy in Book Two expands on the idea in the first, atomic part of the analogy, that things seen at a distant provide clues to the reality on the ground. It is appropriate, therefore, that Lucretius has structured his description of the Garden in a ring composition that begins and ends with the word "hill" (*colli*, 317; *colli* 322, end of line). This ring composition, enclosed by the word "hill," rhetorically encloses the Garden. The hill also makes the Garden embody the Epicurean distant view on reality—the distant, tranquil view with which one looks down (with compassion) on the turmoil of unenlightened non-Epicureans.

There is also a distant view taken in the second part of the passage above, in the section describing the culture of empire, where the landscape of the culture of empire is seen from "a certain place high in the mountains" (*quidam locus altis montibus*, 331). This part of the passage, describing the culture of empire, is likewise structured by a ring composition, beginning and ending with *fulgor* ("flash," 322 and 325 at the end of line). Both landscapes, therefore, contain within themselves positions for taking a distant view

on reality, and this allows Lucretius' reader to participate in looking down from a distance, within the text, on each landscape. It also provokes the reader to consider his or her own standpoint towards the text, i.e. to how Lucretius positions *the reader* to experience the different landscapes. In short, we look at ourselves looking, from a distance, spectators of ourselves as spectators, as the reader's gaze becomes a *mise en abîme* of one's own standpoint within the text.

Such reflexivity is important for an analogy whose aim is defamiliarization: to stage for the reader the experience of seeing surface reality as only a partial view of reality. To see one's own standpoint in the text is to be forced to see this standpoint *as a standpoint*, as partial. In structuring the analogy this way, Lucretius seems to be suggesting that the Garden's tranquility arises in part from its inhabitants enjoying the distant perspective from the hill. From there, one can look down on the turbulence of a violent, ambitious, greedy, unhappy, Mars-oriented humanity. This second, cultural section of the analogy in Book Two, therefore, not only enacts the experience of what it would be like to see atoms, it forces the reader to realize that his or her distant view of reality is just one standpoint caught between two infinities—the macroscopic and microscopic—in what Lucretius increasing stages as a complicatedly hermeneutic landscape.[284]

Lucretius begins each part of the cultural sections of the analogy by, first, describing the reality on the ground then, second, zooming out to show its appearance from a distance. Lucretius, thereby, forces the reader's gaze into a chiastic movement.

[284] As Schrijvers (1999, 176) beautifully puts it: "Comme Pascal, Lucrece est le poete-penseur se trouvant entre les deux infinis."

When describing the atoms, Lucretius starts on the surface (*summă*) and descends to reality below. When describing the two cultures, Lucretius starts on the ground, the landscape, and then zooms out to the distant view, i.e. back to the surface again, where the analogy about the atoms began. The analogy as a whole goes from surface to depth, and from depth to surface—a chiastic movement that Lucretius enacts in the reader. On the surface—that is, from a distance—each culture appears as brightness at rest. The Garden appears as a *still* brightness: the hill is a sheen of white on green, a "**brightness** at rest upon the green hill" (*in **viridi candor** consistere **colli***, 322). It is also a "**poured-together** blur" (***confusa** videntur*, 321).[285] This blurred sheen is a phenomenological clue to the *fluid* entanglements of the Garden.[286] An enactment in language of the culture of Venus.

By contrast, the culture of empire appears from afar as a violent "flash", or *fulgor* (322; 325 end of line). Don Fowler has noted that Lucretius' depiction of the soldiers' weapons has an important intertext in the *Iliad* (19.357-64).[287] Homer says: "And all the earth round about smiled because of the **lightning** of bronze" (γέλασσε δὲ πᾶσα περὶ χθὼν χαλκοῦ ὑπὸ **στεροπῆς**).[288] In Lucretius, *fulg**o**r* ("flash") suggests *fulg**u**r* ("lightning")—not just any "flash" or "brightness," but a lightning-flash. And yet this brightness, that as Lucretius says seems to stand still at a distance, is carefully chosen to connote, at the same time, the lightning-like movement of the legions below. The

[285] *OLD* s. v. 1 & 2.
[286] Commager Jr. (2011 [2007], 189 n. 4): "Lucretius is committed to the discovering of *vestigia notitiai* ('traces of knowledge', 2.123; cf. 2.112) in every imaginable physical phenomenon. Cf. Epicurus, fr. 212 (Usener 163)."
[287] Fowler, 2007 [2002], *ad loc*., 398-400.
[288] Lucretius, as Munro notes, might have had *Odyssey* 14.267 in mind: ...**πλῆτο** δὲ πᾶν πεδίον πεζῶν τε καὶ ἵππων/ **χαλκοῦ τε στεροπῆς**; as well as *Iliad* 2.457, 465. See Munro 1864, 204. For an overview of Lucretius' use of Homer, see Gale 2009, 61-67.

suggestiveness in Lucretius' language (*fulg**o**r*/*fulg**u**r*) enacts in the reader the movement from the distant vantage-point to the ground, from a "flash" to "lighting." This light imagery, at the same time, contrasts starkly with the slow, entangled movements of the Garden. But these differences in the phenomenology of the two cultures also point to differences in values.

Lucretius emphasizes the different values in the two cultures with the differences of their movements and lines in the landscapes. For instance, the description of each culture ends with similar but also contrasting phrases: the Garden ends with *candor* ***consistere*** ("sheen at rest," 322) and empire ends with ***consistere*** *fulgor* ("lightning-flash at rest," 332). The *candor*, or "sheen," of the Garden seen from afar, suggests restfulness. But the lightning-flash of the culture of empire, though at rest (*consistere fulgor*, "lightning-flash"), is at first glance an oxymoron: lightning is not usually thought to "stand still" (*consistere*). However much the culture of empire appears from a distance like *frozen* lightning, that image at the same time connotes the legions' *speed* on the ground. As Lucretius makes clear, the legions move "suddenly" and in an "onrush" (*repente*, 329; *impete*, 330).

While speculative, Lucretius may be imagining the legions on the plains as lightning that, falling from the sky, appears from "a certain place in the mountains" to stand still at the moment of flashing, like a strobe light. Another possibility is that the flash represents a kind of eternal moment: the way that waves, while they surge one after the other, appear calm and melded into one when viewed from a high enough vantage point. But unlike waves, real lightning does actually seem to pause at the moment of the flash. Lucretius' language is, therefore, phenomenologically precise: *fulgor* refers both to

the rapid, lightning-like movement of the legions on the plains and to the flash of their weapons that, seen from a distance, appears like strobe lights. Thus, the *fulgor* ("flash," 332) of the war culture and the *candor* ("sheen," 322) of the Garden point to how Garden and empire appear from afar, while accurately connoting their different speeds and lines on the ground.

In the empire section of the analogy, Lucretius compares the legions to a storm. Describing the legions this way is an expansion of the famous proem to Book Two of *De rerum natura*, the same Book that this complex analogy is described in. In the proem to Book Two, an Epicurean spectator, secure on a distant hill, gazes down on a storm at sea. This storm is described in terms of atoms, and compared to legions on a plain—the reverse of the analogy in Book Two. The proem to Book Two is, therefore, programmatic for the complex analogy later in the Book. It sets up a series of images that Lucretius recycles in the triptych analogy, the center-piece of this chapter, that comes later in the Book. The proem to Book Two is as follows,

Suave, mari magno **turbantibus** aequora ventis,	2.1
e terra magnum alterius spectare laborem;	2
non quia vexari quemquamst iucunda voluptas,	3
sed quibus ipse malis careas quia **cernere** suave est.	4
suave etiam **belli certamina magna** tueri	5
per campos instructa tua sine parte pericli	6

> Sweet it is, when on the great sea the winds trouble the waters, to gaze from land upon the great labor of another; not because anyone's trouble is a joyful pleasure, but because it is sweet to discern (*cernere*) the ills you yourself are free from. It is also sweet to gaze upon great contests of war (*belli certamina magna*) arrayed over the plains, with you having no part in the danger.

Here Lucretius indexes several features of the landscape that he will re-use in the triptych analogy to the atoms and the two cultures later in Book Two. For instance, Lucretius

expands on the "great contests of war" (*belli certamina magna*, 5) above when he uses a similar phrase in the analogy to describe the culture of empire in terms of its "great legions" (*magnae legiones*, 323). In the proem, Lucretius appeals directly to the reader's powers of vision, in the ideal second person subjunctive: "since it is sweet to **discern** the ills **you are free from**" (*quibus ipse malis **careas** quia **cernere** suave est*, 2.4) and "from which **you can** look down" (*despicere unde **queas***, 2.9). He takes up this appeal in the analogy to the atoms where, as discussed, he addresses the reader's powers to sift levels of reality, also in the ideal second person subjunctive (***cernere** iam **nequeas***, 314; *quae possimus **cernere***, 315). The proem and the analogy shift in and out of perspectives in a similar way. While the proem compares a sea storm and land battle to atomic turbulence, the analogy compares atom turbulence to a (mock) land battle, that is itself compared to lightning and a storm. The terms of the metaphors, the tenor and the vehicle, are switched around in these intertextual passages. In both the proem and the analogy, the reader enters cosmic landscapes whose imagery of atomic turbulence, land battle, and sea storm will reappear in the animal revolt discussed in Chapter Five of this dissertation.

By remixing these images resonant with Epicurean values, the landscapes of the proem, the analogy, and the animal revolt (in Chapter Five) are what D. W. Meinig would call "landscape as ideology." This is landscape as "a symbol of the values, the governing ideas, the underlying philosophies of a culture…a translation of philosophy into tangible features."[289] Lucretius carefully selects the figures that populate these ideological landscapes to represent the contrasting values of Garden and empire, images

[289] Meinig continues: "to see landscape as ideology is to think about how it was created," that is, to think about the ideas that drove its representation. See Meinig 1979, 42-3. For a recent treatment of landscape as medium for aesthetic discourse, see Worman 2015.

at times condensed to the point of dream-likeness.[290] The differing lengths of the passages also point to a contrast in values. The description of the Garden is brief; it feels enclosed in space and time, connoting the limited natural and necessary desires of Epicurean ethics. It presents Epicureanism as a sustainable culture, and not an expansionist one, a cold rather than a hot society, that aims at steady-state pleasure rather than expansion, linear time, and history.[291] The Garden's values are figured through how its inhabitants interact with the landscape.[292] The Garden is a snapshot as a whole way of life. By contrast, the culture of empire rushes through the plains as a single event. Lucretius describes both cultures in a single sentence, but the war culture gets a far longer, paratactic description, giving it an epic, linear, expansionist sense (*que*: 326, 327, 329; *et* 329).[293]

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[290] I am thinking less of Freud's notion of the condensation of dream imagery, in *The Interpretation of Dreams*, than Rob Nixon's use of condensation in his analysis of the environmental pastoral that opens Rachel Carson's *Silent Spring*. Nixon describes the environmental imagery of Carson's *Silent Spring* as a condensation both of literary features, actual chemical toxins (DDT), and political relationships: "clustering these scattered microdisasters into a single imaginary community." The Epicurean landscape above is a positive ecological condensation of both the agricultural coexistence of plant, animal, and human, and Epicurean ethics and notions of community, condensed and clustered within the single image of the Garden in the analogy. See Nixon 2011, 57 and esp. 63-4.

[291] For "cold" and "hot" societies, see Levi-Strauss 1966, 233-4: "I have suggested elsewhere that the clumsy distinction between 'peoples without history' and others could with advantage be replaced by a distinction between what for convenience I called 'cold' and 'hot' societies: the former seeking, by the institutions they give themselves, to annul the possible effects of historical factors on their equilibrium and continuity in a quasi-automatic fashion; the latter resolutely internalizing the historical process and making it the moving power of their development [….] the object of 'cold' societies is to make it the case that the order of temporal succession should have as little influence as possible on their content. No doubt they do not succeed perfectly; but this is the norm they set themselves […] the real question is not what genuine results they obtain but rather by what lasting purpose they are guided, for their image of themselves is an essential part of their reality [….] It is tedious as well as useless, in this connection, to amass arguments to prove that all societies are in history and change: that this is so is patent. But in getting embroiled in a superfluous demonstration, there is a risk of overlooking the fact that human societies react to this common condition in very different fashions."

[292] Jonathan Bate makes similar point about the relationship between culture and landscape in the novels of Jane Austen and Thomas Hardy. See Bate 2000, 7.

[293] Monica Gale contrasts the two cultures in this analogy in terms of contrasting literary traditions. As she says "The paired scenes are suggestive of contrasting lifestyles, the martial and the agricultural, which may in turn hint at the two branches of the epic tradition, the Homeric and the Hesiodic (or, to use the conventional modern terminology, epic and didactic)." See Gale 2013, 27 and n. 10.

There is a liquid coexistence of life on the hill suggested by the phrase *confusa videntur* ("they appear poured-together," 321). Lucretius hints at this in the first line of the passage with *tondentes* (317). Most translators render *tondentes* as "cropping," but *tondere* means more precisely "to shear"—hair, beards, or sheep's wool.[294] The incongruity, therefore, between what *tondere* refers to (sheep *eating* grass) and its sense (sheep *shearing* grass) implies that Lucretius is turning the sheep into shearers.[295] That the sheep have become the shearers gets support from the enjambment in the following line of *lanigerae* ("wool-bearers," 318). That is, the "shearers" in the first line become "wool-bearers" in the second line. These epithets suggest the cyclical life of sheep and humans on the hill: the sheep are framed as "wool-bearers," i.e. producers of wool for humans, sheep who in turn are "shearing happy pastures" (*tondentes pabula laeta*/ *lanigerae*, 317-8). The sheep are shearing the grass in order to be shorn—a perfect encapsulation of the Epicurean attitude to the harmonious instrumental value of human and animal to each other, and of the entangled ecology of the Garden. The surprise in the line is that, unlike human shepherds, who presumably use clippers to shear sheep, the sheep shear with their *dentes* ("teeth"), as *ton**DENTES*** hints. Thus, in the opening of the passage, *tondentes pabula laeta*/ *lanigerae* embeds within it the tangled, liquid ecology of the Garden: wool-bearering sheep shearing grass in order to be shorn by humans—and around and around we go in interspecies harmony.

[294] *OLD* s. v. 1 & 2.

[295] Don Fowler is resistant to seeing the metaphor of "shearing" in *tondentes*: "it is not helpful to be put in mind of the fact that sheep themselves are sheared!" (Fowler 2007 [2002], *ad loc*.). But I think it is helpful to see Lucretius as saying that the sheep are shearing the grass, because it echoes the idea of reciprocity in the animal contract in Book Five, where work animals exchange their *utilitas* ("utility") for human *tutela* ("protection") (cf. *DRN* 5.855-77). In the midst of the animal contract, at 5.866, sheep are also called *lanigerae*, as here in the analogy, the compound word suggesting the *utilitas* for their human protectors.

The ecological coexistence of the Garden is hinted at by the way that Lucretius describes the hill appearing from afar. As Don Fowler has noted, it is the sheep's' white fleeces that cause the brightness, or *candor*, that appears from afar as at rest on the green hill (*in viridi candor consistere colli*, 322). As Fowler puts it "Here the feature is stressed which is most responsible for the *candor* that we see, their white fleeces."[296] Borrowing Fowler's structure of thought—that the *candor* on the hill is caused by the sheep's fleeces—I would argue that Lucretius has chosen the word *confusa* deliberately, to indicate how the hill appears "poured-together" from afar to connote the braided flow of plant, animal, and human in the reciprocal instrumentalization of Garden below.[297]

Lucretius also has the glittering lights of the Garden, that appear from afar, suggest the luxury of natural and necessary desires in the Epicurean community below. The sheep, Lucretius says, consume "jeweled grasses" (*herbae gemmantes*, 318) that "call and invite" them (*vocantes/ invitant*, 317-8) as if to a luxurious feast for a sheep.[298] This depiction of the Garden as a space of luxury based on natural and necessary desires follows from the Epicurean ethics of the limits of nature as themselves promoting a life of hedonic luxury. Part of the humor in the passage comes from the fact that the grasses cannot be *gemmantes* ("gemmed") from the point of view of the sheep. Sheep have no interest in jewelry, as far as I know. The value-perspective of the imagery belongs to the

[296] Fowler 2007 [2002], *ad loc*.
[297] Leo Marx calls such ecological images "root metaphors." As Marx puts it, a root metaphor is: "a poetic idea displaying the essence of a system of value. Ralph Waldo Emerson had some such concept in mind when he observed, in *English Traits*, that the views of nature held by any people seem to 'determine all their institutions.' In other words, each image embodies a quite distinct notion…a distinct social ideal." See Marx 2000 [1964], 42.
[298] Fowler notes "It is a social fact of the ancient as of the modern world that invitations are most commonly invitations to a meal." See Fowler 2007 [2002], *ad loc*, 393.

way human see things, to the human perspective, the human context of value.[299] The luxury of "jeweled grasses" (*herbae gemmantes*) is a way of suggesting natural and necessary desires as human luxury, but cathected onto the life of a sheep. The luxury of the sheep's life in the Garden is a medium for attracting the human reader to the luxury of the Garden as a place of Epicurean ethics that, in their limited way, the sheep perform naturally.[300] The sheep's lack of exceptionalism is their luxury.

This Epicurean landscape works as a mediator of the reader's desire. The nonhuman imagery of the Garden instills, via its simulacra of liquid sights and sounds, a longing in the reader to imitate Epicurean desires, to be want to be more like the peaceful sheep, to the extent a human can. Unlike the competitiveness and acquisitiveness of the culture of empire, as Lucretius shows throughout in *De rerum natura*, the desire to imitate the kind of glittering "wealth" the Garden has to offer provokes an alternative conception of wealth that would short-circuit the competition and violence of the culture of empire.[301]

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[299] Bakhtin thought that words in a poem might belong to, or have different meanings in, different "value-contexts" or in different "centers of value" in a poem, i.e. that the same word might take on different meanings when seen from the different points of view, positions of interest, or positions of value established within the poem. The different positions of interest or value are in dialogue with each other and with the discourse of the poem itself. See Bakhtin 1993, 65.

[300] P. H. Schrijvers accounts for the "gemmed grasses" (*herbae gemmantes*) as an instance of ἐνάργεια. This does not conflict with my claim above that the image has value primarily from the human perspective. But Schrijvers also claims that the gemmed grasses are an indicator of the fecundity of the earth, its ability to produce *mira*, through the creativity of the *magna* ***MATER****ies*, or atoms [my emphasis]. It makes sense, I would suggest, for Lucretius to use such imagery associated with the fecundity of matter in an analogy about atoms—which are the true creative, fecund, "Great Mother-matter" of things. See Schrijvers 1970, 227.

