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“Sweet Science”: Romantic Materialism and the New Sciences of Life

By

Amanda Jo Goldstein

A dissertation submitted in partial satisfaction of the

requirements for the degree of

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University of California, Berkeley

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Abstract

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by

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Doctor of Philosophy in Comparative Literature

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This dissertation on late Enlightenment poetics and the history of the biomedical sciences unfolds a lapsed possibility near the historical beginnings of the division of labor between literary and scientific representation. Against the pressure, then and now, to treat the culture of science as context or antithesis to literary production, I recover a countervailing epistemology that cast poetry as a privileged technique of empirical inquiry: a knowledgeable practice whose figurative work brought it closer to, not farther from, the physical nature of things.

In his late life science, Morphology, Goethe mischievously re-signified “objectivity” to mean an observer’s vulnerability to transformation by the objects under view: “every new object, well seen, opens up a new organ in us.” Such a gesture at once opens the scene of experiment to the agency of objects, and shifts biology’s question from the life force within beings, to the metamorphic relations between them. From Wordsworth’s call for a “science of the feelings,” to Blake’s for a “sweet Science,” and Goethe’s for a “tender Empiricism,” my project argues for a series of late Enlightenment attempts to re-invent empiricist methodology – and to do so with the resources of verse and figure. These revisionary poetic sciences, I argue, challenged early biological and aesthetic protocols to countenance the mutual, material influence between the subjects and objects of experiment; to represent ‘bare’ sensation as itself vulnerable to social and rhetorical transformation; and to position vulnerability – to impression, influence, and decay – as central, not inimical, to life.

I show that writers from James Thomson and Erasmus Darwin to Percy Shelley retrieved Lucretius’s classical materialism as a model for describing bodies (textual and animal) as porous assemblages, shaped by losses and incorporations of what is not self, and not immediately present. In Lucretius’s *De Rerum Natura*, all things, decaying in time, scatter fine atomic husks from their bodies: *simulacra, figurae, imagines*. Here ‘figures’ are fractions of the real estranged from their sources, and all bodies, not just poets or their language, produce them. Such an epistemology afforded poetry a strong claim upon the real, and proved particularly fit to connect the epochal interest in living bodies to the period’s new sense of its own historicity. Poets deployed Lucretius’s atomist imaginary in order to make historical experience palpable as what Wordsworth called an “atmosphere of sensation.” The material tropes they mobilized to do so, I

argue, have been unrecognizable through the symbol-allegory paradigm that controls most rhetorical readings of romanticism.

Such a view of the period's philosophy of life differs from a more frequent argument, whereby romantic poetics and early biology converge in the ideal of organism or artwork as self-sufficient whole, "both cause and effect of itself" – and the ideal of life or imagination as the "power" productive of such wholes. This Kantian and Coleridgean ideal of "organic form," I argue, has overshadowed our critical understanding of what the late Enlightenment poetics of life might have sought to do. Working through the tense collaboration between the Poet and the Man of Science in Wordsworth's 1800 "Preface" to *Lyrical Ballads* and in Blake's notion of "sweet Science" (*The Four Zoas*, 1797), my introduction extracts two critical lenses – "matter figures back," and "atmospheres of sensation" – with which to discern the rival epistemology described in the dissertation's four body chapters. In chapters that center on, and move outward from, Goethe's poetic biology (1-2) and Shelley's "poetry of life" (3- 4) I show how a neglected strain of materialist natural curiosity sought to uncouple professionalizing biology and subject-centered aesthetics from their rhetoric of agency, autonomy, and power.

In my first chapter, "Composite Life," I translate previously unavailable pieces from Goethe's microscopy logs (1785-6) and *On Morphology* periodicals (1817-24) as emblematic of the broader contemporary interest in studying living beings as composite, rather than organic forms. Here, each "seeming individual" is as a "being-complex," a fractious "assemblage of independent beings." Morphology, moreover, redirects biological inquiry from the question of new life (generation) around which the discipline had coalesced, to the biology and poetics of decomposition and senescence – or, as Goethe names one essay, "Going to Dust, Vapor, Droplets." What, this essay begins to ask, might life look like from the perspective of the non-reproductive, but communicative, effluvia that mediate between beings? What arts of discomposure would be adequate to this view? Focusing on an experiment in which a cut mushroom "draws" its own image in spores, I argue for the credibility in the period of non-human acts of representation: that is, for material (neo-Lucretian) images that emanate not just from agents, but from things.

My second chapter, "Thinking Like an Object, Contra-Kant" concerns the aesthetic and poetic stakes of the experimental method Goethe calls "tender Empiricism," an approach to composite life that I read as a sly critique of Kant's durable accounts of aesthetics and organism. From Goethe's perspective, Kant's celebrated epistemological modesty – his concern that a man not "presumptuously ... tack a whim ... to the objects" (Goethe's paraphrase) – screens a more significant hubris: the presumption that a person could produce whims without objects and a sensing body; and, more basically, that what is important about a subject is the way in which he is not a natural object. Re-valuing the passive quality of tenderness as an epistemic virtue, Goethe experiments in "objectively active thinking," permitting the way the self is (also) an object to re-enter natural and aesthetic philosophy. The chapter culminates in a re-reading of the didactic poem *Dauer im Wechsel* ["Durance in Change"] from the perspective of objective figuration, centering on a neo-Lucretian simulacrum that, I argue, Paul de Man consequentially mistook for a symbol.

In Chapter Three I move from Goethe's poetic morphology to Shelley's "poetry of life." "Growing Old Together: Composite Physiognomy in *The Triumph of Life*" examines the way Shelley's *Triumph* revives Lucretian corporeality in order to rebuke the markedly triumphalist rhetoric of both contemporary vitalist physiology and post-Waterloo historiography. Offering a

new account of the face-giving trope of prosopopeia in the poem, I argue that Shelley mobilizes Lucretian simulacra in order to think through the way personal bodies produce and integrate passages of historical time. Representing aging faces as mutable registers of the “living air” of a post-Napoleonic interval, *The Triumph* depicts senescence as the unintended work of multitudes, pressing towards a biology and epistemology of transience that holds rhetorical, vital, and historical materialisms together.