[301] George Monbiot has recently argued that we need a new culture story for the environmental crisis that emphasizes belonging to community, altruism, and a notion of land as a commons communally managed to be a source of common-wealth. This story would feature altruism as a virtue heroically to be aspired to, and a virtue that would maximize what it means to be human—rather than extreme competition or individualism hankering after wealth. See Monbiot 2017.

Lucretius is, therefore, not just painting a pretty pastoral scene in his description of the Garden. He is arousing, through Epicurean value-laden imagery, a *desire to desire* the Epicurean attitude towards luxury. Such imagery creates a meta-ethical moment, to provoke readers into wanting to desire what Epicureans desire, in the way they desire it: a desire to *see* the easily-gotten gifts of the natural world *as luxurious*. Lucretius' imagery is performative; it acts on the reader's perception of the things in the Garden, so that those things become imbued with an aura they would not otherwise have, so that the reader want Epicurean simplicity and to see it as true luxury.[302] Far from being merely a

[302] Cp. Lucretius' mockery of the desire for wealth and power at the beginning of Book Two (2.11-13): "to compete with wits, to fight for precedence, to strive all day and night with surpassing labor to emerge at the peak of riches and get possession of power! O pitiable human minds, O blind hearts!" *certare ingenio, contendere nobilitate,/ noctes atque dies niti praestante labore/ ad summas emergere opes rerumque potiri./ o miseras hominum mentes, o pectora caeca!*. In opposition to Roman ideas of wealth, Lucretius depicts the pastoral mode, itself a model for Epicurean desire, i.e. the satisfaction of unlimited wants by limited means. See *DRN* 2.14-46, especially 2.29-31: *cum tamen inter se prostrati* ***in gramine molli****/ propter aquae rivum sub ramis arboris altae/* ***non magnis opibus*** *iucunde corpora curant*; and *DRN* 2.41-2: *tuas legiones* ***per loca campi****/ fervere cum* ***videas belli simulacra cientes***. My argument is that such scenes work as lures for the imitation of Epicurean desires. Whereas the imitation of conventional Roman desires, in Lucretius' view, would lead to conflict and violence, the imitation of Epicurean desires would eliminate conflict and violence, since the imitation of Epicurean desires would be the mimesis of a desire *to limit desire*. The Epicurean community seems to be a place where each imitates the other's desire to temper unnatural and unnecessary desires. The Epicurean community is, therefore, a "non-conflictual mediator" of desire, that is, a group whose desires, were you to imitate them, would not lead to conflict, since, in imitating an Epicurean's desires, you would be desiring to limit desires. That is what it would mean to say that the Epicurean community is a non-conflictual mediator of desire. A non-conflictual mediator of desire leads to the elimination of conflict rather than the ramping up of it, and this, I would argue, is what Lucretius seems to have his images of the Epicurean life in *De rerum natura* perform, one example of which is his portrait of the Garden in the analogy above. For the distinction between external mimetic desire (non-conflictual) and internal mimetic desire (often conflictual), see Girard 1976 [1961], 83-99. Here, Lucretius does seem to be lauding simple pleasures over luxurious ones when he shows nonhuman animals, by nature limited to what is natural and necessary, experiencing simplicity as luxury, in the absence of reason. This suggests that Epicureans believe there to be a direct contrast between simple and luxurious pleasures, and not only an *attitude* or *psychological stance* towards luxurious pleasures. Compare Raphael Woolf: "But Epicurus does not say that it is sober pleasures as opposed to luxurious ones that generate the pleasant life. Reason and pleasure are the elements of the contrast, not pleasures of different kinds. In the light of this, it seems right to take Epicurus' point to be advocacy of the thoughtful approach to pleasure, not the lauding of simple pleasures…over luxurious ones." Woolf's position leads to a conclusion that does not accord with Lucretius' depiction of the happy Epicurean life, which as here is often the life of simple pleasures, *even among animals*, who do not take the complex psychological stances Woolf describes humans taking: "We should be able to say that for Epicurus the life in which luxury is chosen over simplicity, with peace of mind maintained, is a *more pleasant life than where it is not chosen*, just insofar as luxury does, we are assuming, tend to offer more pleasure than simplicity. Pleasure as freedom from pain and distress is attained *independently of luxury*; the latter cannot make our lives happier

locus amoenus or "happy place," Lucretius' depiction of the Epicurean Garden acts as a mediator of desire, so that the reader, through reading, come to want to desire what is natural and necessary, and to see such things as imbued with value. Even violence in the Garden is depicted in such a way as to reroute it into a form of pleasant social activity. Full lambs (*satiati agni*, 320), Lucretius says, "alluringly flash [their horns]" (*blandeque coruscant*).[303] The play-butting of the lambs foreshadows (and sets up for parody) the mock-battles of the culture of empire in the second half of the analogy about the soldiers. The coruscating flashes of the lambs' horns, like the jeweled grasses, are offered as seductive (*blande*) to the human viewer.

It is speed, more than anything, that separates the imagery of the two cultures. Lucretius describes the sheep in the Garden as "crawling" (*lanigerae* ***reptant*** *pecudes*, 318). But since real sheep do not crawl, David West, in his phenomenological reading of the passage, has suggested that their "legless progress across the face of the hill," as he puts it, is a creation of the distance between the spectator and the hill. This distance

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than they would otherwise be [my italics]." But Lucretius often portrays the simple life of simple Epicurean pleasures as *itself luxurious*. That is, there is a real thing called simple or natural pleasures that Lucretius shows even animals partaking of. Such pleasures are not merely the result of a *stance* taken to the world. Cp. Woolf 2009, 165-8.

[303] Perhaps the portrait of the lambs as satisfied (*satiati agni*) is meant to suggest the Garden as a space of "katastemmatic" (i.e. static, self-sufficient) pleasures. The connotations of slowness and self-sufficiency in Lucretius' portrait of the Garden above certainly make it feel like a space of katastematic pleasure—showing that there is something it is like to be in a state of katastematic pleasure, that katastematic pleasure is not merely the absence of pain but a really real pleasure, having a positive qualitative content and not a mere absence of pain. Hence, the Garden's feel of sustainability as happiness (katastemmatic pleasure), against the kinetic aquisitiveness and endless growth of the war culture. Lucretius' portrait of the Garden as a place of sustainable, katastemmatic pleasure that stemms from views about the limits of nature, justice, and social harmony, comes close to the idea of "just sustainability" in Agyeman, Bullard, and Evans 2002, 78. They define "just sustainability" this way: "Sustainability cannot be simply a 'green,' or 'environmental' concern, important though 'environmental' aspects of sustainability are. A truly sustainable society is one where wider questions of social needs and welfare, and economic opportunity are integrally related to environmental limits imposed by supporting ecosystems." Lucretius' portrait of sustainable Epicurean communities as spaces of katastematic pleasure offer a glimpse of a systematic, intersectional framework that also importantly satisfies the need for pleasure in a way conducive to social justice, multispecies ethics, and environmental limits—and not an asceticism of denial or community of the dutifully dour.

constructs the illusion of sheep crawling. The grass hides their legs, just as the distance between places did to the atoms in the atomic part of the analogy (*surpere,* 314; *celent,* 315; *spatio diducta locorum,* 316).[304]

Lucretius contrasts the sheep's crawling with the pinball-like frenzy of the legions' movements (*fulgor* 325; *simulacra cientes* 324; *se tollit* 325; *aere renidescit* 326; *excitur* 327; *clamore* 327; *icti reiectant* 328; *circumvolitant* 329; *quatientes* 330). In terms of speed, therefore, the contrast between the sheep and the soldiers is in some sense quite direct, but subtle in others. Lucretius enacts, in the simulacra his texts produces, the ricocheting velocity of the legions. The word ***REPTANT***, indicating the "crawling" of the sheep, is sounded back in the second half of the passage in the words ***REP****e****NT****e*** ("suddenly," 329) and *im****PET****e* ("in an onrush," 330). These adverbs from the second half of the passage describe the legions' surging speed across the plains, and directly contrast the slow movements of the Garden with the speed of the legions, by recycling the same letters in all three words across the analogy. While fanciful, it is possible to imagine the obnoxiously loud culture of empire as breaking the fourth wall of the analogy, insofar as Lucretius has the language that he uses to describe them shout back, so to speak, the words from the first half of the analogy in the second half, as if the legions themselves were shouting back across the analogy. On such a reading, ***REP****e****NT****e*** and *im****PET****e* would create sonic simulacra for the reader that resound the word ***REPTANT*** in the first half of the analogy. Thus, the louder second half of the analogy, i.e. the legions, would be staged as echoing the quieter half of the analogy, i.e. the Garden, across the analogy, and at the same time contrasting, in the meanings of the echoed words, the key difference between

[304] West 1994 [1969], 14.

the two cultures—their speeds (*reptant*/*repente*). The text shouts back across the *analogy* just as the legions do on the *plains*.

Both the soldiers and their simulacra—their shouts and flashes—territorialize the plains. Lucretius says "when great legions **fill the spaces of the plains** in their course, as they set in motion **simulacra** of war" (*magnae legiones cum **loca** cursu*/ ***camporum complent** belli **simulacra** cientes*, 323-4).[305] The legions' friscalating simulacra of light and sound are enacted by the text once again, in the synaesthetic pun *ae**RE RE**nidescit* ("bronze flashes back," 326).[306] The prefix *re-* in **re***nidescit* is a sonic simulacrum of the *-re* that ends the previous word *ae***re** (*ae**RE RE**nidescit*). The pun, thus, performs in *sound* the reflecting *lights* of the *aere*, or "bronze [armor]," of the legions. The text enacts in the textual simulacra of sights and sounds in *aere renidescit* the simulacra of the legions' sights and sounds. Lucretius performs in kinetic language the untranquil simulacra of the culture he is describing.

Lucretius does a similar thing in the next line with the sounds in ***ICTI** re**IeCT**ant voces* ("[mountains] having been struck cast back their voices," 328).[307] The sounds ricochet between the words just as the soldiers' voices ricochet between the mountains. While sound might be thought irrelevant in an analogy ostensibly about visible evidence for invisible atoms, the switch from sight to sound in the pun violates that visual analogy in a way that, I think, even further enacts the excessive confusion that the legions cause

[305] For *complere* as a military term for "occupying" territory, see Fowler 2007 [2002], 400.
[306] Of course, the *fulgor* of "lightning-flash" refers to the reflection of the sun on the soldiers' armor—thus, the *fulgor* is itself a *simulacrum* but in reverse, since, unlike lightning that goes from heaven to earth, the "lightning-flash" of the soldiers' armor goes from earth to heaven.
[307] J. M. Snyder notes that "*Iacio* and *ico* are not in fact related, but compounds of *iacio* such as *deicio*, *inicio*, etc., probably led to the association of the two words." See Snyder 1980, 84.

as they territorialize the plains with their simulacra.[308] In other words, Lucretius' text incites a confusion of simulacra in the reader that goes so far as to confuse sight and sound so that the reader experience the confusion of simulacra in the militaristic culture of empire. It is confusing because the culture of empire is a confused mentality. While the atomic part of the analogy, the first part of the analogy, is strikingly lacking in words that conjure sound, the culture of empire, is incredibly noisy. This may be Lucretius' way of demonstrating the culture of empire's distance from reality. Once again, in an analogy initially set up to be visual, Lucretius has the legions stomp (***excitur pedibus*** *sonitus*, 327), shouting (*clamore*, 327), and shout (*voces*, 328), as if to suggest that they are so frenzied that they break out of the analogy's visual mode to territorialize it with sound.

The analogy turns out to be a virtuoso performance of simulacra on Lucretius' part. Simulacra means "copy" or "semblance," and tends to signal that Lucretius is enacting something with his words and imagery, affecting the reader in some way dependent on the context. Lucretius begins his description of the war culture with the legions filling the plains with *belli simulacra* ("semblances of war," 324). These *belli simulacra*, commentators think, probably refer to the "mock battles" or "military training" of the legions on the plains.[309] The same phrase occurs earlier in Book Two to refer to military training on the Campus Martius.[310] Lucretius, therefore, describes the legions here in a mock battle that is a more violent version of the lambs' playfighting in

[308] P. H. Schrijvers would have thought the switch from sight to sound just one (charming) element of an analogy that had gotten out of hand, as he says "Dans la description pleine de vivacite que Lucrece fait de ces legions, les vers 325/328 ne sont pas directement fonctionnels a l'interieur de la demonstration dont il font partie. Cependant, ces vers ajoutent au caractere merveilleux de l'image en question, et par la ils amplifient egalement le fait physique que cette image est destinee a illustrer." See Schrijvers 1970, 308.
[309] Fowler 2007 [2002], 121.
[310] *DRN* 2.40-1: *si non forte, tuas* ***legiones*** *per* ***loca campi****/ fervere cum videas* ***belli simulacra*** *cientes,* "unless by chance, when you see your **legions** seething through the **spaces of the plains** stirring up **mock battle**."

the Garden mentioned four lines earlier in the analogy (*et satiati agni ludunt* ***blandeque coruscant***, 320).

The legions' movements, as they course through the plains, are expansive and imperialistic. Lucretius recreates in the text how the legions fill the "spaces of the plains" with their simulacra (*loca…camporum*) by having the word *simulacra* in the text *fill the space* of the phrase *cum loca cursu* in the line before it. This is a speculative point: the words *belli simulacra* could be seen, in the text, as taking on the aggressive tendencies of the legions they describe. As the legions fill the plains with *belli simulacra* in the sense of filling it with "mock battle," they also fill the plains with *belli simulacra* in the sense of the *simulacra* flowing off their bodies as they fight in mock battle. Lucretius recreates both these senses of *belli simulacra* by having the word *simulacra* become a copy (or *simulacrum*) of the phrase in the line just before it, and in nearly the same position in the line, *cum loca cursu* (*c**UML**o**CA**cu**RS**u* → ***S**i**MULACRA***). While not a perfect re-enactment, the sounds of *cumlocacursu* and *simulacra* are close enough to suggest a thematic connection between the two, especially since, again, the pun *does* exactly what it says the legions are doing: filling the *loca camporum* ("spaces of the plains") with their *simulacra*. Lucretius performs in the soundscape of the text the soundscape of the mock battle:

praeterea magnae legiones c**UM L**o**CA** cu**RS**u 323
↓
(SMULACRA)
↓
camporum complent belli **S**i**MULACRA** cientes 324

> Moreover, when great legions fill the spaces of the plains in their course, setting in motion semblances of war…

Whether this pun is really there or not, Lucretius makes it clear that the legions' filling of space takes on comically cosmic proportions. In a bombastic phrase, their flashing armor "raises itself to the heavens" (*ad caelum se tollit*, 325). If that were not enough, their armor is then reflected by the "whole earth round about" (*tota…circum…tellus*, 325-6), and the legions' stomps and shouts reach "to the stars of heaven" (*ad sidera mundi*, 328). As Bailey drily remarked "the expression is rather exaggerated here."[311] By Lucretius' time, such "epic" expressions must have been clichéd. While fresh in Homer, when Lucretius' re-iterates them, they come off as a parasitic parody of the excessive desires for glory in the culture of empire.[312] Given this, the "mock battles," i.e. the phrase *belli simulacra*, can now be understood in a third sense: not just mock battles, or *simulacra* flowing off the soldiers' bodies, but "mockeries of battle" (*belli* ***simulacra***) and by consequence a mockery of a culture that would value such things.

This chapter has taken a close look at an extended analogy from Book Two of *De rerum natura* that in many complex ways contrasts the values of two fundamental human cultures: Garden and empire. Lucretius brings these values to life for the reader through numerous effects of language. The analogy begins with the performative use of Latin words for pedagogical purposes: to recreate, through linguistic effects in the visible letters of the text, the invisible reality of the atoms.

The second half of the analogy shifts into language that uses the simulacra of words to restage not only the contrasting experiences of the simulacral worlds of Garden

[311] Bailey 1947, vol. II *ad loc*.
[312] For an overview of Lucretius' critique of fame in *De rerum natura*, see Nichols 1976 [1972], 138-144. As Joseph Farrell notes "in the final lines, the martial gleam of the weapons that, as in epic convention, was also said to rise to the heavens has been reduced to a vague sheen." See Farrell 2007, 85.

and empire, but at the same time uses language that connotes the contrasting values of either culture via description of the landscape. The cultural half of the analogy ends with a virtuoso performance on the word *simulacra*. Lucretius nearly collapses the simulacra produced by the legions of the culture of empire into the simulacra with which his text affects the reader. As the Garden uses technology in a homeotechnic way to work with the grain of the animals and ecology of its environment, empire goes to excess in an epic way with allotechnics. It is because empire does not hew closely enough to the limits of nature that it goes to excess and virtually overlays its natural environment with a ridiculous cacophony of simulacra.

Chapter Five: The Animal Revolt

> The awareness of humanity's supremacy on earth demands reflection about the manner and aims of its rule. As yet, the awareness is dim. The prevalence of unending competitive struggles between human groups themselves has induced a chaotic and self-defeating utilization of human power over non-human nature, an employment of power which is dictated entirely by the short-term and sectional aims of the competitive struggles between human groups, regardless of the conditions of non-human nature on which, in the long run, human survival depends.
>
> –Norbert Elias, *Involvement and Detachment* (1985)

Animals have long resisted civilization's runaway instrumentalization of their bodies. Humans have simply lacked the moral imagination to see it.

In his 2010 book, *Fear of the Animal Planet: The Hidden History of Animal Resistance*, Jason Hribal argues that so-called accidents in zoos and circuses, in which animals attack, harm, or kill their masters, are better understood as acts of resistance. As Hribal shows, there is a history of animals not simply reacting to abuse but actively resisting it—acting on their own reasons, memories of abuse, and sense of injustice. If it were not for the long history of human exceptionalism, Hribal argues, humans would long ago have had the moral imagination to see animal resistance as a call for humans to change their behavior towards nonhuman animals.

Hribal tells a story about an elephant named Janet at the Great American Circus, who escaped while still carrying a group of children riding on her back. Before she exited the circus tent, however, Janet stopped to let the children safely be removed. As soon as the children were on the ground, Janet immediately began hunting down her trainers in their living quarters at the edge of the circus complex. When she found the them, she:

> Snatched one of them and threw the man twenty feet into the air. She grasped the other and gave him a similarly high and mighty toss. Finished with those two, Janet began to ram her broad body against the trailer she had been locked in so many times. Next, according to an eyewitness, "the elephant grabbed the training stick [from a fallen handler] and was slinging it against the van. Then she threw it down and just took off running." That stick, otherwise known as an ankus or bull-hook, is the primary teaching tool for elephants. It is an instrument meant to inflict pain and submission. Terror is how elephants are ruled. And Janet hated both: the ankus and the ankus-wielder.[313]

A bull-hook is a large crowbar sharpened to a point and curled at the end that zoos and circuses use to "teach" elephants.[314] Having thrown her trainers to the ground, Janet repeatedly pounded the bull-hook against the van and then against a wall. From her story, Hribal concludes that:

> Every captive animal knows, through learned responses and direct experience, which behaviors are rewarded and which ones are punished. These animals understand that there will be consequences for incorrect actions. If they refuse to perform, if they attack a trainer, or if they escape their cage, they know that they will be beaten, have their food rations reduced, and be placed in solitary confinement. Captive animals know all of this and yet they still carry out such actions—often with a profound sense of determination. This is why these behaviors can be understood as a true form of resistance. These animals […] are rebelling with knowledge and purpose. They have a conception of freedom and a desire for it.[315]

For Hribal, rebel animals are not just "going wild," "acting on instinct," or "being animals." They rebel out of a sense of injustice, blocked freedom, and a determination to get revenge on their abusers. Only after safely letting the children off her back did Janet track down her "teachers." She knew the children were innocent, so she paused to let them free amidst her rage.[316] She also knew where to find her abusers. Such actions

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[313] Hribal 2010, 48-9.
[314] Lucretius also invokes the "violent education" of animals in his ironic use of the *doctoribus* ("teachers," "trainers," 5.1311) who *docuerunt* ("taught," 5.1303) wild animals to fight in war.
[315] Hribal 2010, 25-6.
[316] Pliny the Elder describes the gentleness of elephants towards those weaker than themselves (*Natural History* 8.7.23): "There is a story that the animal's natural gentleness (*clementia*) towards those less strong than itself is so great that when among a flock of sheep the elephant moves aside those who come in its way with its trunk (*manu*), so as not crush any unwittingly. Also, they never harm unless harassed, and this is

articulate her reasons for resistance. She could have rebelled at any time, and yet she waited until compelled to act, fully knowing that there would be consequences for her actions.

To see animals as resisting and not merely as reacting is to attribute motivations to them that, to the extent possible, take up the world from their perspective. To fully imagine animal resistance means seeing each trampling of a brutal handler, each mauling of a taunting visitor, and each bashing of a torture device as a crack in an old order that has long treated animals as instruments for competitive struggles between human groups.

In this chapter, I present a close reading of a similar scene from Lucretius' *De rerum natura*. In a passage that I call the "animal revolt," from Book Five of *De rerum natura* (5.1297-1349), Lucretius examines the destructive consequences for humans having violated the "animal contract" (detailed in Chapter Three of this dissertation). Lucretius describes a long series of abuses that culminates in humans turning animals into biological weapons. As they are led onto the battlefield, however, the animals revolt against their "armed **teachers** and savage masters" (***doctoribus*** *armatis saevisque*

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the case even though they always walk in herds, being the least inclined to solitary roaming (*solivagi*) of all [animals]. When surrounded by horsemen, they take the weak, tired, or wounded into the middle of their column, and proceed to the battle line by relays, as if by command (*imperio*) or strategy (*ratione*)." (*Ipsius animalis tanta narratur clementia contra minus validos ut in grege pecudum occurrentia manu dimoveat, ne quod obterat inprudens. nec nisi lacessiti nocent, idque cum gregatim semper ambulent, minime ex omnibus solivagi. equitatu circumventi infirmos aut fessos vulneratosve in medium agmen recipiunt, aciei velut imperio aut ratione per vices subeunt.*). In *Elephants on the Edge: What Animals Teach us about Humanity*, G. A. Bradshaw reports the following story from Dame Daphne Sheldrick, a native fourth-generation Kenyan born in 1934 and founder of the David Sheldrick Wildlife Trust located in Nairobi National Park: "During the 50 plus years that I have been intimately involved with Elephants in Africa, and the rearing of over 80 orphans, I am astounded about how forgiving they are, bearing in mind that they are able to recollect clearly that their mother, and sometimes entire family, have perished at the hands of humans. Our Elephants arrive wanting to kill humans but eventually protect their human family out in the bush, confronting a buffalo, or shielding their surrogate human family from wild, less friendly peers. That is why I say that they are amazingly forgiving, because there can be nothing worse in life for an Elephant than witnessing the murder of those they love. And since Elephants never forget (which is a fact), they demonstrate a level of forgiveness that a human would in all likelihood have difficulty in achieving." See Bradshaw 2009, 115.

magistris, 1311), and the animal contract breaks down completely. Cyril Bailey described the animal revolt as "perhaps the most astonishing paragraph in the poem."[317] Nonetheless, it has received little attention from classical scholarship. Most scholars have concerned themselves with the question of whether the animal revolt is evidence that Lucretius had gone insane.[318] To take the animal revolt in Lucretius seriously as a history of animal resistance is, therefore, to enter new and important scholarly territory.

In a striking similarity to Hribal, Lucretius says that human trainers "taught" or "trained" the animals "to suffer the wounds of war" (*belli* ***docuerunt*** *volnera…/ sufferre*, 5.1304). No "teaching," however, could be more at odds with the Epicurean principle of living according to nature (*secundum naturam vivere*). It is contrary to the nature of nonhuman animals, in Lucretius' view, to fight in wars. Thus, more than two thousand years before the animal liberation movement and activists like Hribal, Lucretius was already recounting the history of animal resistance to critique a civilization that he saw as so blinded by the artificial lights of instrumental reason that it would train wild animals for security.

The Rise of Empire

This chapter focuses on Lucretius' story of the tragic rise and fall of empire. Central to this account is empire's excessive use of instrumental reason, turning companion animals

[317] Bailey 2001 [1947], *ad loc*. Considering the poetic virtuosity of the passage, there is relatively little scholarship about it. See Shelton 1996, 48-64; Saylor 1972, 306-16; Segal 1986; de Grummond 1981, 50-56; Schrijvers 1970, 302-5.
[318] The animal revolt has been considered the product of "an intelligence fevered, perverted and cancerous." And Lucretius has been accused of being subject to "hallucination" and even "mental derangement" in writing this passage. See Segal 1986, notes 2-6.

and wild animal into technologies of war. Lucretius begins the story in prehistory. There, Lucretius distinguishes between the incipient cultures of Garden and empire by their use of the natural environment. The culture of empire sees its environment as a resource for technologies of violence, resembling what Sloterdijk calls allotechnics.[319] The Garden, by contrast, sees the natural world in terms of possibilities for increasing the life and health of the entire community, including animals, resembling what Sloterdijk calls homeotechnics.

In Michel Serres' phrase, "From the same piece of iron we can make a sword or a plow."[320] Both the culture of empire and the culture of the Epicurean Garden use the natural environment and animals instrumentally. Empire, however, goes to excess with instrumentalization, technifying everything in sight with no sense of limits. The Garden, by contrast, presents humans and animals as engaging in instrumental relationships that are mutually beneficial to each species. Thus, empire differs from the Garden in that empire is both excessive in its instrumental logic, and also puts that logic to violent ends. Garden and empire differ both in their relationships to the limits of nature, and in the values that guide the ends to which they put technology.

As Lucretius' culture story proceeds, the Garden drops out of his account. Lucretius then devotes himself solely to the tragedy of empire. As new technologies become visible in the landscape, the culture of empire seizes them, first for self-defense,

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[319] See Chapter Four, "Garden and Empire."

[320] Serres continues: "So the condition is indeed the determinant. And if knowledge works for death and destruction, it is because Mars or the military, the commander in Bacon, or the Cartesian master and possessor, are there keeping watch over the beginnings. This is also true outside science: there are few virginal spaces. Paths have already been cleared, and classifications are in place….The condition of Mars or the condition of Venus: this is what determines the world-map of knowledge." See Serres 2000 [1977], 116-7.

then for large-scale warfare. Lucretius focuses on empire's excessive instrumentalization of animals, through both the disciplinarity of their bodies and physical augmentation. Lucretius' narrative of the increasing channeling of animal life to the ends of war and empire has an atomic structure to it. For Lucretius, time is an *eventum* or "outcome" of the atoms.[321] This means that time in Lucretius is dependent on the atomic structure of the events themselves.[322] For Lucretius, time is more like matter or space. Lucretius reminds us of this throughout his narrative of the rise and fall of empire by repeatedly using the language of atoms to describe the events of history. The language of atoms signals that events really are rooted in the order and flux of atomic reality. History, for Lucretius, does not have a robust ontology apart from the accumulation, turbulence, and flux of atomic reality.

Lucretius also describes the abuse and adaptation of the animals' bodies in terms of atoms. And as it proceeds, the temporality of Lucretius' narrative begins to resembles an accumulation of atoms, as the linear time of empire becomes an accumulation of atomic matter onto the bodies of nonhuman animals. As one thing after another is added to, or recombined in, the animals' bodies, the rhetorical structure of the narrative becomes one of atomic accumulation—the pile-up of abuse and and accumulation of time being dependent on the same physical plane, the motion of atoms. But suddenly, into this linear narrative of empire and atomic pile-up of abused bodies breaks the animal revolt.

As the pressure of the narrative builds along with augmentation of the animals' bodies, the linear time of empire, itself dependent on the atomic structure of the events, is

[321] *DRN* 1.459-82.
[322] Warren 2006.

ruptured by the chaotic, primal temporality of the bodies of rebel animals, whose revolt returns civilization to the state of nature. In describing the rise of empire as an atomic build-up whose narrative structure resembles linear time, Lucretius is suggesting that the hegemonic time of empire—its increasing capture of the alternative time-scales of animals and the natural world, the rhythms and speeds of nonhuman lives—could be broken by the temporality of the rebel animals, whose bodies Lucretius describes as atoms, and their revolt as resembling both Lucretius' notion of the swerve and Deleuze and Guattari's notion of the "line of flight." In both philosophical systems, temporality is based on the movement and turbulence of matter. The line of flight in Deleuze and Guattari has long been used to as a material way to think about politics, while the swerve in Lucretius' has rarely been see as political.[323] To bring out the political possibilities of the swerve in Lucretius, and to understand the material temporality of the animal revolt, it is helpful first to grasp how the line of flight works in Deleuze and Guattari.

Deleuze and Guattari use the concept of the line of flight to discuss change or creativity in the arts, literature, music, and politics in the most general sense. It is one of their most popular concepts, and is formulated somewhat abstractly to make it portable across multiple disciplines and domains of thought.[324] A line of flight, or "escape" (*ligne de fuite*), is a movement of the deterritorialization of an assemblage. In other words, a line of flight deterritorializes, or questions, the boundaries and organization of a

[323] It is usually discussed in terms of free-will or voluntariness. See Johnson 2013.
[324] In a conversation with Foucault, Deleuze characterized theory as concept creation, in which the concept, or "image of thought," as he calls it, is articulated and launched into the world in a way that will make it open to multiple disciplines and domains of thought: "A theory is exactly like a box of tools. It has nothing to do with the signifier. It must be useful...As soon as a theory is enmeshed in a particular point, we realize that it will never possess the slightest practical importance unless it can errupt in a totally different area." See Foucault 1996 [1989], 76.

"territory." A territory is any kind of determination—any category, concept, identity, or aspect of reality bounded or captured by language or culture. A line of flight, therefore, questions, or seeks to transform, territories, and in doing so reveals their structures. It is a way of looking at social change from a materialist perspective.

A line of flight specifically deterritorializes an "assemblage." An assemblage is a collection of parts that work together in aggregate, where each part remains autonomous and unsubordinated to the whole, like co-operating but independent parts of a machine. In an assemblage, the whole is neither greater, more important, metaphysically prior or hierarchically superior to the parts. This is important because Deleuze and Guattari use the concept of the assemblage to think about social dynamics in a way that avoids hierarchy. It is way of analyzing society that assumes the equality of all the members as parts of the whole.

And yet, any assemblage—however determined or rigid-seeming—contains escapes or "flights" that, in conditions of disequilibrium, break out or explode from within to transform the assemblage—like a mutiny of atoms. In their most famous image of the line of flight, Deleuze and Guattari compare it to drilling a hole in a pipe to cause a runoff.

> Lines of flight, for their part, never consist in running away from the world but rather in causing runoffs, as when you drill a hole in a pipe; there is no social system that does not leak from all directions, even if it makes its segments increasingly rigid in order to seal the lines of flight. There is nothing imaginary, nothing symbolic, about a line of flight. There is nothing more active than a line of flight, among animals or humans.[325]

[325] Deleuze and Guattari 2011 [1987], 204. See also Deleuze and Guattari (2011 [1987]) 503-4 and 2007 [1977], 135. It is worth noting that the image Deleuze and Guattari present for the line of flight could suggest that the drilling happens from the outside. I do not think they mean this. The line of flight, as opposed to the "war machine," is a movement of deterritorialization that breaks out from inside.

No matter how final our ways of thinking about reality may seem, reality, Deleuze and Guattari believe, will always surprise us. An assemblage will always contains lines of flight within it, waiting to break out, given the right conditions.

As the material temporality of empire accumulates, the trajectory of empire in Lucretius comes to resemble what Deleuze and Guattari call a "molar line." A molar line is an increasingly rigid segmentation, or binary, that in Lucretius' case increasingly divides civilization into animal instruments and human masters. The concept of the molar line has particular resonance for Lucretius' story of the rise of empire, since Deleuze and Guattari use it to describe how large institutions and the State slowly freeze out alternative ways of living.[326] Animals, in Lucretius' story, becomes trapped by the molar line of empire and technology as the linear temporality of empire makes it increasingly hardened towards nonhuman life.

Lucretius begins the story of empire with prehistoric humans already under the grip of Mars, as they begin to see weapons in their environment, first in the articulations of their own bodies, then in nearby animals and things.[327]

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[326] Cf. *A Thousand Plateaus*, 204: "Line of molar or rigid segmentarity, line of molecular or supple segmentation, line of flight—many problems arise. The first concerns the *particular character of each line*. It might be thought that rigid segments are socially determined, predetermined, overcoded by the State."

[327] Both Jo-Ann Shelton (1996) and Charles Saylor (1972) have claimed that Lucretius was ambivalent towards developments in the arts and technology. As Lucretius tells the story, human incisions into the natural environment in the run-up to civilization are inextricable from the increasingly destructive powers of technology. But this is not as it should be, on the Epicurean account. The wealthy Epicurean Diogenes of Oinoanda, on his inscription in the mountains of south-west Turkey, claimed that the arts and technology originally arose from *need* in prehistory, as the inscription says: "For need and experience gave birth to all [the arts/technologies] with the help of time." (πάσας [τὰς τέχνας] γὰρ ἐγέννησαν αἱ χρεῖαι καὶ περιπτώσεις μετὰ τοῦ χρόνου.). The anonymous commentator on the work of Dionysius Thrax, collected in Usener's edition of Epicurus, claimed that the Epicureans believed the arts and technology to be processes of inquiry that bring into actuality what is beneficial for life: "The Epicureans define *techne* thus: *techne* is inquiry that brings into actuality what is beneficial for life. By 'brings into actuality' they mean producing." (οἱ μὲν Ἐπικύρειοι οὕτως ὁρίζονται τὴν τέχνην· τέχνην ἐστὶ μέθοδος ἐνεργοῦσα τῷ βίῳ τὸ συμφέρον. 'ἐνεροῦσα' οἷον ἐργαζομένη. = Usener 227b). Lucretius' point in his account of the rise of technology is, to use Thomas Cole's words, "to emphasize the role which chance

ARMA antiqua manus ungues dentesque fuerunt	5.1283
et lapides et item silvarum f**RA**g**MI**n**A RAMI**,	1284
et flamma atque ignes, postquam sunt cognita primum.	1285
posterius ferri vis est aerisque reperta.	1286

> The ancient weapons (*arma antiqua*) were hands, nails, and teeth (*dentes*), and stones and also branches broken from forest trees (*lapides et item silvarum fragmina rami*), and flames and fire, as soon as they were known [as such] (*postquam sunt cognita primum*). Later was discovered the power of iron and bronze.

Lucretius shows humans to have always been technological, becoming what their environment offered to shape themselves with. Here, in the case of the *arma antiqua*, or "ancient weapons"—i.e. hands, nails, teeth (*manus ungues dentes*, 1283) —protohumans are not yet different from other animals. Yet they are already technological, because as Lucretius says elsewhere humans have always had war, even before civilization, the "war of the forest" (*bellum silvestre*).[328] Civilization, however, only make this *bellum silvestre* worse, not only by increasing its scale, but also by waging it with a deliberativeness that gives it a special horror.[329] In the passage above, Lucretius shows the *genus humanum* as already technological, since they see the articulations of their bodies as weapons. Lucretius shows them doing this not instinctually but self-reflectively, i.e. making a

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and external suggestion play in the development of technology; and the *sapientes* no less than the benefactor-god Hephaestus are out of place in such a process." See Cole 1990 [1967], 18-19, 39.

[328] Cf. *DRN* 5.1243-5: "When fire in the great mountains had burnt up huge forests with its heat, whether by some lightning-bolt sent from the sky, or because humans waging **war in the forests** among themselves had brought fire on their enemies to make them afraid." (*ignis ubi ingentis silvas ardore cremarat*/*montibus in magnis, seu caeli fulmine misso,*/*sive quod inter se **bellum silvestre** gerentes*/*hostibus intulerant ignem formidinis ergo*).

[329] Almost all commentators note the fact that when Lucretius compares violence in prehistory to war in civilization he criticizes civilization for magnifying the scale of violence. What they have not noticed is that Lucretius also criticizes the *deliberateness* and *organization* of such violence—facts about state violence that give it a special horror. Cf. the organizational and deliberational aspects of Lucretius' famous statement about violence in civilization, *DRN* 5.999-1001: *at non multa virum **sub signis** milia **ducta**/ **una dies** dabat exitio, nec turbida ponti/ aequora lidebant navies ad saxa virosque* "But **one day** did not **lead** to destruction many thousands of men **under the banners of battle**, nor did the turbulent waters of the sea dash ships and men on the rocks."

mental effort to cognize these body parts as weapons. Lucretius tells us this when he says that "The ancient weapons were hands, nails, and teeth…**as soon as they were known** [as such]" (*arma antiqua manus ungues dentesque fuerunt…**postquam sunt cognita primum***, 1285).[330] Lucretius never presents the human as non-technological in *De rerum natura*, but here self-technification is already part of what it means to be male, since Lucretius describes *techne* as mediating not only the natural environment but as an apparatus to divide genders.[331]

Technological ages pass quickly in the first two lines of the passage above. First is the age of the body, in which Lucretius shows humans relying directly on their hands, nails, and teeth. Then, humans distance themselves from the body by the discovery of projectiles, liberating themselves from dependency on muscle-power alone.[332] There is a

[330] *cognita* means not simply "known" or "recognized" but "known as such," since in a similar passage in Book Four (4.843-52, esp. 851-2), Lucretius argues that unlike human body parts (*membra*) and the senses (*sensus*), which existed before a use for them was discovered, weapons and other instruments were discovered with use already in the mind: "These things, therefore, which were **discovered** from experience and life, may be believed to have been **known as such for the sake of use**" (*haec igitur possunt **utendi cognita causa**/ crederier, ex usu quae sunt omnia vitaque **reperta***.) That is, they are known (*cognita*) *as instruments* because humans already envisioned for them a use in their minds.