In Chapter Four, “The Natural History of Violence: Atomist Pre-Histories for Shelley’s *The Mask of Anarchy*,” I continue the increasingly historical trajectory of the dissertation’s materialism by turning to Shelley’s poetic representation of the 1819 “Peterloo Massacre.” Here, I attempt to put the dissertation’s valuation of epistemological “sweetness” and “tenderness” to the test of an event in which subjects’ vulnerabilities were tragically violated. Focusing on the *The Mask*’s preoccupation with the way wrongly spilled blood enters geological and meteorological cycles, I argue that the poem, which Shelley called “wholly political,” is also a form of natural history. I recruit Erasmus Darwin, William Cowper, and James Thomson as well as Walter Benjamin to argue for a didactic natural historical mode in which a poem speaks polemically for bloodstained materials that do not, in themselves, disclose their provenance. In this way I suggest that, despite its reputation, pre-Darwinian natural history – and especially its poetry – is anything but a-historical or a-political.

In the dissertation’s Coda, “Marx’s Sensuous Science” I pick up this materialist current at the start of the historical materialism more familiar to present-day critics: Karl Marx’s doctoral dissertation on classical atomisms. I link Marx’s reception of Lucretius to the idea of natural history that emerges in his “Economic and Philosophical Manuscripts of 1844,” which paraphrase Goethe on tender empiricism, and argue (like Blake, Wordsworth, and Shelley) that any sensation-based science needs to countenance the senses’ susceptibility to historical re-configuration. The Manuscripts strain, very much in the tradition my chapters lay out, towards what Marx calls a “sensuous science.” Like Goethe and Shelley, Marx presses past the biology of organicism in order to adumbrate “man’s inorganic body,” a body neither contemporaneous nor coincident with itself and whose life is traversed by and contingent upon innumerable others. In the Coda I take this cue to compare Marxian and neo-Lucretian ideology critique, asking how the embodied impressionability valued in “tender,” “sweet,” and “sensuous” sciences may run, but may also outrun, the risk Marx named “reification.”

For the Lee-Haubrich-Goldstein Clan of Northern California

In gratitude for these seven years
in your loving company.

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Introduction:

“SWEET SCIENCE,” BY WAY OF BLAKE

*Knowledge is not seeing, it is entering into contact,
directly, with things; and besides, they come to us.*

—Michel Serres, *The Birth of Physics in the Text of Lucretius*

1. Sweet Science and the Honeyed Cup

“Thy self-destroying beast formd Science shall be thy eternal lot,” threatens Blake’s Eternal Man in an outburst of frustration that finally provokes the lethargic Urizen to join in the work of Apocalypse under way in *The Four Zoas* (119:40, E390).¹ That Blake could level “Science” as a curse comes as no surprise: his famously scathing critiques of the *Lumpen-Empiricist*, “Bacon. Locke & Newton / ... / Whose Science is Despair” lay bare the way an experimentalism insensible to the historicity of the “senses five” unwittingly scaffolds present power arrangements (*Milton* 41: 5, 15). But it *is* a surprise that “Science” – not Imagination, not Poetic Genius, not Energy, Albion, or any of Blake’s more usual protagonists – presides over the “fresher morning” that dawns at the close of *The Four Zoas’ Night the Ninth, Being The Last Judgment*. Over Blake’s “Dream” of a post-apocalyptic Earth, “sweet Science reigns”:

The Sun arises from his dewy bed & the fresh airs
Play in his smiling beams giving the seeds of life to grow
And the fresh Earth beams forth ten thousand thousand springs of life
Urthona is arisen in his strength no longer now
Divided from Enitharmon no longer the Spectre Los
Where is the Spectre of Prophecy where the delusive Phantom
Departed & Urthona rises from the ruinous walls
In all his ancient strength to form the golden armour of science
For intellectual War The war of swords departed now
The dark Religions are departed & sweet Science reigns
End of the Dream (139: 1-10)

This project began as an attempt to grasp the science Blake called “sweet,” the one to which this often fiercely anti-scientific poet could imagine ceding place at the end of time. For that is what seems, at first, to happen in this passage: the prophet Los, usually read as the poet’s heroic avatar, is nowhere to be found. Suddenly dismissing this poet-protagonist as a “delusive phantom,” Blake rehearses some famous materialist and empiricist rejections of figurative language.²

But in Blake's passage, of course, the poet Los is less "Departed" than hidden in plain sight, where the hide-and-seek chorus, "*Where is the Spectre of Prophecy where the delusive Phantom,*" teases us to discover him. (Initiates in Blakean mythology will recognize the same effect on an allegorical plane: Los is not so much "Departed" as reabsorbed, with Enitharmon, into the figure of Urthona, who had manifest previously as "Divided" into male and female portions in accordance with the fallen regime of sexual reproduction.) Sweet science is reigning – or raining? – in a *poem*, as the emphatic (s)word-play of the last two lines encourages us to remember. In the reign / rain pun, the epic and allegorical dimension, the heroic figure of Urthona who shapes "the golden armour of science / For intellectual War," is curiously reabsorbed into the weather of this subsequent world, "rain" audible now as the fourth, watery element – with Earth, air, and fire ("Sun") – by which the "ten thousand thousand springs of life" in the third line manage "to grow." That is, when "sweet Science" is permitted to "rain" as well as "reign," the golden scales of Urthona's armour are equally the droplets glistening in the early sunlight of the passage's first lines. This begins to account for extraordinary tranquility that the last three words let fall upon the "intellectual War" that *The Four Zoas* prophesy.³

The Four Zoas calls Urthona, this composite poetic and scientific figure whose strength it softens to an elemental rain, "ancient." The word is a clue that Blake's phrase "sweet Science" in fact glosses a very old formula for the inter-animation between science and poetry: for this dissertation it has been a clue to a series of linked, Romantic era experiments in the strategic fusion of scientific and poetic means of knowing. Some decades before Horace's memorable endorsement of the poet who mixes sweetness and usefulness – *qui miscuit utile dulci* – delighting (*delectando*), and teaching (*monendo*) the reader at once, Lucretius's didactic epic *De rerum natura* (c. 55 BCE) minted the enduring topos of the "honeyed cup" to describe the way his poem served up Epicurean natural philosophy.⁴ *De rerum natura* casts itself as the sweet coating that renders palatable the bitter medicine of Epicurean doctrine – a materialist physics and ethics that reserves no transcendent privilege or supernatural permanence for the human soul. Lucretian poetry presents itself as that which "tinge[s]" this difficult news "with Sweet" (Creech, 1.946).

Epicurean doctrine begins, like the reign of Blake's "sweet Science," with elemental rain: Epicurus argued that all things are varied and variable congeries of indestructible, material minims of body (atoms) and void; having weight, atoms, in the words of Thomas Creech's 1682 translation, popular throughout the eighteenth century, "needs must fall, / Like Drops of Rain" through the void (Creech, 2.213). What Lucretius adds next is not on record in Epicurus's surviving writings, and remains an irresistible provocation for philosophers: if atoms could only continue to fall, untouched, through the void, the extant universe of compound bodies could never have come into existence.⁵ They must, therefore, also be apt to "DECLINE / Tho' VERY LITTLE, from the exactest Line" – so, coming into contact, they can produce the complex figures (*perplexis figuris*), textures and entanglements that constitute the apprehensible world (Creech, 2.213, 210-11, 102). In *The Book of Los*, Blake makes the notoriously causeless and world-producing Lucretian *clinamen* part of Los's early history: "Falling, falling! Los fell & fell / Sunk precipitant heavy down down / / thro' the void" (4: 28-29, 32). Then, though, "contemplative thoughts first arose" – apparently Lucretian ones – and "His downward-borne fall. chang'd oblique" and "in process of falling he bore / sidelong on the purple air" (4: 39, 42, 47-8).

Like Blake's "sweet Science" in the *Four Zoas*, that of Lucretius and Epicurus sets out to dispel superstition (Blake's "dark Religions") and violence ("The war of swords"). Both

problems, according to Epicurean philosophy, are destructive strategies humans have developed to compensate their fear of death, a fear that sensuous examination and enjoyment of nature in its mortality and transience can answer better. Lucretius's (still unlearned) lesson is that war cannot defeat terror because fears cannot be frightened: "fears and haunting cares fear neither the clang of arms nor wild weapons" (2.49, Loeb⁶). Rather, in a passage repeated four times in the epic:

Dark fears of the mind, then banish quite away
Not with the Sun-beams, or the light of day,
But by such *species*, as from Nature flow,
And what from right informed reason grow.

*Hunc igitur terrorem animi tenebrasque necessesit
Non radii solis neque lucida tela diei
Discutiant, sed naturae species ratioque.*
(Evelyn (1656), p.21-23, [1.146-8])

For radical, high Enlightenment culture, the appeal of Lucretian materialism is well known to have lodged in that last word, *ratio*: as Peter Gay and others have taught, Lucretius was recruited as a classical herald of reason's power to free humankind from the thrall of dark superstition.⁷ But the passage's subtle insistence that light is *not* terror's antidote – "this terror of mind" [*terrorem animi*], Lucretius writes, will *not* be banished by "light" and "Sun-beams" – must have rung out with welcome sophistication to late-Enlightenment and Romantic generations reared in the knowledge that Terror could be Enlightenment's consequence as well as its casualty.⁸ The chapters on Romantic neo-Lucretianism that also track a shift in focus to *ratio*'s pendant here, *species*. This appropriately multifarious term, which John Evelyn wisely left untranslated (above) and which many translations simply elide,⁹ gives terror-dispersing power to the visible outsides of things: *naturae species* connotes the 'view,' 'sight,' or 'spectacle' of nature, nature's 'outward appearance,' 'shape,' 'form,' 'figure,' 'aspect,' or 'mein' (Lewis & Short). *Species* may also be plural here: Evelyn views it that way, and his rendering "such *species* as from nature flow" highlights a technical sense that *species* had acquired in Medieval and Early Modern usage, glossing a shared aspect of both atomist and Aristotelian and sciences of sensation. About this last sense, there will be much more to say: *species* here denotes not only a subject's "view" of an object, or that object's "look," but the subtle material media that, "flowing" between them, enable one body to affect another in perception.¹⁰ As we will see, Lucretius's leveling of nature's flowing face and its ratio – *naturae species ratioque* – constitutes a rare and radical validation of sensuous, phenomenal appearance as real disclosure of unseen things.¹¹

In pointing us, through the phrase "sweet Science," to the Lucretian model for the cooperation between science and poetry, Blake designates a lapsed possibility at the historical beginnings of the division of labor between literary and scientific representation. Against the pressure, then and now, to treat the culture of science as context or antitheses to literary production, this dissertation follows Blake's gesture to uncover countervailing materialist epistemology that cast poetry as a privileged technique of empirical inquiry: a knowledgeable practice whose figurative work brought it closer to, not farther from the physical nature of things. I argue that versions of Blake's invocation of Lucretian "sweet," poetic science recur variously in Romantic era writing as means of contesting poetry's increasing specialization on the subject and its concomitant retreat and expulsion from the domain natural scientific representation.

Lucretian materialism also proves fit to contest the prevailing representation of one of the period's defining natural scientific objects – the living organism – around which the new sciences of life were taking shape in the late eighteenth and early nineteenth centuries.

From Blake's call for a "sweet Science," to Wordsworth's for a "science of the feelings," to Goethe's for a "tender Empiricism," my project argues for a series of late Enlightenment attempts to re-invent empiricist methodology – and to do so with the resources of verse and figure. These revisionary poetic sciences, I argue, challenged early biological and aesthetic protocols to countenance the mutual, material influence between the subjects and objects of experiment; to represent 'bare' sensation as itself vulnerable to social and rhetorical transformation; and to position vulnerability – to impression, influence, and decay – as central, not inimical, to life. In chapters that center on Goethe's multi-generic biology and Percy Shelley's "poetry of life," I attempt to show how writers from James Thomson and Erasmus Darwin to Karl Marx retrieved Lucretius's classical materialism as a model for describing bodies (textual and animal) as porous assemblages, shaped by losses and incorporations of what is not self, and not immediately present.

Lucretian materialism afforded poetry a strong claim upon the real and proved fit to connect the epochal interest in living bodies to the period's new sense of its own historicity. The material tropes Romantic era writers mobilized to do so, I argue, have been unrecognizable through the symbol-allegory paradigm and exclusively linguistic materialism that has controlled many rhetorical readings of romanticism after Paul de Man. As I will begin to show in the second part of this introduction, the version of the period's philosophy of life uncovered by attention to its neo-Lucretian impulse differs from a more familiar argument, whereby Romantic poetics and biology converge in the ideal of the organism or artwork as self-sufficient whole, "both cause and effect of itself" – and the ideal of life or imagination as the "vital power" productive of such wholes. This Kantian and Coleridgean ideal of "organic form," has overshadowed our critical understanding of what the late Enlightenment poetics of life might have sought to do.