[331] In *Technics and Human Development: The Myth of the Machine, Volume One*, Lewis Mumford called humanity's ongoing attempt to create itself "the first mission of human culture": "Man had to learn to be human, just as he had to learn to talk; and the jump from animalhood to humanhood, definite but gradual and undatable, indeed still unfinished, came through man's endless efforts to shape and re-shape himself. For until he could establish an identifiable personality he was no longer an animal, but not yet a man. This self-transformation was, I take it, the first mission of human culture. Every cultural advance is in effect, if not in intention, an effort to remake the human personality. At the point where nature left off molding man, he undertook with all the audacity of ignorance to refashion himself." See Mumford 1967, 46.

[332] This is similar to what Paul Alsberg, and Hans Blumenberg after him, have called the "deactivation [literally 'shutting down'] of the body," the *Körperausschaltung*. Alsberg is quoted in Sloterdijk (2017, 113-4) as saying: "With good reason, the event that is described as a deactivation of the body [*Körperausschaltung*] was characterized as *'breaking out of the prison' of an environmental relation determined merely biologically*. This breaking out is achieved by *the space-creating effect of certain pre-human actions: deactivation of the body depends on a certain activation of the hand* [*Handeinschaltung*]. If there were thus something like a primal scene of the clearing from an evolutionary perspective, then without a doubt it would consist in a sequence of activities [*Handlungssequenz*] in the course of which the pre-human being—supposedly an agile east African ape on the savannah with generalist features, more scavenger than hunter, far advanced in the tendency toward erect bipedalism, endowed with a robust foot for running on the ground and a paw that for the first time approximates to the human hand—grasps a stone, and does so from the beginning in accordance with aspects of 'handiness' [*Handlichkeit*], *as though the interesting stones were formed a priori* with two sides: with a grasping side for the paw and a contact

logic to what Lucretius is saying here about technology, what Thomas Cole called *maiores cogitationes*, the idea that "as technology becomes more complicated, the range and number of situations out of which suggestions for new inventions arise is vastly increased."[333] In the passage above, as early humans recognize of the violent potential of their bodies, they begin to extend that vision to nearby stones and branches, to begin to see their potential as weapons. Lucretius sums this up in his closing statement to Book Five: "They saw **one thing out of another** grow clear in their minds" (***alid ex alio*** *clarescere corde videbant*, 5.1456).[334] A major theme of Lucretius' story in Book Five is, therefore, how the technification of the immediate environment leads to greater possibilities for technification of the landscape becoming visible to the human mind. The meaning of older technologies also become clearer with each new technological mediation of the environment.[335]

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side for the object so as to make use of the thing in its paw, *which forces phenomena in the environment to yield, either by throwing into the distance or striking nearby. By means of this first work of the paws the ontological niche of the human being opens up in nature* [my italics]." Stones and branches help solve the problem at *DRN* 5.988-998 where early humans are said to be regularly eaten by wild beasts. Presumably, once one's hands are cognized as weapons, as Lucretius says they are here, this opens them up to further technological development, in the use of stones and branches as projectiles. Cp. Diodorus Siculus' notion (1.8.9) that humans owe their technological achievements not just to to their wits (ψυχῆς ἀγχίνοια) or to speech/reason (λόγος) but also to the fact that they have hands (χεῖρες). See Cole 1990, 21 and 40.

[333] Cole 1990, 40. Compare the comments of anthropologist Edward Hall: "Today man has developed extensions for practically everything he used to do with his body. The evolution of weapons begins with teeth and the fist and ends with the atom bomb. Clothes and houses are extensions of man's biological temperature-control mechanisms. Furniture takes the place of squatting and sitting on the ground. Power tools, glasses, TV, telephones, and books which carry the voice across both time and space are examples of material extensions. Money is a way of extending and storing labor. Our transportation networks now do what we used to do with our feet and backs. In fact, all man-made material things can be treated as extensions of what man once did with his body or some specialized part of his body." See Hall 1990 [1959], 55."

[334] Cole notes an intertext with Manilius, 1.89-90: *tum belli pacisque commenta vetustas;/ semper enim ex aliis alias* ***pro****seminat usus.*

[335] Bruno Latour thinks that later inventions or mediations of an original invention add knowledge, tell us more, about the conditions in which the original invention arose, so long as those mediations remain in the same "key." See Latour 2010, 599-608, esp. p. 600-601.

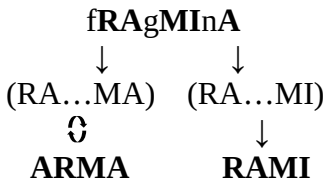
Lucretius is not only focused on the "growth of ideas" in his account of the rise of empire but also on the drift of instrumental reason—and his insights have potentially frightening implications.[336] Discoveries carried out under one mentality, here the mentality of Mars, expand that society's powers to make more discoveries along that line, as if guided by an invisible hand originating in prehistory. This is not exactly technological determinism, since the line of development is not locked-in from the start, but more like a "molar line" that slowly calcifies or occludes that society's ability to see the natural world otherwise. Against this drift of instrumental reason is Lucretius' Epicurean reasoning about the long-term goals and responsibilities that come with humanity's windfall supremacy over their environment.[337]

For Lucretius, technological reason, while not bad in itself, is not philosophical if it does not seek the pleasures of living in accordance with nature (homeotechnics) rather than against it (allotechnics).[338] Lucretius' culture story tracks the rise of empire as a molar line with the word *arma*, which he repeats at key moments of moral judgement in the story. The indexing of *arma* in Lucretius' culture story begins in the passage above when humans begin to see *arma* in the prehistoric landscape.

After telling us that the first weapons were "hands, nails, teeth…and stones," Lucretius then recreates how the "branches broken from forest tress" (*silvarum fragmina rami*, 1284) became visible to humans as weapons. He does this by having both *rami*,

[336] Similar to Cole's notion of *maiores cogitationes*, Elizabeth Asmis notes that the eventual experimentation with animals as war technologies, begun with similar experiments on natural objects, develops along with humanity's empirically-based "growth of ideas." See Asmis 1984, 58.
[337] For the kind of reason presented in Lucretius' description of the development of technology as reason of a "lower-order kind" than true, or philosophical, reason, see Fowler 2011 [2007], 212.
[338] Sloterdijk 2017. See Chapter Four, "Garden and Empire."

"branches," and *arma*, "arms" become visible in the text as they emerge from the "fragments" of the word *fragmina*.



fragmina stages this discovery in the landscape of the text. It refers to the broken branches, but very clearly visible among its elements/letters are the branches, *rami*, that will become the arms, *arma*. By affecting the reader in this way, f**RA**g**MI**n**A** reperforms the mindset with which these early humans saw those material fragments in the landscape as weapons (*arma*).[339] Thus, through the pun **ARMA**…f**RA**g**MI**n**A RAMI**, Lucretius lets us see the world through the eyes of a culture already under the sway of Mars. Lucretius presents the landscape in the passage above not as a simple origin of technology, but as a kind of originary complex within which certain technologies become visible or not depending one's way of seeing.[340]

The discovery of weapons in the landscape initiates the molar line of technology that will split the cultures of empire and Garden, and will end with the animal revolt. E. J. Kenney noted that *arma* later re-enters the narrative just when humans turn their hand to adapting wild animals into war machines. By indexing *arma* to the rise of empire, Lucretius shows how from prehistory to the animal revolt the war culture structures its

[339] It is worth asking, at what point is the *Kulturentstehung* in Lucretius not so much about individual concepts emerging from the interaction of humans with nature ("the growth of ideas"), as about a whole system of concepts, i.e. *ideology*, of a war-society, in which weapons appear as if they had always been there, articulated in nature, because of the society's ideological way of seeing its environment? Cf. Althusser 2015 [1965], 22-6.

[340] *arma* are an important symbol for Lucretius of the non-Epicurean life. See *DRN* 2.49, 2.621, 2.629ff, and 5.50, and Gale 2000, 255 n. 82.

identity through what in prehistory was a natural desire for security from violent humans and other animals, but that as time passes becomes so excessive that harming the enemy becomes the only goal, even at the cost of destroying oneself.[341] As Lucretius says at the end of the animal revolt: "They did this not so much in the hope of winning as to give their enemies something to mourn, and to perish themselves, when they mistrusted their numbers and were without **arms**."[342] The emergence of *arma* in prehistory sets in motion a molar line that makes the war culture's self-destruction, as time goes on, increasingly certain.[343] The scale of violence only increases, while the *saevitia* of the prehistoric *arma* remain.[344]

After the initial discovery of weapons, Garden and empire bifurcate over different uses of metals. The Garden uses metals to till the soil; empire, for war and raiding.

aere solum terrae tractabant, **aereque belli** 5.1289

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[341] Hermarchus describes a period of social amnesia after the initial social contract, i.e. after homicidal humans and, for Hermarchus (but not Lucretius), all animals were expelled from the community: a period of "forgetfulness of the past," in which the commitment to mutual aid and security brought about by mutual aid, deteriorates. For Hermarchus, the invention of law solves this slackening of mutual aid, by sedimenting its spirit in writing.

[342] *Sed facere id non tam vincendi spe voluerunt,/ quam dare quod gemerent hostes, ipsique perire,/ qui numero diffidebant **armis**que vacabant* (*DRN* 1347-9).

[343] Roland Barthes would describe *arma* as a "function," i.e. a signifier that accumulates over the course of a narrative to produce a larger meaning. Its being linked to a network of signs, distributed throughout the story, produces the impression of increasing complexity and depth to *arma* through the strategic repetition of the word in question in key moments. In Barthes' definition: "The soul of a function is, so to speak, its seed, what allows it to sow the narrative with an element which will ripen later, on the same level, or elsewhere, on another level." See Barthes 1994 [1985], 104.

[344] Segal 1986, 3. Lucretius' self-destructive narrative about the progress of *arma* resembles what Ronald Wright has called a "progress trap" (Wright 2004, 7-8). Wright defines a progress trap as follows: "So far I have spoken of such problems as if they were purely modern, arising from industrial technologies. But while progress strong enough to destroy the world is indeed modern, the devil of scale who transforms benefits into traps has plagued us since the Stone Age. This devil lives within us and gets out whenever we steal a march on nature, tipping the balance between cleverness and recklessness, between need and greed. Paleolithic hunters who learnt how to kill two mammoths instead of one had made progress. Those who learnt how to kill 200—by driving a whole herd over a cliff—had made too much. They lived high for a while, then starved. Many of the great ruins that grace the deserts and jungles of the earth are monuments to progress traps, the headstones of civilizations which fell victim to their own success. In the fates of such societies—once mighty, complex, and brilliant—lie the most instructive lessons for our own. Their ruins are shipwrecks that mark the shoals of progress. Or—to use a more modern analogy—they are fallen airliners whose black boxes can tell us what went wrong."

miscebant fluctus et vulnera vasta **serebant** 1290
et pecua atque agros adimebant; nam facile ollis 1291
omnia cedebant **ARMA**tis nuda et in**ERMA**. 1292

> With bronze (*aere*) they tilled the soil of the earth, with bronze (*aere*) they mixed the waves of war and sowed (*serebant*) desolating wounds and seized cattle and fields; for everything naked and unarmed (*inerma*) easily yielded to those who were armed (*ollis armatis*).

The split between Garden and empire happens in the first line, which begins and ends with *aere* ("with bronze"). The shape of the line separates the two cultures based on their use of the metals: "With bronze **the soil**…with bronze [waves] **of war**" (*aere **solum**…aereque **belli**/…fluctus*, 1289). This distinction also enters the soundscape of the passage. There is the "tink tink tink" of the Garden tilling the soil in *aere solum **T**errae **T**rac**T**aban**T*** ("with bronze they tilled the soil of the earth"), while the war culture "mixed the **waves** of war" (*belli*/*miscebant **fluctus***).[345] After mentioning the "waves of war" (*belli/…fluctus*, 1289), Lucretius sounds them out with the wave-like rhythm of the "v" sounds in *vulnera vasta serebant*.[346] Through these contrasts in sound and structure, Lucretius associates the Garden with the regularity of hard work against the earth, and the war culture with the turbulent flux of war as if an ocean.

Lucretius heightens this contrast by having the first line begin and end with the contrasting pairs *aere **solum***/*aere **belli***. And he structures the second line as a chiasmus of mixing and sowing: (A) ***miscebant*** (B) *fluctus et* (B) *vulnera vasta* (A) ***serebant***.[347]

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[345] Munro notes that *miscebant fluctus* suggests *miscere proelia*, and points to the same metaphor at *DRN* 5.1435: ***belli magnos** commovit funditus **aestus***. See Munro 1864, 369. Just after the animal revolt, at *DRN* 5.1350-78, Lucretius produces an extended passage describing the creative—rather than destructive—uses of metals.

[346] Paul Friedländer makes a similar point about Lucretius' use of "v" sounds: that they sometimes give a "swinging movement suited to winds and waves." See Friedländer 2011, 364-5.

[347] Leonard and Smith point out the chiamus of *miscebant* and *serebant*. See Leonard and Smith 1968 [1942], *ad loc*.

The point of the binary structures in the rhetoric is the emphasize the cultures of the Garden and empire going separate ways. The incipient culture of empire then uses metals to raid the Garden's cattle and fields (*pecua atque agros adimebant,* 1291). And they also raid, or appropriate, the Garden's language, when as Lucretius says "they **sowed** desolating wounds" *vulnera vasta* ***serebant****,* 1291). While oxymorons like "sowing destruction" are common enough in Lucretius, the context gives *serebant* a particular irony, since it is not just "wounds" (*vulnera*) that they sow but "desolating," "waste-making" wounds (*vulnera* ***vasta***).[348] This idiom contrasts the necropolitics of empire with the vitalism of the Garden.

Lucretius ends the passage with a pun that marks the rift between Garden and empire, again indexed to the word *arma*: "for everything naked and **unarmed** easily yielded to those who were **armed**." (*nam facile ollis*/*omnia cedebant* ***ARMA****tis nuda et in****ERMA***., 1291-2). The split between Garden and empire, therefore, ends with empire gaining a competitive advantage over the Garden by using arms to raid the Garden's animals and fields.[349]

The Invisible Hand of Mars

Empire then begins appropriating animals for war, beginning with the domestication of wild horses.

Et prius est **armatum** in equi **conscendere** costas 5.1297

[348] Munro notes that *vasta* may signify not only "large/vast" but also "ugly/misshapen." See Munro 1846, *ad loc.*

[349] Bailey notes that cattle and fields should be understood as forms of wealth among early humans. See Bailey 1947, vol. 3, *ad loc.*; Nussbaum 1994, 263-4; Schrijvers 1999, 99.

et **moderarier** hunc frenis dextraque vigere 1298
quam biiugo curru belli **temptare** pericla. 1299
et biiugos prius est quam bis coniugere binos 1300
quam falciferos **armatum escendere** currus. 1301

> And mounting on horseback armed (*in equi conscendere*), and guiding (*moderarier*) the horse with reins and weilding [a weapon] with the right hand, came before testing (*temptare*) the dangers of war in a double-yoked chariot. And double-yoked [chariots] came before doubly yoking together doubles [of horses], and mounting armed a scythed chariot (*falciferos armatum escendere currus*).

The molar line of technology expands to encompass animals. Lucretius begins with the temporal marker *prius* ("before"/"earlier," 1297) that sets up a clear line of accumulating temporality that proceeds apace with the build-up of the arms race by the culture of empire. Lucretius marks each stage of animal instrumentalization with a similar time-stamp: *prius* (1300), *inde* ("next," 1293, 1302), *alid ex alio* ("one thing after another," 1305), *inque dies* ("day by day," 1307), *etiam* ("also," 1308). This increasingly rigid linear temporality will only cease when the temporality of the rebel animals—animal time—breaks into the linear temporality of empire, and Lucretius' narrative switches from language that connotes accumulating atoms to the language that connotes a chaotic spatial plane of violent turbulence on the battlefield.

In the passage above, the focus is on the tension between instrumentalization and the limits of nature. Lucretius enacts in the text the increase in the instrumentalization of horses with a rhetoric of calculation. For instance, *arma* is indexed again in a ring composition here that begins and ends the passage by describing armed men mounting horses or chariots. The passage begins with "**mounting armed** on horseback" (***armatum*** *in equi* ***conscendere*** *costas*, 1297) and ends with the men "**mounting armed** a scythed chariot" (*falciferos* ***armatum escendere*** *currus*, 1301). Between these rhetorical

bookends an arborescent line of development emerges in which one yoking of horses leads to another, exponentially doubled yoking. That is, first there is the simple mounting of horses. Then, humans "moderate" horses (i.e. guide or restrain them) with reins (***moderarier***…*frenis*, 1298). After that, humans double-yoke horses, i.e. attach them to two-horsed chariots (***bi****iugo curru*, 1299). Then, Lucretius says "doubly yoking-together double [horses]" (***bis*** *coniugere* ***bi****nos*) emerged, i.e. four-horsed chariots. Finally, armed men mount "scythed chariots" (*falciferos…currus*, 1301). The accumulation of physical augmentations to the horses' bodies begins with humans riding them, then guiding them, then yoking them to larger weapons, and ending with attaching "scythes" to the horses.

"Scythes" is itself a doubled word, insofar as *falciferos* is compounded of *falx* ("scythe") and *ferus* ("bearing" or "carrying"), and *ferus* has the double connotation of *ferrum* ("iron") and *ferus* ("wild"/"uncivilized"). Attaching scythes to chariots refers back to the theme of metals that earlier distinguished Garden from empire, where the Garden used metals to till the soil while empire used metals and "sowed wounds of war" (*vulnera vasta serebant*, 1290). The first half of the compound word *falciferos*, evokes a scythe (*falx*), which is not primarily a weapon but an instrument of agriculture, here perverted into a weapon by the war culture, just as they have perverted other natural things.[350] Such compound words seem to hint at the essence of the structure of the things they show, and here at the history of their use.[351] Lucretius' obsessive rhetoric of numbers describes the arms race, but it is also deeply ironic, since while it reflects a

[350] Gale 2007 [1994], 174 n. 59.
[351] There is something Empedoclean about the linguistic compound that may hint at the increasing influence of Mars (or in Empedoclean terms Νεῖκος). For the "Empedoclean fingerprint," see Sedley 2003. For Empedoclean compound words as a deliberate attempt to capture the essence of things, see Gemelli Marciano 1990, 89-90.

calculation about means, but is obviously irrational about ends. It is the kind of calculation opposed to Epicurean rational hedonism and the rational Epicurean calculation of pleasures, since the calculation of empire aims at harming the enemy, not at pleasure. While humans attempt to "control" or "moderate" (*moderarier*, 1298) the horses, empire's "moderating" is also ironic, since they have already gone to excess with instrumental reason.