In what follows, I set the stage for what these aspirations toward "sweetness" and "tenderness" in empirical practice might mean by examining Lucretius's "honeyed cup" metaphor in depth, with special attention to the features that most interest its Romantic appropriators. Romantic neo-Lucretianism point above all to Lucretius's extraordinary account of figuration and its potential to recast poetic representation as "objective" and "historical" in unfamiliar to us – but not unreal – senses of those terms. In the Introduction's second part, I return to Blake in some detail in order to lay out the contemporary life-scientific landscape and to furnish an opening example of Romanticism's internal critique of the ideal of self-sufficient organic form with which it is so often associated. A summary of each of the dissertation's chapters follows these two parts: one could also begin reading there and proceed directly to Chapter One.

a) *Matter figures back*

According to a twice-repeated extended simile, *De rerum natura*'s poetic features – its status as composed (*pango, -ere*) song or charm (*carmina*), its verses (*versus*), its grace of the Muses (*musaeo lepore*), and implicitly, its propensity for figures such as the one at hand – "tinge" the bitter medicine of Epicurean natural philosophy "with Sweet":

Tho' my Subject's dark, my verse is clear,
 and sweet, with Fancy flowing ev'ry where :
 And this design'd : For as Physicians use,
 In giving Children Draughts of bitter Juice,
 To make them take it, tinge the Cup with Sweet,
 To cheat the Lip ; this first they eager meet,
 And then drink on, and take the bitter Draught,
 And so are harmlessly deceiv'd, not caught :
 For by this Means they get their Health, their Ease,
 Their Vigor, Strength, and baffle the Disease.
 So since our Methods of Philosophy
 Seem harsh to some; since most our Maxims fly,
 I thought it was the fittest way to dress
 In pleasing Verse these rigid Principles,
 With Fancy sweet'ning them ; to bribe thy Mind
 To read my Books, and lead it on to find
 The NATURE of the WORLD the RISE of THINGS,
 And what vast Profit too that Knowledge brings.
 (Creech, 1.942-59)¹²

As readers of *De rerum natura* have long understood, the biggest “cheat” in the passage is the way the sweet-speaking (*suaviloquenti*) Lucretius passes off his poetry as contingent sweetener to the bitter but essential dose of “rigid Principles” and does so in an extended simile that seems to epitomize poetry as fanciful figurative “dress.” Lucretius was composing verse science under pressure: Epicurus had warned his followers against the writing of poetry, and classicists affirm that prose had, in the meantime become an established medium for the representation of technical and natural philosophic knowledge: “the use of poetry could be defended only if it brought to the subject something which prose could not” (Dalzell, 28).¹³ Here I begin to take Lucretius’s cues for undoing his modesty topos, but in what I hope to be an unexpected way. Rather than prove that this poetry is neither sweet, nor contingent, nor figurative, nor – to add a feature from Blake’s passage on sweet Science in *The Four Zoas* – ghostly, I want to begin to examine these professedly immaterializing qualities in light of the materialist ontology the poem offers.

This begins in the last words of the “honeyed cup” passage cited above (given here in different translation, because Creech’s version had written them over):

I have chosen to set forth my doctrine to you in sweet-speaking
 Pierian song, and as it were to touch it with the Muses’ delicious
 honey, if by chance in such a way I might engage your mind in my
 verses, while you are learning to see in what shape is framed the
 whole nature of things.

*volui tibi suaviloquenti
 carmine Piero rationem exponere nostram
 et quasi musaeo dulci contingere melle,*

*si tibi forte animum tali ratione tenere
versibus in nostris possem, dum perspicis omnem
naturam rerum qua constet compta figura.*

(Loeb, 1.945-50)

The modesty conceit suggests that the addressee (patient) is “deluded as far as the lips,” superficially beguiled by the poetry (honey) into taking in something else entirely, sad and salutary doctrine (bitter medicine) (Loeb 1.939). The figure mobilizes honey’s adhesiveness to this effect, emphasizing the poet’s capacity to hold the listener’s mind fast [*teneo, -ere*] with a grasp that (massage-like) intends nevertheless to loose it from other binds: the passage had begun, “I proceed to loose the mind from the knots of superstition [*religionum animum nodis exolvere pergo*]” (1.932, Loeb).” Yet there is a mollifying pun even in this firm grasp, due to the verb’s infinitive form, *tenere*, and an enjambment (1.948-9) that leaves open, momentarily, the possibility that what will be meant is *tenere*, the adverb: *softly, delicately, tenderly, yieldingly*.

Surprisingly, the passage’s last word – what the speaker hopes a person detained in the adhesive sweetness of the verse, in the poet’s grasp that loosens, will discern and observe [*perspicio, -spicere*] – is not *ratio* (943) but *figura*, figure, shape: “while you examine by what woven figure [*compta figura*] the whole nature of things holds together [*constet*].”¹⁴ The whole nature of things’ seems especially, flamboyantly figurative because Lucretius calls its figure *compta*: ‘braided’ (hair), ‘embellished’ (rhetoric), ‘dressed up,’ ‘elegant’ (person), arrayed or arranged. This can be read, of course, as a self-reflexive moment in which, just where we expect to see through [*perspicio*] the sweet coating and into the poem’s natural philosophical content, we are instead deflected back upon the delicious surfaces of its own embellished shape, the poem ceasing to refer to the nature of anything outside its own discourse. But here and in the chapters that follow, I will be following through on a stranger possibility (to us) that *De rerum natura* extends with its poetry and its science: that figure in the physical sense of the shape of the universe and in the rhetorical sense of trope, image, figure of speech or text do not differ at the level of their matter.

Indeed, neither the physics nor the poetics of *De Rerum Natura* enforce a distinction between the physical sense of *figura* as bodily shape or form and the rhetorical sense of *figura* as trope (*simulacrum et imago* (2.112)) – rather, the poetry and the science each presume and constantly rediscover the material continuity between poetic and physical shapes, and in this way constitute a single knowledge. Goethe, in the eighteen-teens, will draw on this knowledge to theorize the life science of *morphology*, a logic of shape and form that meaningfully confuses object and representation. In Lucretius, the phrase *in qua constet compta figura* is both typical and illuminating in this regard: to exist as anything other than an atom, which in the Lucretian view is the only thing that exists alone and indivisible, is to stand together [*consto-*] interwoven [*compta*] of smaller elements and the spaces [void] between them. In this way *figura*, in that familiar physical sense of having a bodily shape, connotes for Lucretius the contexture through which a compound body, whether a universe, a dust mote, or a poem, persists. But in *De rerum natura*, such stasis has the status of a freeze-frame image: in fact, every shape is constantly traversed, bombarded, de- and re-composed by the in- and effluence of other particles.

And this is where we encounter another dimension of Lucretian *figura*, one we are inclined to set off as a distinct, second and rhetorical sense, but which it is Lucretius’s extraordinary gesture to posit as part of the first: all things, as they decay in time, ceaselessly emit atoms from the surfaces of their bodies. Composite bodies [*res*] shed atoms not singly but in

configuration, as subtle tissues that, like a snake's discarded skin, bear the outline of the form from which they were shed. If they chance to strike a sentient being, *De rerum natura* explains, these airborne husks are the data of perception and thought: they touch the sense organs and the fine particles of mind with floating traces [*vestigia*] of near or distant objects (4.87). Lucretius calls these slight but real films "*figurae*" and by two other names that render their tropological dimension unmistakable: *simulacra* and *imagines*.

De rerum natura gives no further, differentiating definition that would serve to distinguish the kind of figure, simulacrum or image produced by the poem or its speaker from the general figurative activity everywhere evident in the world at large. Instead, the work is an epic example of the kind of poetry and natural knowledge that results from declining to define figuration primarily as a strategy of consciousness and a linguistic effect: here all bodies, not just human subjects and their language, are productive of tropes, likenesses, and metaphoric transports. Anything that has a figure, a body compounded of parts, emits figures, *simulacra*, as those parts fall away. Unlike Platonic simulacra – for the target of Epicurean philosophy, it is thought, was Plato's theory of forms¹⁵ – the Epicurean and Lucretian kind are no less real than the forms they represent. Or rather, a simulacrum is less real (less thing-full) only if measured by weight: a material fraction of a material body, *simulacra* differ from their sources in position, texture, and distance traveled rather than in kind. Both referent and image are particulate congeries (*figurae*), one more dense and one more rare. At stake is a lapse in time rather than in reality.

Different inflections of this materialist epistemology of figuration and sensation will recur in each of the chapters that follow, which focus on Goethe and Shelley's appropriations of *De rerum natura* in the eighteen teens and twenties. But in each case, these Romantic era texts take particular interest in several key consequences of Lucretian poetic science that are worth mentioning at the outset. First, against the anti-figural premises (though not the practices) of New Scientific and Enlightened empiricism, Lucretian materialism suggests that any sense-based scientific methodology is necessarily a figurative transaction.¹⁶ *Simulacra*, *figurae* and *imagines* are the indispensable media of sensuous perception: their touch produces sensation by transfiguring – entering, tearing, smoothing, and moving – the particulate mesh of the perceivers' body (figure).¹⁷ I argue in this dissertation that when Blake, Goethe, Marx, and Shelley respectively, call for a "sweet Science," a "tender Empiricism," a "sensuous" natural philosophy, and a "sense awakening, and yet tender," their calls for *sweetness* and *tenderness* suggest that present protocols of empirical observation need to be renovated by the theory of knowledge as trans-figuration that Lucretius extended with his "honeyed cup." Against the virtue of impartial observation advanced not only in post-Kantian aesthetics but also in post-Kantian empiricism, these writers insist that there is no scene of perception, aesthetic or scientific, that does not involve a mutually transformative exchange of parts. In each case, the series of Romantic calls for sweetness and tenderness renovate the empirical habitus from two sides: they entail both an attitude toward the object that is conscious of its fragility, and a concomitant consciousness – indeed, a cultivation – of the permeability of the observing self. "Every new object, well seen," as Goethe puts it in his mischievous re-signification of scientific objectivity "opens up a new organ in us."¹⁸

Indeed the "honeyed cup" topos emphasizes that one effect of the poet's *dulce labor* is to induce the auditor *to open* to a kind of knowledge that is at once potentially frightening and supportive of life. In *De rerum natura*, the knowledge to which one must open turns out to be a lesson in ineluctable openness, in the physical permeability of a self involved in constant

material interchange with other things. “[H]owever solid things may be thought to be,” Lucretius repeatedly insists, they are in fact “rare [*raro*],” open textured and loosely bound – “nothing exists unless loosely bound in body” [*nil est nisi raro corpore nexum*] (1.346-7, 6.958). The open-texture of bodies that appear bounded and circumscribed is an issue of extraordinary importance to *De rerum natura*, which constantly directs attention to the matter (from food to figures) that passes between them. And unlike the highest and better known Epicurean philosophical pleasure of *ataraxia* – a negative, freedom *from* anxiety that arguably does not survive its translation into poetry intact¹⁹ – sweetness in *De rerum natura* tends to describe pleasures of in- and ex-corporation. Smooth particles of juice, for instance, “sweetly touch and sweetly stroke” [*suaviter attingunt et suaviter...tractant*] as they pass through “the pores [*foramina*] of the palate and the winding passageways of the open-textured tongue [*rarae...linguae*]” (4.623-4; 620-1 Geer/Loeb).” In its sweetness, then, this form of didactic poetic action induces the listener to experience with pleasure rather than fear this basic tenet of atomist corporeality: the open, vulnerable texture of his body and its dependence upon the motions of other things.²⁰ We will see Goethe and Shelley retrieve this version of figural corporeality as an alternative to the organicist rhetoric of autonomy, integrity, and power.

Hand in hand with its necessarily figurative – but not, for that reason, skeptical or linguistic-constructivist – version of empiricism, *De rerum natura* extends a model of poesis crucially different from some of the more persistent strains of Romantic self-definition and its critical legacy. One thinks, for instance, of Lacoue-Labarthe and Nancy’s seminal reading of Jena Romantic criticism as a theory of literature’s absolute self-reflexivity, “its own infinite questioning and as the perpetual positing of its own question” (83), or of M.H. Abrams’s powerful thesis that Romantic poetics project the life and passion of mind upon nature in order to “reanimate the dead universe of the materialists” (*Mirror*, 64-65).²¹ If, however, as in *De rerum natura*, all things are credited with the capacity to produce tropes, then the figures that turn up in poems need not derive from the poet’s internal faculty of imagination or attest to the text’s infinite self-reference. They may also derive from without, from empirical experiences that, as Goethe writes of the “wavering shapes” in the Dedication to his *Faust*, “press in!” (3).

Lucretius is wont to describe a figure [*simulacrum et imago*] as “always moving and present before our eyes” [*ante oculos semper sobis versatur et instat*]. At times they are even “striving ardently to fall upon your ears ... and a new aspect [*species*] of things to show itself” [*tibi vementer... molitur ad auris / accidere et nova se species ostendere rerum*] (Loeb, 2.112-13; 1024-5). Yet often “like dust clinging to the body,” like “the impact of a mist by night, or a spider’s gossamer threads,” such forms of natural disclosure “are so exceedingly light that they ... find it a heavy task to fall” (3. 382-3, 387-8). *De rerum natura* is the didactic discourse that works to sensitize its readers to the subtle impact of what often passes unfelt, “arrest[ing],” as Shelley would say, “the vanishing apparitions which haunt the interlunations of life” (*Defence* §39, 532). From the perspective of this physical poetry and poetic physics, registering and communicating *figurae* is central to any attempt to investigate and represent the shapes, events, and processes that make up the natural world (including its human subset). And by these lights, poetry, rich in figures, is an extraordinary technique of empirical inquiry with a strong claim to representing the activity of the real.