Empire is so obsessed with harming the enemy that they seem to desire their own destruction. In Lucretius' phrase, they wanted to "**to test**/**experiment** with the dangers of war" (*belli* ***temptare*** *pericla*, 1299). It is worth noting that Lucretius does not say that they "tested" or "experimented" with *technology* but with the *dangers* (*pericla*) of war. That is, the direct object of *temptare* ("to test," "to experiment with") is *belli*…***pericla***. This indirection in Lucretius' language, that is, the use of the rhetorical figure of *hupophora*, suggests a desire for self-destruction. While Lucretius is primarily referring to testing out new technologies in war, including animals, the narrative voice seems to be more knowing than the people it describes who, by experimenting with animals in war, seem to be so blinded by the ideology of Mars that they only partly see that they are headed to destruction.

In a new, exponential accumulation, the technological quest of empire expands to encompass elephants. Lucretius presents the elephants from the perspective of the Romans' first historical encounter with them as natural monsters, made even stranger by the fresh technological augmentation of their bodies.

inde boves lucas **turrito corpore**, taetras,	5.1302
anguimanus, belli **docuerunt** volnera Poeni	1303
sufferre et magnas Martis **turbare** catervas.	1304

sic alid ex alio peperit discordia tristis, 1305
horribile humanis quod gentibus esset in armis, 1306
inque dies belli **terroribus addidit augmen**. 1307

> Next the Lucanian oxen, with turreted bodies (*turrito corpore*), hideous creatures, snake-handed, were taught (*docuerunt*) by the Carthaginians to suffer the wouds of war, and to confound (*turbare*) the great bands of Mars. Thus, sad discord bred one thing after another (*sic alid ex alio peperit discordia tristis*) to be horrible for nations in arms, and day by day added an augment (*addidit augmen*) to the terrors war.

Lucretius begins with a feeling of astonishment tinged with revulsion that humans would make natural monsters (elephants) even more monstrous by augmenting their bodies. Lucretius' revulsion arises both from the natural incongruity of elephants, their "snake-hands" (*anguimanus*, 1303), and from the moral disorder of their human manipulators, who turn the elephants into "turreted bodies" (*turrito corpore*, 1302).[352] The passive participle *turrito* frames the technification of elephants as a direct physical augmentation of their bodies, i.e. a false human addition to their natures.[353] There is an ambiguity, however, when Lucretius calls the elephants "hideous creatures!" (*taetras*, 1302), as to whether Lucretius' outburst comments more on naturalcultural hybridity of the elephants' turreted bodies or on the natural incongruity of their snaky hands.[354] This ambiguous atmosphere of the passage is capped later when Lucretius concludes by commenting on the moral disorder, or *discordia*, at the heart of empire. Lucretius sums up technological developments of empire to this point by concluding: "Thus **sad discord** gave birth to one

[352] *turrito corpore* refers to the Mahouts atop the elephants' back, but Lucretius point is about what humans did to the elephants' bodies, not merely pointing out a cultural curiosity. Gale notes that *anguimanus* is apparently a Lucretian coinage (Gale 2009, *ad loc*.)
[353] For analysis of the contemporary cultural assumptions that make the commodification of nonhuman animals possible, see Shukin 2009.
[354] For *manus* used to describe the elephant's trunk in ancient biological texts, see Schrijvers 1970, 294 n. 7.

thing after another" (*sic alid ex alio peperit* ***discordia tristis***, 1305). This *discordia* expands on Mars mentioned in the previous line, as if it were a psychological aspect of the god infused into the culture of empire. What is clear, however, is that Lucretius is making a psychological critique of the war culture: their lack of mental harmony, their "hearts divided" against themselves (*dis-**cordia***).[355]

It is notable that Lucretius avoids calling the elephants "elephants," and instead calls them "Lucanian cows" (*boves lucas*, 1302). Pliny the Elder gives us a reason for this, when he says that elephants were first seen by the Romans during the invasion of Lucania by the Hellenistic king Pyrrhus.[356] The phrase "Lucanian cows" (*boves lucas*), therefore, may be meant to preserve the uncanniness of that first encounter of the Romans with elephants. The odd phrase "Lucanian cow" would also restage the Romans' attempt conceptually to assimilate the elephant to a recognizable domesticated animal, the *bos* or "cow," replaying that first moment of encounter with elephants when Romans saw a strange animal and classified it according to an animal they were familiar with—a cow. The combination of strangeness and familiarity here characterizes elephants as of foreign

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[355] Gale (2013 [2009], *ad loc*.) notes that *discordia* also invokes the idea of Νεῖκος or Strife from Empedocles. But unlike Empedocles, I would argue, Lucretius is not just talking about a cosmic force. I suspect that *discordia* here is also ideological and psychological, referring to the divided heart of the culture of empire that drives it to increased violence and technification. Lucretius' proposed cure for the mental *discordia* of empire is that we should follow our senses rather than other people's ideas, other people's ideology (*DRN* 5.1131-1135): "Let them then sweat blood, pointlessly worn out as they struggle on the crammed path of ambition, **since their wisdom comes from another's mouth, and they pursue things on hearsay rather than from their own senses**; this does not succeed now, nor will it in the future, any more than it did in the past." *proinde sine incassum defessi sanguine sudent,/ angustum per iter luctantes ambitionis,/* ***quandoquidem sapiunt alieno ex ore petuntque****/* ***res ex auditis potius quam sensibus ipsis****,/ nec magis id nunc est neque erit mox quam fuit ante.*

[356] Pliny, *Natural History*, 8.6.16: "Italy saw elephants for the first time in the war of king Pyrrhus, and called them 'Lucanian cows' because they were seen in Lucania in 280 BCE, but Rome first saw them in a triumph five years later, and also a very large number that were captured from the Cathaginians in Sicily by the victory of the pontiff Lucius Metellus in 252 BCE." *Elephantos Italia primum vidit Pyrri regis bello et boves Lucas appellavit in Lucanis viso anno urbis cccclxxiv, Roma autem in triumpho v annis ad superiorem numerum additis, eadem plurimos anno DII victoria L. Metelli pontificis in Sicilia de Poenis captos.* See also *DRN* 3.833-837, 3.1034.

origin but also similar to a domesticate, and this betrays a feeling of unpredictability and unreliability in the elephants' nature as focalized from the point of view of the Romans described in the passage. If you cannot fully categorize an animal, how can you predict how it will behave? And if you cannot name it, how can you be sure about its nature? These elephants will only reveal their full nature in the animal revolt.

Part of the elephants' strangeness stems from the fact that this first encounter appears to be a condensation of encounters from different times and places. Are these the elephants of Pyrrhus in Lucania, Hannibal in Italy, Alexander in India? These layerings of encounters are another way that Lucretius represents elephants as in-betweeners, hybrids, monsters. After introducing the elephants as hideous, Lucretius quickly moves to talking about how the Carthaginians, or *Poeni* (1303), trained them for battle (*volnera* ***docuerunt****/sufferre*). While it is possible to interpret Lucretius as saying merely that Pyrrhus introduced the elephants to the Romans, but the Carthaginians trained them for war (but Pyrrhus did too), the mixing of the two encounters makes even the foreignness the elephants a hybrid. The elephants are strange Greco-Carthaginian creatures. Another way, though speculative, that Lucretius makes the elephants strange is with the word *taetras* ("horrible creatures!" 1302). If we can believe Isidore of Seville that "the ancients said 'hideous' for 'wild.'" (*'tetrum' enim veteres pro fero dixerunt)*, then their ugliness would be in some sense connected with their wildness.[357] This reading of *taetras* fits into Lucretius' larger point that empire experimented with animals so wild, i.e. so uncategorizable, as to be "ugly" or "hideous" (i.e. *taetras*) in the eyes of civilization. This wild-ugliness certainly builds to Lucretius' conclusion, that empire trained elephants "to

[357] Isidore of Seville *Etymologiae*, 10.270.

be **horrible** for nations in arms" (***horribile*** *humanis quod gentibus esset in armis*, 1306). With this final claim Lucretius returns to the idea at the beginning of the passage: that animals who were initially seen as natural monsters were made even more monstrous by the culture of empire.

Lucretius has suspended elephants in multiple ways between familiarity and monstrosity. Nevertheless, Lucretius presents them as familiar enough to get a cognitive grip on. It is noteworthy that instead of representing them directly, Lucretius reveals them to the reader in hints and fragments, representing them, as if at the moment of first contact, in a partial, confused light. This narrative logic of partial, non-representation contributes to making the elephants difficult to categorize or comprehend. In the end, the in-betweenness of the elephants, as Lucretius presents them, suggests empire's own *discordia*. Lucretius has characterized empire a mental state resembling a nightmare of incongruous, unnatural images that will come to a climax in the animal revolt.[358]

The passage ends on an eschatological note when Lucretius says "and day by day [discord] **added an augment** to the terrors of war." (*inque dies belli terroribus* ***addidit augmen***, 1307). Lucretius' molar line of animal instrumentalization is clearest in this phrase *addidit augmen* ("added and augment"), which is what the trajectory of empire and its accumulative temporality has been doing to the animals all along—accumulating repressive additions to their bodies in a linear fashion. *addidit augmen* takes on different meaning when thought about according to the different issues raised in the passage. The first is the issue of temporality: the build-up of the molar line of empire as accumulation

[358] The possibility that the *discordia* of empire and its production of monsters is like a collective nightmare that resembles the unnatural combinations of simulacra in dreams was suggested to me by Brooke Holmes.

of time that goes hand in hand with the *augmen* as an accumulation of matter to the elephants' bodies. Recall humans ascending horses, then mounting increasingly complex chariots. Now here they add fortifications to elephants' backs. The second issue is the emotional atmosphere of the passage: i.e. the emotional accumulation that the technological manipulation of the elephants adds to the "terrors of war" (*belli terroribus*, 1307). The final issue is how the passage looks to an Epicurean: the unnatural and unnecessary *augmen* to the elephants' bodies is clearly contrary to their natures and, therefore, unethical. Lucretius explicitly uses a metaphor of filiation to describe the evolution of empire. This is another connotative use of language that points to the temporality of the rise of empire: as genealogy or family descent of biotechnological manipulation of animal life. The verb *peperit* in the central line of the passage, *sic alid ex alio* ***peperit*** *discordia tristis* ("Thus sad discord **gave birth** to one thing after another," 1305) suggests not simply that one thing comes from another, but that it does so according to the metaphor of filiation and family resemblance, with an arborescent material structure and therefore, on Lucretius' view of time, an arborescent, accumulative temporality.

By acting under the influence of forces that increasingly foreclose their choices, the culture of empire reveals itself to be at the mercy of their ideology and subject to cosmic irony. Lucretius has all along described the rise of empire in a narrative voice that is both slyly mocks the subjects whose story he is telling. Lucretius' tone not only undercuts their grandeur of their actions, but also lends the Epicurean perspective on this story an air of superiority. Lucretius' ironic, Epicurean stance towards the "progress" of empire is clearest when he describes the elephants as being "**taught to suffer** the wounds

of war" (*belli* ***docuerunt*** *volnera*/***sufferre***, 1303-4)—*sufferre* enjambed as if to hold their pain. No "teaching" could be more at odds with the Epicurean injunction to live according to nature. Elephants are not living beings in the eyes of empire; they are just another technology with which to gain a competitive advantage over other human groups. This suggested by the phrase *belli…volnera* ("wounds of war") here, which echoes ***belli*** *temptare* ***pericla*** four lines previously, where humans "tested" or "experimented" with the "dangers of war" by developing war chariots (1299). The parallel suggests that, like chariots, elephants are just another instrument in an accumulating arms race. What the human masters teach the elephants will turn out to endanger themselves in the animal revolt: to *turbare*, i.e. "**to confound** the great bands of Mars" (*magnas Martis* ***turbare*** *catervas*, 1304). The choice of *turbare* once again presents the narrative voice as more knowing than the subjects it describes, since it is definitional of a *turba* ("disorderly mass," "crowd," "riot")[359] to be uncontrollable. The human masters' teaching will deconstruct itself on the battlefield of the animal revolt, where the elephants will become an out of control *turba*, or animal "vortex." As Michel Serres puts it, while "*turbare* means a disorder, a confusion, a disruption or […] a perturbation," "the origin of things and the beginning of order consist simply in the *narrow space* [my italics] between *turba* and *turbo*, an incalculable population tossed by storms, by unrest, in vortical movement."[360] Lucretius uses the pun *turba*/*turbo* to a different end. Rather than describing a movement from the disorder of a *turba* to the incipient order of a *turbo*, Lucretius shows humans deliberately creating an animal *turba* that will become multiple

[359] *OLD* s. v. 1 a-d.
[360] Serres 2000, 27-8.

turbines, as each kind of animal pursues its own line of flight from empire on the battlefield.[361]

Empire continues to chase its own dark future. After the elephants, it then experiments with inherently violent animals—bulls, boars, and lions. For a third time Lucretius uses the phrase *belli temptare pericla* ("to test/experiment with the dangers of war," 1299). Here, he says that the soldiers "tested" (*temptarunt*) and "experimented" (*experti…sunt*) with bulls, boars, and lions—now, in the "**duty** of war" (*in* ***moenere*** *belli*, 1308). War has now become a duty for empire, rather than merely a space of experimentation. By experimenting with more and more violent animals, the human masters, as Lucretius describes them, become just as "savage" as the "savage" animals they attempt to control (*sues* ***saevos****…****saevis*** *magistris*, 1309/1311). Human "master" and animal "victim" is about to turn on its head.

Temptarunt etiam tauros **in moenere belli**	5.1308
expertique sues saevos sunt mittere in hostis.	1309
et validos partim prae se misere leones	1310
cum **doctoribus armatis saevisque magistris**	1311
qui **moderarier** his possent vinclisque tenere—	1312

> They also tested (*temptarunt*) bulls in the duty of war (*in moenere belli*), and attempted (*experti*) to send wild boars against the enemy. And some sent lions in the front rank with armed teachers/trainers and savage masters (*doctoribus armatis saevisque magistris*) who had the power to moderate (*moderarier*) them and hold them in chains.

As empire continues to experiment with the dangers of war, the molar line established by the phrase ***belli temptare pericla*** ("**testing** the **dangers of war**," 1299), and extended

[361] As Deleuze and Guattari say (2011 [1987], 202): "There are different animal lines of flight: each species, each individual, has its own." This has to be acknowledged about animal resistance, as Lucretius shows each animal *genus* escaping in its own way. See *DRN* 5.1338ff.

when humans "taught [elephants] to suffer the **wounds of war** (***belli*** *docuerunt* ***volnera***/*sufferre*, 1303), hardens here into the "duty of war," as Lucretius says "they **tested** bulls **in the duty of war**" (***temptarunt*** *etiam tauros* ***in moenere belli***, 1308).[362] All three phrases share a family resemblance and index empire's restless desire for power after power.[363] *moenus*, *-eris* (more commonly, *munus*, *-eris*) usually indicates "duty" or "service," but can also refer to "last duties," or funeral rites.[364] This ambiguity suggests that the duty of war is also a kind of self-sacrifice to Mars.

The ironies in this passage suggest Lucretius' view of the instrumentalization of animals as not just wrong but "savage."[365] The most obvious Epicurean-based irony is the astonishing phrase "armed teachers and **savage** masters" (*doctoribus armatis* ***saevis****que magistris*, 1311).[366] Here, Lucretius characterizes the the human masters as having become just as "savage" as the "savage" animals they control (*sues* ***saevos***, 1309).[367]

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[362] Cp. *DRN* 1.29-33: *effice ut interea* ***fera moenera militiai****/ per maria ac terras omnis sopita quiescant./ nam tu sola potes tranquilla pace iuvare/ mortalis, quoniam* ***belli fera moenera Mavors****/ armipotens regit, in gremium qui saepe tuum se.*

[363] Hobbes' *Leviathan*, 1.12: "Felicity is a continuall progresse of the desire, from one object to another; the attaining of the former, being still but the way to the later. The cause whereof is, That the object of mans desire, is not to enjoy once onely, and for one instant of time; but to assure for ever, the way of his future desire. And therefore the voluntary actions, and inclinations of all men, tend, not only to the procuring, but also to the assuring of a contented life; and differ onely in the way: which ariseth partly from the difference of the knowledge, or opinion each one has of the causes, which produce the effect desired. So that in the first place, I put for a generall inclination of all mankind, *a perpetuall and restlesse desire of Power after power, that ceaseth onley in Death*. And the cause of this, is not alwayes that a man hopes for a more intensive delight, than he has already attained to; or that he cannot be content with a moderate power: but because he cannot assure the power and means to live well, which he hath present, without the acquisition of more. And from hence it is, that Kings, whose power is greatest, turn their endeavours to the assuring it at home by Lawes, or abroad by Wars. [my italics]"

[364] *OLD* s. v. 1 a, 1d.

[365] This is not the same as thinking that humans in general should avoid such animals, as *DRN* 5.38-42 makes clear. Epicureans could think that wild, violent animals should be avoided *and* that they should not be abused.

[366] Philip Hardie notes that this is "an apparently unique use of *doctor* applied to an animal trainer." Therefore, the connotations of "false teacher" are strong. Philip Hardie 2009, 45 n. 13.

[367] About *saevus* in this context, Charles Segal says (1970, 3): "Enframed by 'savage' animals on either side, the trainers are no less *saevi* than the beasts that they vainly try to control (*saevi magistri* ['savage masters'], 1311; cf. *sues saevos* ['savage boars'], 1309, and *saevi leones* ['savage lions'], 1314)."

While Lucretius often uses *saevus* to describe lions and boars in *De rerum natura*, this passage is the only time that he uses it to describe humans.[368] Amidst this wild struggle, Lucretius depicts an almost comical attempt by the soldiers to impose order on the lions who are sent to fight in the front ranks: "And some sent lions in the front rank…who had the power to moderate them and hold them in chains." (*et validos partim prae se misere leones*, 1310). As they are led to the front line, the lions more easily unite and turn on their former masters. In a second irony, Lucretius says that the handlers "have the power" (*possent*) to "moderate" (*moderarier*) the lions by "holding them in chains" (*vinclisque tenere*)—*qui* ***moderarier*** *his possent vinclisque tenere* (1312). Like so many of the Epicurean ironies in Lucretius' story of empire, this one mocks the soldiers' pose of mastery over naturally uncontrollable animals.[369]

Seconds before the revolt breaks out, Lucretius leaves us with the image of humans confidently holding wild animals in chains. Just before the animals turn on them, Lucretius brings the human masters' increasing sense of power, and their increasing insecurity about that power, to the breaking point, as he slips into the subjunctive mood with the verb *possent* ("would/could be able"): *qui* ***moderarier*** *his* ***possent*** *vinclisque tenere* ("those who **would/did have the power to moderate** [the animals] and hold them

[368] de Grummond 1981, 52.

[369] Lucretius already indexed *moderarier* as a thematic word in the part of the *Kulturentstehung* detailing the increasing instrumentalization of animals, which I called "The Rise of Empire as Molar Line": "and **guiding** horses with reins and weilding a weapon with the right hand;" *et* ***moderarier*** *hunc frenis dextraque vigere* (*DRN* 5.1298). As Gale comments, the distance travelled between the first animal experiments in domesticating horses ending in the attempt to control wild animals with chains here reveals the futility of entire the arms race. See Gale 2009, *ad loc.* The fact that it is an infinitive that is repeated (*moderarier*, 5.1298 & 5.1312) could be seen to bolster the irony of empire's attempt to control or master the natural world, an irony resembling Romantic irony, in the sense that humans who try to control the flow of creative life, of becoming, end by making their lives ironic, because they deny the limits of their control over the dynamism of nonhuman life. The infinitive itself in *moderarier* could signal the impossibility of the project of mastering "nature." For a Deleuzian take on Romantic irony, see Colebrook 2008 [2005], 48-51.

in chains," 1312). It is possible that *possent,* in the relative clause of characteristic, does not express the power that the masters *actually* have over the animals so much as the power they *expect* or ironically *think* they have. Since the revolt breaks out in the next line, *possent* is certainly ironic. The subjunctive may to represent a kind of wish fulfillment or fantasy of control over the wild animals—not the power they actually have.

The animal abuse culminates with the masters holding them in chains (*vinclisque tenere,* 1312). This image concludes the story of the rise of empire as a molar line, i.e. the story of empire as a linear accumulation and increasing capture of animal life since prehistory. But this is the bifurcation point. In the next line, the rebel animals swerve from the history of human control. Lucretius' narrative now switches from time to space: from the linear temporality of the rise of empire as a molar line to the swerve of animals on the space of the battlefield. Lucretius' narrative also takes on epic features, as each kind of animal gets its own ἀριστεῖα, or close-up moment of glory on the battlefield.

The Animal Revolt

In this final section of the chapter, I will use Deleuze and Guattari's notion of the line of flight to highlight several points about Lucretius' description of the animal revolt. In doing so, I will try to discuss Lucretius and Deleuze and Guattari together, as a symbiotic object, in which nothing is said that is not in Lucretius, but that relaunches his insights about animal resistance in the idiom of contemporary thought.[370]

[370] For reception as creative symbiosis, see Holmes 2016, 284-5.

The animal revolt resembles a line of flight by breaking out from within. The animals turn on their masters from within the army unit (*turbare* ***catervas***, 1304; *turbabant…**turmas***, 1312). Lucretius presents this moment of deterritorialization from within in atomic language that connotes *discordia*. He codes the rebel animals' movements as atomic mixing, weaving, turbulence, and the the swerve. The use of such language to describe political change resembles Deleuze and Guattari's materialist language of revolution as a line of flight. Monica Gale has described the animal revolt as taking place on a "cosmic battlefield," and this, I would add, is meant to show the dependence of the entire event—its temporality and its politics—on the atomic configurations that it really is. [371] To think about animal resistance using atomic imagery emphasizes that such resistance, whether human or animal, is not solely driven by ideas, but but by bodies affected by their environments: bodies that, whether human or nonhuman, feel together so as to physically influence and react in unforeseeable ways and with unpredictable results. In an early work, Guattari described the role of the body in resistance this way: "As we know, social revolutions, aesthetic revolutions, do not just overturn ideas and what is given to be seen and heard, they also work on bodies, the most subterranean of organic metabolisms, perceptions of the world, formulations of intersubjectivity, *and even a certain presentiment of the future* [my italics]." [372] At a certain level, the animals' desire to revolt need not be justified in human terms, as I quoted Hribal doing at the beginning of this chapter. Lucretius show the animals' desire to revolt as a not-entirely-cognitive process of the body reacting to its repressive environment.

[371] Gale 2006, 232-40.
[372] Guattari 2016, 234.

Guattari was emphasizing the role of physical influence, or "affect," as underappreciated in revolutionary movements, asking us to consider what happens at the level of the body when they are assembled together. Guattari even suggests, in the passage quoted, that bodily affect itself can contain "presentiments" of the future.[373] The animal revolt in Lucretius gains by comparison with the line of flight in that it is a model for revolt that does not require that animals be too human in order for the moral import of the revolt to be appreciated. The violation of the animals' bodies, those bodies' reaction to the history of repression, and the bodies' presentiment of the future, offer a framework in which to think about animal ethics in a less anthropocentric way.

Like a line of flight, the animal revolt in Lucretius is not a pre-formed, ready-made event—not a set of identities waiting to break out—but a series of goals and tactics that come into being. The atomicity of the animals' bodies is shown as metabolizing and changing trajectory in the process of revolt itself. Like a chemical fire, the animal revolt is catalyzed within and between nonhuman bodies on the battlefield. As the philosopher Todd May has argued, the line of flight in Deleuze and Guattari is not so much a field of identities in causal interaction as a chemical reaction that can surprise even the participants. Tactics, goals, and new selves come into being as the revolt proceeds. May describes the line of flight as an unfolding series of connections that come into being in the process of flight itself.[374] In Lucretius, the animals revolt after being "heated with mixed slaughter (1313)," "becoming enraged (1318)," and "boiling over…in action (1335)."

[373] For the idea that physical influences on bodies, i.e. affect, can suggest future states of being, see Raymond Williams' concept of "structures of feeling" (2009 [1977], 128-35).
[374] May 2008 [2005], 160-2.

Prior to the revolt, Lucretius depicted the animals as docile objects of abuse. The animal revolt unleashes new powers in their minds and bodies that take the human masters by surprise. This unleashing of new animal capacities stems from Lucretius depicting the battlefield of the revolt as a far-from-equilibrium system, in which small changes, under the right conditions, have huge consequences. This is cause for hope, since it shows that society, for Lucretius, is not a closed system—not a narrowing molar line or pipe locking animals into an abusive culture—but an open system that contains within it possibilities waiting to break out, into a new temporality more inclusive of animals and the time-scales and goals of their lives.[375] Deleuze and Guattari often mention that animals too are capable of lines of flight. Lucretius focuses almost exclusively on animals, and has written a quasi-epic of their revolt.

[375] There are striking similarities between Deleuze and Guattari's way of thinking about the line of flight and Raymond Williams notion of "the emergent," i.e. a cultural formation, taking shape in the present but unfinished, tending towards the future, and revelatory of the dominant structure it re-routes. For Williams, "the emergent" is a cultural formation that tends beyond its given terms in the present, and it is the job of the cultural critic to locate, identify, articulate, and encourage it. As Williams puts it: "We have certainly still to speak of the 'dominant' and the 'effective', and in these senses of the hegemonic. But we find that we also have to speak, and indeed with further differentiation of each, of the 'residual' and the 'emergent', which in any real process, and at any moment in the process, are significant both in themselves *and in what they reveal of the characteristics of the 'dominant'* (121-2) [….] By 'emergent' I mean, first, that new meanings and values, new practices, new relationships and kinds of relationship are continually being created. But it is exceptionally difficult to distinguish between those which are really elements of some new phase of the dominant culture (and in this sense 'species specific') and those which are *substantially alternative or oppositional: emergent in the strict sense, rather than merely novel* (123) [….] It is true that in the structure of any actual society, and especially in its class structure, *there is always a social basis for elements of the cultural process that are alternative or oppositional to the dominant elements* (124) [….] What really has to be said, as a way of defining important elements of both the residual and the emergent, and as a way of understanding the character of the dominant, is that no mode of production and *therefore no dominant social order and therefore no dominant culture ever in reality includes or exhausts all human practice, human energy, and human intention*. This is not merely a negative proposition, allowing us to account for significant things which happen outside or against the dominant mode. On the contrary it is a fact about the modes of domination, that they select from and consequently exclude the full range of human practice [italics in original] (125) [….] What matters, finally, in understanding emergent culture, as distinct from both the dominant and the residual, is that it is never only a matter of immediate practice; indeed it depends crucially on finding new forms or adaptations of form. Again and again what we have to observe is in effect a *pre-emergence*, active and pressing but not yet fully articulated, rather than the evident emergence which could be more confidently named. It is to understand more closely this condition of pre-emergence, as well as the more evident forms of the emergent, the residual, and the dominant, that we need to explore the concept of structures of feeling (126-7)." See Williams 2009 [1977], 121-7.

The animal revolt also reawakens individuality in the animals, as each species gets an *aristeia*, or heroic moment of glory on the battlefield.[376] As each animal steps forth, the animals themselves "become-animal" again. The animals flee their masters and form packs according to their *genus*, and thereby regaining their animality by returning their species-specific *Umwelten*.[377] For Deleuze and Guattari, forming packs is definitional of "becoming-animal." In Lucretius too, the animality captured and controlled by the rise of empire—that wild animality—reasserts itself on the battlefield. In the animal revolt, bulls form packs with bulls, elephants with elephants, and he-lions and she-lions according to gender. Lucretius does depict the rebel animals somewhat anthropomorphically, as using human-like tactics, but this is more a case of poetic justice, as the animals—quite intelligently—use their masters' tactics, their "teaching," against them. The rebel animals take on human features but in an animal way and for the sake of regaining their animality.

Comparing the animal revolt to a line of flight clarifies Lucretius' minimally humanist way of presenting nonhuman resistance. Unlike Jason Hribal, whom I quoted at the beginning of this chapter, Lucretius does not depict animal revolt in terms of human-like reasons, choices, notions of injustice, and desire for freedom. The animal revolt in Lucretius is less anthropocentric than Hribal. But Lucretius is also less posthuman than

[376] In a helpful image, Deleuze and Guattari characterize the "time-image" as like a "time-crystal," a snapshot of time amidst the narrative flow of action that makes narrative time feel increasingly like space because of its independence from narrative linkages. On the battlefield each animal kind is described as revolting as if in its own separate sphere, not only in terms of the space on the battlefield but in terms of each animal getting its own space in time—like the "superimposing of coexistent sheets." See Deleuze 2013 [1985], 121, esp. 270-9.

[377] See von Uexküll ([1934] 2010) for the idea each animal kind inhabits its own *Umwelt*. In Lucretius, each animal kind seems to pursue a line of flight from the human *Umwelt* to its own *Umwelt*, in which its actions have meaning for it. See the section entitled "Lucretius and Animals Studies" in the introduction to this dissertation for an overview of von Uexküll.

Deleuze and Guattari: the rebel animals do learn and use the tactics of their human masters, and Lucretius describes them as if Iliadic heroes as each gets his or her ἀριστεῖα. Lucretius' rebel animals are not illegitimately raised to humanity nor reduced to pure materiality. Rather, Lucretius overlays the rebel animals with multiple codes and levels of agency that act in concert: atomic motion, chain reactions, animal packs, anthropomorphic tactics, and individual animal heroes. Despite this complex semiotic stratigraphy, Lucretius' point is clear. By using their technologically manipulated bodies against their masters—using their very vulnerabilities as resistance—Lucretius shows that what civilization has done to the animals is morally wrong, and that the dynamic powers of animal life, and its nonhuman temporality, cannot be yoked to the rise of empire without destructive consequences for human civilization itself.

As the revolt proceeds, the darkness of empire comes alive. While the soldiers were formerly able to "moderate" (*moderarier*, 1312) the animals with chains (*vinclis*, 1312), the animal instrumentalization that began in prehistory now turns out to be "in vain" (*nequiquam*, 1313). [378]

nequiquam, quoniam **permixta caede calentes**	5.1313
turbabant saevi nullo discrimine **turmas**,	1314
terrificas capitum quatientes undique cristas,	1315
nec poterant equites fremitu perterrita equorum	1316
pectora mulcere et frenis **convertere in hostis**.	1317

[378] The moment denoted by *nequiquam*, could be called a "singular moment" or "bifurcation point." As the Nobel-winning scientist Illya Prigogine, writing with the philosopher Isabelle Stengers, pointed out (2017 [1984], 140-5), in systems that are far-from-equilibrium, small changes can have huge, even startling effects, in which it is impossible to determine in advance which direction that change will take: whether into higher, more differentiated levels of order or disintegration into chaos. In Lucretian terms, a *minimum momen* has the potential to change everything when society pushes the environment to its limits. And yet, the possibility that small changes can produce large deterritorializations of society can be cause for hope, since it shows that society is not a closed, deterministic structure, but an open system.

> In vain (*nequiquam*), since when heated with mixed slaughter (*permixta caede calentes*), wild, they confounded (*turbabant*) the squadrons (*turmas*), making no distinction (*nullo discrimine*), on all sides shaking their frightening crests upon their heads, nor were the horsemen able to soothe the hearts of their horses (*pectora mulcere*) terrified at the roaring and turn them back against the enemy (*frenis convertere in hostis*) with the reins.

The revolt erupts when the animals become "heated with mixed slaughter" (*permixta caede calentes*/*turbabant* 1313). Rather than showing them planning or premeditating, Lucretius describes their bodies as a chain reaction exploding, like an atomic assemblage experiencing a swerve emerging from within its own turbulence.[379] Lucretius uses the marked word *permixta,* which he restricts in *De rerum natura* to describing atoms or elements mixing. The phrase, *permixta caede calentes* (1313), has only one other instance in *De rerum natura*, where it depicts scythed chariots becoming "heated by mixed slaughter" as they sever limbs in a chariot battle. The phrase, used of lions here, invokes mechanical violence, and suggests that the lions are more like combustible machines than humans. When heated with blood, the lions cause turbulence within the armed band that controls them (***turbabant****…turmas*, 1314). The the animal revolt begins with heated bodies creating a disequilibrium plane.

There is reflexivity in the pun *turbabant…turmas* ("they **confounded** the **squadrons**," 1314) as it enacts turbulent animals disturbing their human masters. This phrase invokes the earlier phrase *magnas Martis* ***turbare catervas*** ("to **confound** the great **bands** of Mars,"1304). Both *turbabant turmas* and *turbare catervas*, therefore, mirror how the animal "mob," or *tur**b**a*, emerges from within the military band or *tur**m**a*.

[379] Lucretius regularly uses *permixta* and *turbabant* to describe atomic mixing and disorder (*permixta*: 1.1107 world destruction, 2.585, 2.687, 2.769, 2.990, 3.351, 3.643, 6.790. *turba*/*turbare*: 1.1113, 2.1, 2.126-7, 2.438, 2.550, 3.928, 4.530, 5.502, 5.504, 5.439, 5.1329, 6.370, 6.465)

turma may be a derivative or cognate of *turba*.[380] Whatever the relationship between the *turba*/*turma*, they perform, in the text, the process of an animal mob breaking out from within the human band. In another anti-anthropocentric moment, Lucretius specifies that the animals made "no distinction" (*nullo discrimine*, 1314) amidst their violence, presumably between friend and foe. This is another piece of evidence that the animals are not entirely in control of their choices or acting purely out of notions of injustice, as Hribal describes it in his history of animal revolt. Lucretius, thus, presents friend and foe caught up in a general *turba*, or chaotic flux on the battlefield. It is neither an anthropocentric nor entirely posthuman description of animal resistance, but what I would call a minimally humanist account of animals in revolt.

Lucretius depicts the lions in revolt in the grip of berserker rage. Now, the distinction between human and animal breaks down, as the turbulence of the battlefield overturns the categories of human and animal. Lucretius depicts the lions, like human soldiers, shaking their manes like helmet-crests: "shaking their frightening crests upon their heads on all sides," (*terrificas capitum quatientes* ***undique*** *cristas*, 1315). Human berserker rage is usually depicted in terms of losing one's humanity and becoming animal. Lucretius depicts berserker animals becoming human. The lions not only shake their manes like soldiers' helmets but also like the frenzied worshippers of the *Magna Mater*, or Great Mother, depicted in Book Two of *De rerum natura*. There, Lucretius

[380] de Vaan (2008, 634) says: "The noun *turma* may or may not be related to *turba*. If related, it might point to both words being loanwords, with *b* and *m* as different renderings of a labial consonant in the donor language. *Turma* is compared by IEW to OIc. *pruma*, *prymr* 'noise, racket', OE *drymm* 'troop, crowd', OS *hem-thrum* 'sword-violence', which does not explain the different order of *r* and *w*." Of *turma*, *OLD* (s. v. 1 a) says: "perhaps ultimately cogn. w. TVRBA." Both may be related to the PIE root **(s)terbh-*, whence the Greek : note the repeated of words for "turning" (the *ver-* root) in the animal revolt, for which see the section of this chapter below "Turbo/Turba."

described the worshippers of *Magna Mater* as crazed with the blood of religious rites, "shaking with divine force the terrifying crests of their heads," *terrificas capitum quatientes* ***numine*** *cristas,* 2.632). The frenzy of the lions and the worshippers, and the wages of *religio* and empire, are collapsed. The lions rage "on all sides" (*undique*), just as the worshippers of the *Magna Mater* raged "under divine possession" (*numine*).[381] Lucretius depicts both as entering limit states under the control of outside, divine, forces: the lions possessed by the *caede* ("slaughter"), which hints at Mars, and the devotees of *Magna Mater* by the *numine* ("divine possession") of the god. In their ecstatic rage, the lions rout the knights and horses on the battlefield so thoroughly that "the horsemen were not able to **soothe the hearts** of their horses terrified by the lion's roaring and turn them back against the enemy" (*nec poterant equites fremitu perterrita equorum/****pectora mulcere*** *et frenis convertere in hostis*, 1316-7). *pectora mulcere* is the language of therapy: "soothing the hearts of their horses." It reminds the reader of the human masters' ironic *doctores* and *magistri* ("teachers" and "masters") of the animals. Here too, in this dire moment, the human masters fail again in that role, as the lions violently separate the riders from their horses, the imposition of humans on another animal.

As the turbulence ramps up, the she-lions get their *aristeia*. Like the males, they revolt after becoming incensed by the violent simulacra of the battlefield.

inritata leae **iaciebant corpora** saltu	5.1318
undique, et adversum venientibus **ora petebat**,	1319
et nec opinantis **a tergo deripiebant**,	1320
deplexaeque dabant in terram volnere victos.	1321

[381] Lachmann and Housman rejected this line but Bailey notes the intertext with the worshippers of Magna Mater and argues that it would be most unlikely for it to be an interpolation, since the change from *numine* to *undique* is a mark of genuineness. See Bailey 1947, vol 3, *ad loc*.