To argue, as I will be doing in the following pages, that Lucretius’s mode of materialist, didactic poesis remained available to Romantic era writers is to accept an unfamiliar possibility: that the faces, forms, and figures that Nature puts on in Romantic poetry might signal attempts to cede poesis to something besides the self. These attempts are hopelessly entangled with an

observer's own inherently figural means of knowing: but might this be, on occasion, fortuitous as well as necessary? Especially in Chapters Two and Three, I will attempt to show how this form of materialist rhetoric has eluded rhetorical readings of Romanticism in the tradition of Paul de Man – for whom the materialism of the signifier tends violently to interrupt figuration – as well as the way it differs from pan-textualism and pure linguistic constructivism.²²

Thus, over the course of this dissertation, I will be arguing that in its Romantic era appropriations, *De rerum natura* offered something other than an model for how to instruct and delight by coating difficult scientific knowledge in sensuous poetic form. Lucretian materialism was of extraordinary strategic value in resisting the increasing polarization between literary and scientific representation: a process that, Lorraine Daston and Peter Galison conclude in their monumental study of the history of scientific objectivity, escalated to the point of diametrical opposition during the fifty year dissemination of Kant's critical philosophy (37).²³ Romantic neo-Lucretianism counters by presenting scientia and poesis as mutually implicated in processes of figuration that are both the object and medium of natural knowledge. For thinkers certain that something of the objects would be lost to representation if poetry was constrained to the sphere of the self, Lucretian materialism offered a rare ontological and epistemological counterweight. It enabled Goethe and Shelley, among others, to articulate epistemological stances that rebuked naïve empiricist pretense without relinquishing the task of knowing the objects. Attending to this possibility helps us to define positively, rather than negatively (as not-yet-disciplined, as clinging to pre-modernity) the period's generically deviant experiments.

b) *Atmospheres of sensation*

Without this *non-contemporaneity with itself of the living present*, without that which secretly unhinges it, without this responsibility and this respect for justice concerning those who *are not there*, of those who are no longer or who are not yet *present and living*, what sense would there be to ask the question “where?” “where tomorrow?” “whither?”

—Jacques Derrida, *Spectres of Marx*, xix.

In the brief reading of “sweet Science” in Blake's *The Four Zoas* with which we opened, I pointed out that the collaboration between science and poetry insinuated elements of a prior order into the “thousand thousand springs of life” and the “fresher morning” represented there. The “Spectre Los,” whose Los[s] the passage announced but did not fulfill allegorized the diffuse persistence of some past in the vibrant present scene: the “*non-contemporaneity with itself of the living present*,” as Derrida put it in his study of historical materialism's spectres (above epigraph). I want to end this opening exploration of the resources of Lucretian figural materialism by returning to the temporal lapse inherent in *De Rerum Natura*'s account of perception by way of simulacra, which always strike an observer after traversing a distance. Because they vary in age and provenance, and because of their great velocity, simulacra insinuate temporal heterogeneity into any perceived present: “in one moment of time perceived by us ... many times are lurking [*tempora multa latent*]” (4.794-6). As I argue in Chapters 3 and 4, as well as in the Coda on early Marxian historical materialism, this heterogeneity becomes a

resource for Romantic historicism, helping to articulate the formative pressure on the present of prior and distant circumstance. But for the moment, the quickest route to this idea passes through Wordsworth's 1802 "Preface" to *Lyrical Ballads*.

In that seminal piece of Romantic poetic theory, Wordsworth grounds his experimental poetics in a sensuous physics of action and reaction and a remarkably Epicurean pleasure-index: the Poet "considers man and the objects that surround him as acting and re-acting upon each other, so as to produce an infinite complexity of pain and pleasure" (252). The "Preface" next begins to mitigate an antithesis it had posited earlier between "Poetry and Matter of fact, or Science" (284n). Now, Wordsworth issues an ambivalent reconciliatory challenge to the "men of Science," one that hinges on their capacity to provide "the Poet" with something called an "atmosphere of Sensation" – as good a name as Lucretius's likeness-laden air – "in which to move his wings." Here is how Wordsworth describes the "material revolution" that would render scientific objects fit for his poetic attention:

If the labours of men of Science should ever create any material revolution, direct or indirect, in our condition, and in the impressions which we habitually receive, the Poet ... will be ready to follow the steps of the Man of Science ... he will be at his side, carrying sensation into the midst of the objects of the Science itself. The remotest discoveries of the Chemist, the Botanist, or Mineralogist, will be as proper objects of the Poet's art as any upon which it can be employed, if the time should ever come when these things shall be familiar to us, and the relations under which they are contemplated by the followers of these respective Sciences shall be manifestly and palpably material to us as enjoying and suffering beings. (253-4)

The crux of this passage comes late, as Wordsworth subtly shifts focus from the propriety of chemical, botanical, and mineralogical objects themselves to what he calls "the relations under which they are contemplated." It might be reasonable for Wordsworth to want to know the general and concrete import of scientific "discoveries" that seem "remote" and specialized, but upon close inspection, this is not what the passage demands. Instead, Wordsworth wishes to feel the *relations of contemplation* that obtain between scientific objects and their specialists - to have those relations rendered "manifestly and palpably material" to (the rest of) "us." An "atmosphere of Sensation" would be one name for the fulfillment of that challenge: it suggests that, in the space *between*, over, and around scientist and object, the climate of observation itself must be made palpable, as it engulfs, enables, and influences that encounter. Variants of this demand, as we will see, are central to the late Enlightenment or Romantic revisions of empiricist experimental protocol: they attempt to come to terms with the fact that there are affective, social, and historical factors conditioning the present possibilities for sensation – contingencies that shape what an earlier generation of empiricists had taken as the unproblematic basis for knowledge.