> Incensed (*inritata*), the she-lions hurled their bodies (*iaciebant corpora*) with a leap on all sides (*undique*), and attacked the faces of the men (*ora petebant*) coming at them, and tore down others from behind (*a tergo deripiebant*) unawares, and intertwining with them (*deplexae*) they cast them to the ground conquered by wounds.

Lucretius depicts the she-lions as the cleverest, most human-like fighters.[382] It is hard to know what to make of the superiority of the she-lions. It may be meant to connote the revenge of *natura*, which is gendered female throughout the poem, guiding the she-lions' bodies. Their violence begins randomly, to accord with the battlefield disequilibrium. When given the opportunity, the she-lions skillfully maneuver against their human masters. Like the males, Lucretius starts with their bodily state. They are "incensed" (*inritata*, 1318). Like the males, they rage "everywhere" (*undique*, 1319), their bodies behaving like a chaos of atoms. Lucretius does not say "they leaped," but rather they "**hurled their bodies** with a leap" (***iaciebant corpora*** *saltu*, 1318). Lucretius is showing the chaos of the battlefield to be so great that even the animals begin treating their bodies like atomic bodies, treating their own bodies as destabilizing weapons, like spears, and cast them randomly about the battlefield as if no longer themselves.

Amidst this turbulence, the she-lions' tactics emerge. As the masters turn back to approach them (*adversum venientibus*, 1319), the she-lions "seek" their faces (*ora petebant*, 1319). This is not only the weakest part of the soldiers' bodies but the most individual. Such scenes of lions or she-lions leaping at the faces of human victims are depicted in Roman art.[383] The humans become disorientated and confused, while the she-

[382] Bailey thought the "separate treatment of the behaviour of the lionesses is another strange element in Lucr.'s description." Bailey 1947, vol. 3, *ad loc*.
[383] There is a Roman mosaic from El Djem in Tunisia dating from the 200s ACE that depicts a condemned criminal being devoured by a she-lion leaping at his face.

lions pull them down "unawares" from behind (***nec opinantis*** *a tergo deripiebant*, 1320).[384] While Lucretius depicts the she-lions as using clever, human-like tactics, there is also a degree of contingency in Lucretius' description of their turnings and swervings. For instance, Lucretius has the she-lions, like an atomic vortex, "enmesh" (*deplexae*, 1321) the soldiers and "cast them to the ground" (*dabant in terram*). Here, it might be hard to visualize what the she-lions are doing. The idea seems to be that they are wrapping themselves around the soldiers and then pulling them to the ground. The similarities to atomic conciliation are striking. By using this language of atomic "interweaving" or "enmeshing" (*deplexae*), Lucretius seems to be hinting that the temporality of the animals, insofar as that is based on the movements of the animals' bodies on the disequilibrium plane of the battlefield, is predominating as the human masters are "conquered by wounds" (*volnere victos*, 1321).[385]

The liquidity of swerving and mixing animal bodies continues as wild boars stomp onto the scene.

permixtasque **dabant** equitum peditumque **ruinas**.	5.1329
nam **transversa** feros exibant **dentis** adactus	1330
iumenta aut pedibus ventos erecta petebant.	1331

[384] While the phrase *nec opinantis* ("unawares"), and its variants, are common enough in Latin, in *De rerum natura* it occurs only three other times, all of which deal with unawareness of the non-Epicurean about the nature of reality: (1) "And death is standing by your head **unawares**" (*et* ***nec opinanti*** *mors ad caput adstitit ante*, 3.959); (2) "and how they [sun and moon] obstruct the earth **unawares** with darkness" (*et* ***neque opinantis*** *tenebris obducere terras*, 5.777); (3) "If however he [Zeus] wants to crush us **unawares** with his fire [i.e. thunderbolt]" (*si* ***nec opinantis*** *autem vult opprimere igni*, 6.408). There may be a thematic connection between these uses of the phrase regarding illusions about the nature of reality and the passage above about the animals taking revenge, since as Denis Feeney has argued, wild beasts in the state of nature re-emerge in the animal revolt as symbols of the "deepest fear of primitive man." Like the humans described as "unawares" in these comparanda, the human trainers in the animal revolt are in the grip of an illusion about the workings of nonhuman nature, in this case of the power and uncontrollability of wild animals. See Feeney 1978, 21. It is also worth mentioning that the she-lions, who were killed in antiquity for their hides (*tergum*), are here specified as pulling down their former masters *a tergo* ("from behind/their hides").

[385] *deplexae* is a hapax legomenon in Latin literature. *plectere* (Gk. πλέκω) means "to plait" or "to twine."

> They [the boars] dealt (*dabant*) mixed destruction (*permixtas…ruinas*) to horsemen and footmen. For [the horses] swerving aside (*transversa*), escaped the wild lunge of tusks, or rearing up to paw the air.

Lucretius first describes the chaotic effects the boars have, and then tell us its cause. The boars dealt "mixed destruction" (*permixtas…ruinas*, 1329) to the horsemen and footmen. The cause (*nam*, 1330) of this was the horses' "**swerving** aside" (***transversa***) to avoid the boars' "tusks" (*dentis*).[386] Lucretius uses *ruinas* to indicate both the "collapse" of the humans from off their horses and their "deaths." It is a word used elsewhere in *De rerum natura* to describe the crumbling of atomic assemblages. For instance, in Book One of *De rerum natura*, the phrase *permixtas…**ruinas*** describes the collapsing death of the world. In arguing, in this passage in Book One, against the theory that matter tends towards a center, Lucretius explains how worlds are capable of "collapsing" in all directions: "the thundering regions of the sky **collapse** upwards (***ruat**…superne*), the earth slips swiftly from under our feet, and amidst the **mixed ruin** (***permixtas**…**ruinas***) of sky all things, freeing their elements, depart through the deep void, so that in a moment of time no trace is left except desert space and blind atoms." [387] In the passage above, the phrase *permixtas…ruinas* seems to frame the "death" that the boars deal to horse and rider as a "collapse" of the horse and rider structure, the atomic compound of empire crumbling on the "cosmic battlefield."

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[386] Segal (1986, 3) has noted that while Lucretius described early humans as using their hands, nails, and teeth as weapons, here we see civilized humans using those same body parts in other animals as weapons (5.1283): "The ancient arms were hands, nails, and teeth." (*arma antiqua manus ungues dentesque fuerunt*). Under the nascent empire, Lucretius described humans using these same body parts in other animals: "snake-hands," *anguimanus*, 5.1303; "curved claws," *unguibus uncis*, 5.1322; "[boars'] tusks," *dentibus*, 5.1326).

[387] *DRN* 1.1105-1110: *neve **ruant** caeli tonitralia templa superne,/ terraque se pedibus raptim subducat et omnis/ inter **permixtas** rerum caelique **ruinas**/ corpora solventes abeat per inane profundum,/ temporis ut puncto nil extet reliquiarum/ desertum praeter spatium et primordia caeca*. Cf. *DRN* 2.1145, 5.347.

The chaos of the animal revolt opens things up so that difference can emerge. The revolt is a swerve. While this is a speculative point, Lucretius several times invokes the notion of turning or swerving with the ***ver-*** root to describe the rebel animals' movements as break up and flee from empire, and the swerve itself, when it is mentioned in Book Two of *De rerum natura,* is introduced with an example of a horse.[388] There were overtones of the swerve when Lucretius described the riders failing to "soothe the hearts of their horses, and **turn them back** against the enemy" (*nec poterant equites…equorum*/*pectora mulcere et frenis con**vertere** in hostis,* 1317); and again when Lucretius depicted the foot soldiers "**turning towards** and approaching" the she lions (*ad**versum** venientibus,* 1319); likewise when Lucretius shows the horses "**swerving** aside" (*trans**versa**,* 1330) to avoid the tusks of the boars. The revolt ends with each animal *genus* scattering off separately, as if into the void.[389]

Lucretius' repeated use of "turning against," "turning away" and "swerving aside" from the linear build-up of empire suggests that Lucretius might have imagined the animal revolt as a historical swerve from the temporality of empire. The animals' bodies erupt with the spontaneity of the swerve and similarly complicated voluntariness. In Book Two, Lucretius described the spontaneity of the swerve this way: "at times quite uncertain and in uncertain places, the atoms swerve a little from their course, just so much as you might call a changed motion. For if they did not tend to incline, all would fall downwards like drops of rain through the profound void, nor would collisions arise nor would blows be created among the first-beginnings. And so nature would never have

[388] *DRN* 2.263-71.
[389] "For every kind of various beast fled" *diffugiebat enim varium genus omne ferarum,* 1338; "as they now flee" *ut…diffugiunt,* 1339-40.

created anything."[390] Lucretius plays with the idea of the swerve in Book Two as a way to secure free will or choice (*libera voluntas*) in all living beings.[391] If Lucretius were thinking of the animal revolt as a historical swerve from the increasing rigidity of empire, this would characterize the chaos of the battlefield not a chaos of annihilation but of a different, animal temporality tethered to the rebel animals' bodies that ruptures the linear time of empire.

Before ending his account of the animal revolt, Lucretius returns to an earlier scene, when the masters thought the animals "thoroughly mastered at home" (*domi domitos satis*), that is, thoroughly domesticated. Lucretius inserts this scene from the earlier part of his story just before the rebel animals scatter off into the void.

siquos ante **domi domitos satis** esse putabant,	5.1334
effervescere cernebant **in rebus agundis**	1335
volneribus clamore fuga terrore tumultu.	1336

> If men before had thought any to be sufficiently mastered at home (*domi domitos satis*), in action (*in rebus agundis)* they saw them boil over (*effervescere*) with wounds, uproar, flight, terror, tumult.

Lucretius briefly returns his narrative to the beginning of the story, and describes a scene that the reader has not yet heard about. The timing is careful. While the duration in textual time is just one hexameter line, in terms of the story, it recounts a whole time before the revolt, when the masters assumed the animals to be sufficiently under their control.[392] The flashback contrasts the seeming tameness of animals before the revolt

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[390] *DRN* 2.219-224: *…incerto tempore ferme/ incertisque locis spatio depellere paulum,/ tantum quod momen mutatum dicere possis./ quod nisi declinare solerent, omnia deorsum,/ imbris uti guttae, caderent per inane profundum,/ nec foret offensus natus nec plaga creata/ principiis: ita nil umquam natura creasset*.

[391] For the *clinamen* in animals, see *DRN* 2.26.

[392] J. M. Snyder (1980, 104) notes that *domare* and *domus* "are in fact from separate roots, but the ancients very likely regarded them as related, just as they thought (correctly) that *domus* and *dominor* were

with their turbulence during it. This "internal analepsis," i.e. Lucretius' returning to a point in the story not previously mentioned, reveals a kind of ecological irony, in which the foolish masters assumed at the start that they had total control over inherently uncontrollable animals.[393] The internal analepsis reveals a facile ignorance of the limits of nature.[394]

Against this backdrop, the turbulence of animals is remarkable, as they "boil over" (*effervescere*, 1335) in the midst of action (*in rebus agundis*). Lucretius depicts animal anger here in a way that accords with what he says earlier in Book Three of *De rerum natura* about the psychology of wild animals: "There is more heat in those creatures whose bitter hearts and irascible minds easily boil over (*effervescit*) in anger." A case in point are lions, whose "violent force" (*vis violenta*, 3.296), Lucretius says in Book Three, makes it so that "they often **rupture** their chests with roaring and growling" (*pectora qui fremitu **rumpunt** plerumque gementes*, 3.297), unable to contain the "**waves** of anger" (*nec capere irarum **fluctus***, 3.298) in their hearts, no matter what training they have had. [395] This portrait of lion psychology is close to what Lucretius says about animal anger boiling over in the animal revolt, where Lucretius portrayed such animals as having

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etymologically connected." See *DRN* 6.223-4: *praeterea saepe accendunt quoque tecta **domorum**/ et celeri flamma **dominantur** in aedibus ipsis*.

[393] Gerard Genette (1980 [1972], 47-54) defines "internal analepsis" as the insertion of an earlier part of the same story, not previously mentioned, into the main narrative. This previously omitted information may not be strictly necessary to the main story or felt to be lacking in it.

[394] Compare biologist E. O. Wilson on the Anthropocene (1999 [1992], 344): "If there is a danger in the human trajectory, it is not so much in the survival of our own species as in the fulfillment of the ultimate irony of organic evolution: that in the instant of achieving self-understanding through the mind of man, life has doomed its most beautiful creations. And thus humanity closes the door to its past."

[395] *DRN* 3.294-8: *sed calidi plus est illis quibus acria corda/ iracundaque mens facile effervescit in ira./ quo genere in primis vis est violenta leonum,/ pectora qui fremitu rumpunt plerumque gementes/ nec capere irarum fluctus in pectore possunt.* See O'Keefe 2009 [2005], 84-5.

a "predominance of heat" (*calidi plus est illis*, 3.294). And just like in Book Three such animals have a tendency to boil in anger" (*effervescit in ira*, 3.295).[396]

The minds of the wild animals boils over like a storm at sea. Just like the sea, when angered they heat up and boil over with violent results (*irarum **fluctus** in pectore*, 3.298).[397] In the animal revolt, Lucretius' syntax begins to boil over as well, as it breaks free from earlier, more controlled forms to enact the chaos of the escaping animals.[398] Lucretius leaves behind words of emotion, like traces of the animals who have already

[396] Giussani (1896) thought that the animals getting heated on the battlefield is metaphorical, but I would argue that it is quite concrete and physical, a matter of the circulation of affects in the battlefield environment.

[397] See Epicurus' description of the disturbed soul as itself a tempest in *Letter to Menoeceus* §128. Lucretius frequently describes both sea storms and land battles in terms of boiling: (1) "unless by chance when you see your legions **boiling** (*fervere*) over the spaces of the plain as they stir the simulacra of war," *si non forte, tuas legiones per loca campi/ **fervere** cum videas belli simulacra cientes* (2.40-1); (2) "[Lucretius describing epilepsy] Assuredly, because the spirit, torn apart throughout the limbs by the force of the disease, stirs up (*turbat*) and causes foam, just as in the salt sea the waves **boil** (*fervescunt*) because of the mighty forces (*validis…viribus*) of the winds," *nimirum quia vi morbi distracta per artus/ **turbat** agens anima spumas, ut in aequore salso/ ventorum validis **fervescunt** viribus undae*; (3) "When wind has invaded a cloud, and turning about there has made the cloud thicken on the surface of the cavity, as I have explained, it **boils by its own quick movement** (*mobilitate sua fervescit*); just as you see all things heat up and burn by motion, indeed a leaden bullet even liquifies when it is whirled a long distance. When therefore this **boiling** (*fervidus*) [wind] has burst the black cloud, by force (*per vim*) it so to speak suddenly squeezes out and scatters seeds of fire, which cause flickering flashes of flame," *ventus ubi invasit nubem et versatus ibidem/ fecit ut ante cavam docui spissescere nubem,/ **mobilitate sua fervescit**; ut omnia motu/ percalefacta vides ardescere, plumbea vero/ glans etiam longo cursu volvenda liquescit./ ergo **fervidus** hic nubem cum perscidit atram,/ dissipat ardoris quasi per vim expressa repente/ semina quae faciunt nictantia fulgura flammae*; (4) [Lucretius explains water spouts] "For it comes about at times that a kind of column sent down from the sky descends into the sea, around which the sea **boils** (*fervescunt*) stirred up by the blowing blasts of winds; and then whatever ships are seized in the tumult and, tossed about, come to supreme danger." *nam fit ut interdum tamquam demissa columna/ in mare de caelo descendat, quam freta circum/ **fervescunt** graviter spirantibus incita flabris,/ et quaecumque in eo tum sint deprensa tumultu/navigia in summum veniant vexata periclum*; (5) [Lucretius continues to explain water spouts] "For the whirlwind turns about as it descends, and brings down along with it that cloud with supple body; but as soon as it has thrust down the heavy cloud on the surface of the ocean, the wind suddenly releases its entire self into the water and stirs up the whole sea, compelling it to **boil with a huge noise** (*ingenti sonitu mare fervere*)." *versabundus enim turbo descendit et illam/ deducit pariter lento cum corpore nubem;/ quam simul ac gravidam detrusit ad aequora ponti,/ ille in aquam subito totum se inmittit et omne/ excitat **ingenti sonitu mare fervere** cogens.*

[398] The mirroring of the uncontrollability of the animals in Lucretius' uncontrolled syntax was suggested to me by Alex Purves.

dispersed into space.[399] These crisp abstractions conclude the revolt by summing up its key affective features:

> …volneribus clamore fuga terrore tumultu.
> …wounds, uproar, flight, terror, tumult.

Lucretius ends the revolt with each kind of animal pursuing its own line of flight. In doing so, they reciprocate "wild deeds" (*fera facta*, 1340) back onto their masters (*suis*). As Lucretius says,

> **diffugiebant** enim varium genus omne ferarum, 5.1338
> ut nunc saepe boves lucas ferro male mactae 1339
> **diffugiunt**, **fera facta** suis cum multa **dedere**. 1340

> For, every kind of various beast fled away (*diffugiebant…varium genus omne ferarum*), as now often Lucanian oxen badly mangled with iron flee (*diffugiunt*), once they have dealt many wild deeds to their own (*fera facta suis…multa dedere*).

The revolt ends in a scene of wild justice. The rebel animals, Lucretius says, "**dealt** many wild deeds to their own" (*fera facta suis…multa **dedere***, 1340). The idea is, however, somewhat contradictory. On the one hand, Lucretius calls the animals' deeds "wild" (***fera facta***). On the other, the animals "dealt" or "gave" them (*dedere*) to "their own" (*suis*). The rebel animals' wild justice is not as human as, for instance, Hribal's account of animal resistance. Nor is it a posthuman as Deleuze and Guattari. As I have argued in this chapter, it is minimally human. There is payback, or negative reciprocity, on the human masters for their abuse. The animals' "wild deeds" are not mere recklessness or "savagery." The animals are not just going wild, acting on instinct. While Lucretius has

[399] Given the vividness of the line, P. H. Schrijvers (1970, 297) identifies it as the rhetorical figure *enumeratio per partes*, which he says is characteristic of ἐνάργεια."

for the most part depicted the rebel animals as catalyzed bodies in a disequilibrium environment, he has also described them as clever, intelligent tacticians. In this final passage, Lucretius brings both these frameworks on the rebel animals' actions together—the physicalist, machinic, affect-based view and the choice-based, desiderative, reasons-based view of their actions. The animals' deeds are, thus, in one sense partly a reciprocal reaction of nature—"nature's revenge"—and partly a form of retributive justice: hence, the complex claim that they "dealt many wild deeds to their own" (*fera facta suis…multa dedere*, 1340) as a form both of wildness and of justice in which there is a remainder of subjectivity in the animals. [400]

The verb *dedere* ("they dealt/gave," 1340) is important to seeing the animals' "wild deeds" as justice. It takes up the motif of "giving" (the verb *dare*) that was central to the animal contract detailed in Chapter Three of this disseration. There, in the animal contract, Lucretius described a quasi-social contract between humans and animals based on reciprocal giving. Lucretius used *dare* several times, and other verbs of giving.[401] It is therefore significant that the idea of reciprocal "giving" returns here in the animal revolt as negative reciprocity, or payback, for humans having violated the animal contract. It brings full circle Lucretius' story about human-animal reciprocity deteriorating into interspecies chaos.

There were three moments in the animal revolt where Lucretius indexed this theme of negative giving to describe the animals' justice. The she-lions "intertwined

[400] Deleuze and Guattari (2011 [1987], 160) do not completely reduce animals to epiphenomena of natural forces: "You have to keep enough of the organism for it to reform each dawn; and you have to keep small supplies of significance and subjectification, if only to turn them against their own systems when the circumstances demand it, when things, persons, even situations force you to; and you have to keep small rations of subjectivity in sufficient quantity to enable you to respond to the dominant reality."
[401] *commendata…tradita* 5.861; *lanigerae* 866; *tradita* 867; *parta* 869; *damus* 870; *tribuit* 871; *dare* 872.

[their human victims] and **cast** them to the ground conquered by wounds" (*deplexaeque **dabant** in terram volnere victos*, 1321). the wild boars "**dealt** mixed destruction to horsemen and footmen" (*permixtasque **dabant** equitum peditumque ruinas*, 1329). And here, in the conclusion, each animal kind "**dealt** many wild deeds to their own" (*fera facta suis cum multa **dedere***, 1340). One could argue that *dare* in these passages is merely a Latin idiom. But since giving featured so heavily in the animal contract, and that the point of the animal revolt is to trace the consequences of having violated the animal contract, the use of *dare* here at the conclusion of the animal revolt is better seen as presenting the rebel animals' "wild deeds" as a form of justice. The animals "dealt" this wild justice to "their own" (*suis*, 1340). *suis* most obviously refers to the human masters. Thus, *suis* means "their own [masters]." But *suis* might also refer to the animal contract, where humans and animals were one another's "own" as part of an interspecies social contract. In dealing wild justice to "their own," the animals not only pay back their harsh masters but also the friends who betrayed them.

Turba/Turbo

The revolt ends with the animal *turba* ("mob") scattering off (*diffugiebat*, 1338) like a *turbo* ("vortex").[402] Each animal kind (*varium genus omne ferarum*), Lucretius says, fled their separate ways (*diffugiebat*, 1338). But then, in an unexpected genealogical moment,

[402] Cp. *DRN* 1.760-762: *quare aut congressa peribunt/aut ita **diffugient** ut tempestate coacta/ fulmina **diffugere** atque imbris ventosque videmus.* ("Therefore, when they [the atoms] meet [in war] they will either perish, or will **flee**, as when a tempest has gathered we see lightning and rain and wind **flee**."); *DRN* 5366-369: *neque autem corpora desunt,/ ex infinito quae possint forte coorta/ corruere hance rerum **violento turbine** summam/ aut aliam quamvis cladem inportare pericli.* ("moreover does [the world] not lack bodies that can by chance gather out of the infinite and overwhelm this sum of things in a **violent whirlwind** or bring upon it another disaster of danger."); Cf. *DRN* 5.1226-1235.

Lucretius brings the animal revolt into his own time, by shifting to the present tense. Lucretius say "as **now often** Lucanian oxen badly mangled with iron **flee**" (*ut **nunc saepe** boves lucas ferro male mactae/**diffugiunt***, 1339-40). By bringing his story into the present, Lucretius shows that his narrative, however difficult to believe, is redeemed by contemporary experience.[403] While Lucretius is genuinely astonished that something so incredible as the animal revolt could happen, in a sense it does not matter. The point is that his civilization's relationship to animals shows that it could.[404] His attitude is, therefore, less skepticism than awe at the degree to which a civilization at its technological peak could become so barbaric towards the nonhuman world.

To end this chapter, I want to return to a scene, not yet discussed, from earlier in Book Five, where Lucretius asserts that there is a "hidden force of nature" that limits human imperial strivings.[405] Just before Lucretius describes the discovery of metals and

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[403] Scholars have speculated (Schrijvers 1970, 298-305) that Lucretius saw a hunt, staged animal fight, or animal procession that went wrong.

[404] For an interpretation of why Lucretius goes to such lengths to tell this story only to doubt its veracity, see Costa 1984, *ad loc.*; Schrijvers 1970, 303-5; Nussbaum 1994, 272-3. Nussbaum puts it this way: "The odd sequence of thought in the closing section has also been found puzzling: the poet first doubts the actuality of what has occurred, then proceeds to analyze the motives of the parties as if it had. I suggest we best understand the complexity of Lucretius' design if we read it in the same double manner in which we have been forced, by the ambiguity of the text, to read the passages from the two proems. The story of horror is a story not just about what human beings do to one another in war, but also, and more importantly, a story of the self-destructive violence of the soul against itself. (272)" This reading does not emphasize the animals enough, who are the central characters. It is not just a story about "what human beings do to one another" but about what they do to animals amidst the humans' own competitive struggles. It is also important to emphasize the genealogical moment in lines 1339-40, where Lucretius explicitly says that this is still happening to animals in his own day and the animals still resist: ***ut nunc** saepe boves lucas ferro male mactae/ **diffugiunt***. As I claim above, however briefly, Lucretius is not so much expressing a literal-minded astonishment about whether the animal revolt actually happened, as an astonishment that, yes, civilization under the grip of Mars and instrumental reason is such that it could happen. This is the truth of fiction versus the truth of history, or to put it another way, the difference between a positivistic claim about the past and a thought experiment that "pumps" (to borrow a term from Daniel Dennet 2013, 6-7) true and real intuitions about what a war culture is capable of. I would argue that the animal revolt is not just an assertion of possibility but an pumping of intuitions in the reader about his or her culture—in Lucretius' case, the culture of the Late Republic. But the knobs and settings of Lucretius' story are still capable of pumping intuitions in the US of the 21st century about relationships between empire and the natural world.

[405] Lucretius' thinking in this passage recalls Anaximander's concept of τίσις or "cosmic retribution," itself not just a description of the cosmos but perhaps a coded political statement to archaic Greek tyrants

the rise of empire, in a passage that can now be seen as programmatic of the animal revolt, Lucretius describes an imperial fleet, with its commander, legions, and elephants being hurled by a violent whirlwind onto the "shoals of death." Lucretius' point is that there is "a hidden force" in nature that "treads down," "tramples," and holds empire in "mockery."

Summa etiam cum vis violenti per mare venti	5.1226
indupedatorem classis super aequora verrit	1227
cum **validis** pariter **legionibus atque elephantis**,	1228
non divom pacem votis adit ac prece quaesit	1229
ventorum pavidus paces animasque secundas?	1230
nequiquam, quoniam **violento turbine** saepe	1231
correptus nilo fertur minus ad vada leti.	1232
usque adeo res humanas **vis abdita quaedam**	1233
obterit, et **pulchros fascis saevasque secures**	1234
proculcare ac **ludibrio** sibi habere videtur.	1235

> And when the supreme force of a violent wind upon the sea sweeps over the waters the commander (*indupedatorem*) of a fleet equally with his mighty legions and elephants (*validis…legionibus atque elephantis*), does he not court the gods' peace with vows and in his panic seek with prayer the peace of the winds and favoring breezes? In vain, since nonetheless he is often caught up by a violent whirlwind (*violento turbine*) and carried onto the shoals of death. So true it is that some hidden force (*vis abdita quaedam*) tramples underfoot human affairs (*res humanas…obterit*), and treads down (*proculcare*) the beautiful rods and savage axes (*pulchros fascis saevasque secures*), and seems to hold them in derision (*ludibrio*)."

Lucretius appeals to the reader's experience of what "often" happens (*saepe*, 1231). [406] A hidden force in nature (*vis abdita quaedam*, 1233), he says, destroys a fleet and its

(Wildberg 2019). Lucretius fully repoliticizes the latent, coded politics in Anaximander by aiming it directly at the militarism of empire. Monica Gale suggested a larger reference for Lucretius' *vis abdita quaedam* ("certain hidden force in nature"), which she describes as "an appeal to the ancient belief in the punishment of *hybris* by *nemesis*." See Gale, 2013 [2009], *ad loc*.

[406] H. A. J. Munro (2010 [1846], vol. 2, 367) glosses *saepe* ("often") as: *id quod saepe fieri videmus* ("that which we often see come about"), and suggests that Lucretius might have been inspired by a historical event in which this actually happened: "Lucretius here is speaking of course generally; but it is not unlikely

commander (*indupedatorem*, 1227), snatching them up in a violent whirlwind (*violento turbine*, 1231) to cast them onto the "shoals of death" (*ad vada leti*, 1232).[407] This hidden force "tramples" (*obterit*, 1234) and "treads down" (*proculcare*, 1235) not only "human endeavors" (*res humanas*, 1233) but empire, in all its washed out patriotism and aestheticized violence ("the beautiful rods and savage axes," *pulchros fascis saevasque secures*, 1334).[408] Lucretius chooses his imagery carefully. Not only do commander, fleet, legions, elephants, rods-and-axes all signify empire, but the phrase "beautiful rods and **savage** axes" (*pulchros fascis* ***saevasque*** *secures*) foreshadows quite specifically the rebel animals' "armed teachers and **savage** masters" (*doctoribus armatis* ***saevisque*** *magistris*, 1311). They too are "trampled" by the "hidden force of nature" in the form of the animal revolt.

The destruction of the fleet above by the "whirlwind" (*turb**o***: *violento turbine*, 1231) and the destruction of the army in the animal revolt by the animal "mob" (*turb**a***: *turbare*, 1304; *turbabant*, 1314) are manifestations of the same "hidden force in nature" that punishes empire's transgression of nature's limits. In the animal revolt, Lucretius used the *ver-* root several times to describe the rebel animals as enacting a swerve from the linear time of empire, and in the process described the rebel animals as a whirlwind

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that his fancy may have been caught by reading of some striking disaster of this kind, such as that of M. Claudius Marcellus who perished in this way just before the Third Punic war, as he was going on an embassy to Masinissa: *M. Marcellus, qui ter consul fuit, summa virtute pietate gloria militari, periit in mari*, says Cicero in Pison. 44: he several times alludes to his fate by which he was greatly impressed: Livy epit. to L *Claudius Marcellus coorta tempestate fluctibus obrutus est*."

[407] There has been debate as to whether the "certain hidden force" of nature (*vis abdita quaedam*, 5.1233) refers to a superstitious view of nature's power or to the Epicurean view of nature, that there are always atoms working underneath it. Yun Lee Too (1991, 255-7) has shown that it is doubtful, in the passage above (5.1226-35), that Lucretius would have intended such an ambiguity on the topic of religion, and that *vis abdita quaedam* must refer to the power of atoms and not to a superstitious view of nature's power. Cf. Y. L. Too, "A Note on *vis abdita quaedam* (*DRN* 5.1233)."

[408] Lucretius, of course, means *pulchros fascis* ironically.

(*nec poterant…frenis con**vertere** in hostis*, 1316-7; *ad**versum** venientibus*, 1319; *trans**versa***, 1330; *diffugiebat*/*diffugiunt*, 1338/40). In the passage above about nature's limits to empire, an actual whirlwind at sea "tramples" (*obterit*, 1234) the human project of empire (*res humanas...obterit*, 1234). The verb *obterit* occurs only one other time in *De rerum natura*, in a famous scene in Book One where Lucretius describes religion as "trampled" (*obteritur*) by the doctrines of Epicurus: "Wherefore religion is in turn cast under foot and **trampled**, [Epicurus'] victory makes us equal to heaven" (*quare religio pedibus subiecta vicissim*/***obteritur**, nos exaequat victoria caelo*, 1.78-9).

The passage above could not be more explicit about nature's limits to empire. The whirlwind at sea (*turbine*, 1231) "treads down" (*proculcare*, 1235) rods and axes. the *violento turbine* evokes feet (or paws) that trample sources of fear stemming from ignorance of nature's limits—empire or religion. Lucretius seems to be saying that, whether in the form of an animal *turba* or ocean *turbo*, there is a hidden force in nature that will eventually destroy all human overreach into the natural world—whether *imperium* or *religio*—and hold it in contempt (*ludibrio sibi habere*, 1233).[409]

Both the whirlwind and the animal revolt are movements that remind us that no human project, not even the linear time of history, can escape the limits of the natural world.[410] There is no eject button. Whether in the form of a whirlwind-mob (*turbo*/*turba*) of animals or of a storm at sea, the material conditions of the natural world and its

[409] Cp. Peter Sloterdijk (2017 [2001], 146): "While in the allotechnological world domineering subjects are in command over raw materials, in the homeotechnological world it will hardly be possible for raw-masters to exercise power over the finest materials. The very condensed contexts of the interconnected world no longer favorably receive domineering inputs—here only that which also benefits countless others can successfully spread […] Here emerges the matrix of a humanism after humanism. Domination must tend in the direction of ceasing because, as crudeness, it makes itself impossible."
[410] *ligne de fuite*; *fuga*, 1336; *diffugiebat*, 1338; *diffugiunt*, 1340.

temporality are the foundation and limit to any human endeavor. Lucretius' story of animal resistance, therefore, does share some similarities with Jason Hribal, whom I quoted at the beginning of this chapter, insofar as the animals in Lucretius are not just "going wild," "acting on instinct," or "being animals." In Lucretius as in Hribal, they are *resisting*. But their resistance is more about the limits of nature than the human-like psychology of the individual animals. And yet, all four of the thinkers mentioned in this chapter—Deleuze and Guattari, Hribal, and Lucretius—converge on the fact that when it comes to animal resistance what at first looks like an attack on the status quo is often better seen as an attempt to escape it. They animals simply want to get away, to live their own lives, on their own time-scales, for their own purposes. As Deleuze and Guattari put it in *A Thousand Plateaus*: "The animal is more a fleer than a fighter, but flights are also conquests, creations." Like drilling a hole in a pipe, being against is only a means. The end is to combine powers, form packs, and to follow nature into new, more creative territory.

Epilogue: Lucretius and Ecological Thought

We live in a world of ecological crisis. As the turbulence of the natural world increases with the expansion of the crisis, we will, as a species, feel like an increasingly vulnerable and contingent fact of a much larger and older world. We will be constantly confronted with the fact that the conditions for human and nonhuman life are not infinitely elastic. Lucretius shows that humans have always lived within the limits of nature, and that it is possible to work within these limits to improve human life in ways that are mutually beneficial for other animals. This was the idea of Chapter Three of this dissertation, "The Animal Contract." The animal contract imagined a multispecies society in which humans and animals related to one another in instrumental but benign ways. While instrumental and contractarian views of animals are not the most popular these days, they may turn out to be the most realistic option, not least because they take into account the self-regarding aspects of ethical action, as well as the political dimension of ethical life.

It has been said several times throughout this dissertation that the ecological crisis is not only a crisis of science and technology but one of culture and values. At the root of this problem, one that Lucretius' untimely reason systematically avoids, is the separation of facts from values—the separation of the language used to describe nature and the language used to discuss ethics. Ethics is inextricable from Lucretius' systematic vision of the natural world, his *ratio naturae*, and his language frames the natural world in ways that are always attuned to the ethical implications of the history and connotations of words. A case in point is his contrasting of what he believes to be the two fundamental human cultures: the Epicurean Garden and empire. As he compares these two cultures in

the lengthy analogy in Book Two of *De rerum natura*, as detailed in Chapter Four of this dissertation, "Garden and Empire," he does so by describing the contrasting landscapes and phenomenological worlds in which the two cultures live, in language that recreates for the reader the ethical stances of the two cultures. Lucretius' language blurs the line between description and ethics because in his poetic vision of the natural world there is no separation.

Likewise, in Chapter One of this dissertation, "Iphigenia and the Calf," Lucretius reveals the linguistic intersections of gender and nature. In this chapter, Lucretius attacks *religio* as a form of intersectional violence against women and animals. But here, the language Lucretius uses to describe nature and gender become problematic, as he reduces both the humanity of Iphigenia and the animality of the calf and mother cow when linking their suffering in metaphor. But Lucretius' failings are instructive, and offer an opportunity to read him against the grain of his intention to attack *religio*. While gender for him is an afterthought, the complicated nature of his text gains in clarity by reading him from the standpoint of ecofeminist critique. While problematic, his gendered language of women and animals is never separated from his ethical concerns, even when those concerns fail to be entirely ethical.

The language of nature and the language of atoms is at its most ecologically intense in Chapter Two of this dissertation, "Lucretius' Dark Ecology." Here, in a number of puns, Lucretius recreates for the reader the emergence of the first names. Lucretius does so by punning on names for things, using his own more advanced Latin in ways that disarticulate the sounds in names to re-stage the prehistoric phonemes from which names sprang in the state of nature. For Lucretius, names are neither wholly

natural—they are not entirely based on prehistoric humans' reaction to their environment—nor are they entirely cultural—they are not pure convention, not pure play of difference. As ecocriticism seeks a language that hews closer to the natural world, but that is at the same time not naively naturalistic, Lucretius' account of the origin of names may provide inspiration for thinking about a more ecological theory of language, not least because his portrait of the emergence of the first names takes place in a brutal, inhuman natural world—a dark ecology. As large swathes of the globe descend into a dark ecology of mass extinction and wide-spread devastation in the coming decades, the stakes for a language that can hold on to a vanishing ecological reality could not be greater.

In the end, it may not be enough for human projects to respect the limits of nature. History itself, understood as a linear timeline, may also need to come in for critique. Lucretius closely associates linear history with the expansion of empire and its increasing incisions into the natural world. In Chapter Five of this dissertation, "The Animal Revolt," Lucretius shows that no matter how secure-seeming the accumulation of human power and hegemonic time over the alternative temporalities of the natural world may be, the life-processes and temporalities of nonhuman nature are always waiting to break into human time and disrupt it. Lucretius tethers these alternative temporalities to the bodies of animals who, as empire expands, are increasingly forced into the timeline and purposes of empire. The animals revolt and return the linear time of empire to the state of nature. In doing so Lucretius shows that no matter how violent or repressive the forward march of human schemes becomes, it can never escape the natural background within which these human projects take place. Lucretius is the poet of *natura*. For him, the natural background is the foreground, the outside the inside, the wild the house, the house

the wild, and it has always been so. This, most simply, is why Lucretius' poetic vision of reality matters for ecological thought today.

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