Though it sounds from the above passage that for Wordsworth this task would fall purely upon the "men of Science," in fact their assignment closely echoes that of "the Poet" in the "Preface." In poems, Wordsworth argues, certain *relations* of contemplation must themselves obtrude as phenomena. To drastically abbreviate a passage that in fact performs the torturous "fluxes and refluxes" involved in relation-contemplation, it is by "contemplating the relation" between thoughts (thoughts being "the representatives of all our past feelings," capable of exerting regulatory power over our new ones), that "we [Poets] discover what is really important

to men” (240-1). Wordsworth’s projects for both Poetry and Science coincided for each coincide significantly in the task of making relations *material*, the same gesture that uncovers them as *mattering*. The phrase “atmosphere of sensation” points us to a role for scientific poetry or poetic science in heightening, in making felt – making “manifestly and palpably material” – the temporally mixed atmosphere that subsists between beings and in sensitizing readers to the slight but real relations that pressure and support present perceptual norms. *De rerum natura*’s utility is obvious here: it is the science and poetry of unseen material relation; it concludes that an unapprehended multiplicity of relations inheres in every sensuous perception; and it invents a discourse of the very slight, very small, and very diverse in order to grant these relations the dignity of material weight.

For Lucretius as for Wordsworth’s 1802 Poets and men of Science, the positing of a palpable “atmosphere of Sensation” seems also to entail “giving flesh” to feel it: “Science,” Wordsworth concludes, “thus familiarized to men, shall be ready to put on, as it were, a form of flesh and blood”(254). Clearly, there is a materialism here, and also a life science and poetics of animation. Yet this is a materialism not of deep structures but of atmospheres thick with relations, and a vital science less concerned with organic unity than with registering, amplifying, and communicating the ambient touch of a collective present. The flesh in question is the more or less alert skin exposed to an atmosphere that takes up the negative space and lapsed time between bodies, affecting them from the outside. Shelley’s *The Triumph of Life* will call this substance a “living air” and burden it with attenuated historical incident.

2. Romanticism’s Other Lives

Incessant the falling Mind labour’d
Organizing itself

– Blake, *The Book of Los*, 4:49-50

The Romantic era credibility of the rare Lucretian notion that “matter figures back” owes much to the emergent sciences of life. Directing experimental scrutiny towards the special properties and propensities of living matter, eighteenth century physiology, medicine, and associated disciplines had shifted focus from the inert, passive matter exemplary for classical physics to living, active and susceptible bodies endowed with specific powers and propensities toward form. The eighteenth century’s most controversial natural objects – headlessly reproducing polyps, animalcules proliferating ‘spontaneously’ in sterile vials, bodily fibers reacting with “irritation” and “sensibility,” chaotic seminal matter prescribing family likenesses – obtruded the possibility that mere *matter*, and not just intelligence, might be productive of figures, copies, and likenesses. The most pressing scientific questions concerned how unorganized matter could shape itself into an intricate embryo; how the sensitive, nervous, fibrous and metabolic body might transfigure and re-present stimulæ; and how static taxonomies might be inadequate to the dynamics of animal and geological nature-in-motion and with a history.

It is no longer news that Blake and indeed all of the major Romantic poets were intimately engaged in what we would now distinguish as the “scientific” study of life.²⁴ And yet as literary historians, re-integrating Romantic poetics and philosophy with the co-evolving life

sciences, have rediscovered the founding eighteenth century controversy between “preformism” and “epigenesis,” we have been too quick, I think, to seize upon epigenesis – construed loosely as the vital, dynamic, indeterminate refutation of deistic, mechanical, preformist predetermination – as romantic poetry’s fit, provocative and progressive life science. Though I will briefly rehearse the history and meaning of both terms here, I have no intention of rehabilitating preformism as a corrective. On the contrary, we need to begin to discriminate between diverse Romantic era possibilities for epigenetic bio-poetics, because by the late-eighteenth century, preformism was no longer worth contesting – it had been largely put to bed.²⁵

In what follows, I will return to Blake, first to sketch briefly, as background, the outlines of the eighteenth century “epigenesis” vs. “preformation” controversy, and second, to show how and why a Romantic poet might dismantle one powerful model of epigenesis – incidentally the one most frequently recovered by literary historians – and point us toward another.

a) *Into the egg: epigenesis and preformation in the eighteenth century*

When Blake, in his illuminated books *Milton* (c. 1804 – 11) and *Jerusalem* (1804 – c.1820), begins to call *this* world, the world disclosed by our fallen and shriveled senses, “the Mundane Egg,” he tucks the theatre of human history within Enlightenment embryology’s most disputed experimental object. For the longest conceivable eighteenth century, controversies in the empirical study of animal generation – discipline-forging controversies for what would become modern embryology, comparative anatomy, biology, and experimental physiology – concerned events underway within mundane eggs.

William Harvey’s groundbreaking *Exercitationes de Generatione Animalium* (1651) had re-ignited empirical research into animal generation and positioned mundane hens’ eggs – “because they cost little, and are always to be had” – as *the* paradigmatic experimental object for life scientific enquiry (169). Subjecting his mundane eggs to the New Scientific rigors of “dissection” and “ocular inspection,” Harvey’s series of replicable anatomical “exercises” revealed that in the common egg, “we have an opportunity ... of observing the first clear and unquestionable commencements of generation, how nature proceeds in the process, and with what admirable foresight she governs every part of the work” (170). But deep into the book, a rather disheartened chapter title confesses that “The Efficient Cause of the Chick is Hard to Be Found Out,” and Harvey’s work served to unleash one hundred and fifty years of controversy around his notion of *epigenesis*: the notion that the unformed materials visible in a fertilized hen’s egg were capable of gradually producing a living body as intricate as that of the nascent chick, and that they did so serially, in the observer’s presence and in his present tense.

Blake, who arguably modeled his seven-stage cosmogony in *The First Book of Urizen* not only on Genesis, *Paradise Lost*, and the Gnostic gospels but also on Harvey’s seven-step histories of chick embryogenesis, may have encountered the then-classic *On Animal Generation* through the celebrated London comparative anatomists John and William Hunter (Kreiter, 1964).²⁶ But when, for one of his commercial engraving commissions, Blake produced a tiny portrait of the Swiss physiologist Albrecht von Haller (1708-77), he drew out the lineaments of one of the most influential protagonists in eighteenth century experimental physiology. Haller’s prodigious work on the “sensibility” and “irritability” of living organs, nerves, and fibres ignited a spate of research into the distinctive properties of living matter and furnished a physiological dimension to the cult of sensibility.²⁷ As Thomas Henry writes in the biography *Memoirs of*

Albert de Haller (1783), which Blake illustrated, Haller's discoveries "formed an aera [*sic*] of revolution in anatomy," helping to define the "living body" (my emphasis) as an object of inquiry meriting its own sciences, and accelerating physiology's transformation into a modern, experimental discipline:

It taught us that there exists in the living body a particular power...[and] that Physiology, which had too long been built on metaphysical and uncertain ideas, might now be erected on the basis of general fact, and verified by experiment.
(Henry, 76)

In the middle decades of the eighteenth century, Haller and his sensitive tissues were at the center of perhaps the most controversial problem in pre-Darwinian natural history: the problem, ignited by Harvey's research on generation a century earlier, of the causality behind the formation and development of intricate animal embryos out of mere seminal matter.

Techniques of vivisection and microscopy enabled researchers like Haller to "trac[e] the formation of the chicken from the instant in which the first change in the egg is perceived, and the vital speck begins to dilate, to that when the little animal quits the shell in which it has been formed (Henry, *Memoirs* 63)." But when Henry goes on to write that Haller "saw the organs successively spring up before his eyes, acquire life and motion; saw them transformed and perfected; assume the several dispositions allotted to them in the animal," he implicitly takes sides in the generation controversy, endorsing an *epigenetic* theory of embryogenesis. Emphasizing the visibly *successive* formation of organs, in the observer's present, out of previously formless materials - *he saw the organs successively spring up before his eyes* - epigenetic theories of generation credited parental seminal matter or its components (above, a "vital speck") with the capacity to gradually produce a new form that increases in complexity as it grows and nourishes itself.

"For," as Harvey had put it in *Of Animal Generation*, "out of the same material from which the first part of the chick or its smallest particle springs, from the very same is the whole chick born ... all variously diversified" (339). Moreover, "the formative faculty of the chick ... acquires and prepares its own material for itself ... and the chick seems to be formed and to receive its growth from no other than itself" (336). In an ungainly metaphor that foregrounds the difficulty of representing this self-shaping agency, Harvey suggests that the growing chick is potter of the clay of its own body, "giving it a figure at the same time that he provides the material, which he prepares, adapts, and applies to his work"(334).

In the seventeenth and eighteenth centuries, such research elicited a powerful counter-reaction from natural philosophers suspicious not only of the patent obscurantism in epigenesists' recourse to terminology such as "formative faculty" (Harvey), "*vis plastica*" (John Turberville Needham) "formative power [*Bildungskraft*]" (C.F. Wolff), "interior mold [*moule intérieur*]" (Buffon) for the formative agencies purportedly resident in formless matter, but also of the threat this self-active posed to the traditionally Divine prerogative of conferring form. In response, naturalists such as Jan Swammerdam, Lazzaro Spallanzani and Charles Bonnet put forward rival theories of "preformation" or "pre-existence." In general, they argued that the finished bodies of each member of each generation of each species of living beings had been formed by God at Creation: they were stowed in progressively smaller miniature in the sperm or ovaries of each species' first parents, like so many nesting dolls, to be unfolded and expanded at the proper time.

Richard Blackmore put their case this way in his didactic epic *The Creation: A Philosophical Poem Demonstrating the Existence and Providence of a God* (1712), re-describing Harvey's formless "vital speck" as a fully-formed "Animal" that is just a little "rumped." The rumped animal need only "unravel and untwist/... envelop'd Limbs, that previous there exist":

And as each vital Speck, in which remains
Th'entir, but rumped Animal, contains
Organs perplext, and Clues of twining Veins;
So ev'ry Foetus bears a secret Hoard,
With sleeping, unexpanded issue stor'd;
Which num'ruous, but unquicken'd Progeny,
Clasp'd and inwrap'd within each other lye:
(4. 281,15-16, 282, 1-7)

Preformist theory was known as "evolution" in the eighteenth century, and Blackmore's verse displays the close kinship the term retained to its etymological sense of unrolling: "evolution" described the way an insensibly minute and transparent (but nonetheless pre-formed) being would gradually "unravel and untwist" over the threshold into *visibility*, rather than into existence. Epigenesists, the preformists argued, did not consider that "the organs that successively spring up before [their] eyes," as Henry put it, might simply have previously eluded their powers of magnified vision.²⁸

Over the course of his career, Albrecht von Haller, the subject of Blake's engraving, rather embodied the controversy, retreating from the epigenetic indications of his early research to a staunchly preformist position in order to protect, as the biography Blake illustrated disapprovingly intimates, "secret" and misguided theological premises. At the height of the debate, meanwhile, Haller posed the following objection to the epigenetic theory of one of his powerful interlocutors, Buffon:

There is a missing building master, who lays down the thousand single molds of the different parts of the large aorta in a correct row according to the length of the body, and who, with a word, would construct the scattered microscopical parts of the body according to the wonderful plan of the human body, who would makes sure, that never could an eye stick to a knee, or an ear to a forehead.²⁹

Blake's answer to the question of the "missing building master" governing generation is a dramatic shift in paradigm: "*We* form the Mundane Egg," he declares decisively in *Milton*, "And every Generated Body in its inward form / Is... a building of magnificence / Built by the Sons of Los" (25: 42, 26: 31-33). Indeed, in *Milton* and *Jerusalem*, that figure for poetry and prophecy, Los, "continual builds the Mundane Shell": he and his estranged partner Enitharmon and their myriad sons and daughters are pictured as tirelessly hammering, beating, blowing, weaving, spinning, knotting, binding, fabricating, moulding, carving, and ornamenting this "Generated" space (34: 32). In *Milton*, "Thousands & thousands labour" – "Thundering the Hammers beat & the Bellows blow loud" – to craft, in micro- and macrocosm, its political and geographical regions, which are also animal tissues and organs in process of formation: "The Bellows are the Animal Lungs: the Hammers the Animal Heart / The Furnaces the Stomach for digestion" (24: 52, 58-9).

It is a hallmark of Blakean scenes of generation to show the embryonic rudiments of sensation – epigenetic in so far as they are malleable and in process – taking shape under societal pressure. In this way Blake’s illuminated books turn the experimentally-embroiled egg into an ongoing social construction site, as though despite the numerous competing accounts of the “forces,” “drives,” and “powers” controlling generation within mundane eggs, what is really “missing” is an account of the force of historically contingent labor, social, and sexual relations in the formation of new bodies and their sensoria:

Let Cambel and her Sisters sit within the Mundane Shell:
Forming the fluctuating Globe according to their will.
According as they weave the little embryo nerves & veins
The Eye, the little Nostrils, & the delicate Tongue & Ears
Of labyrinthine intricacy: so shall they fold the World
(*Jerusalem* 83: 33-7)³⁰

Scenes of generation such as this magnify the mundane egg into an inhabited world, suggesting that the shape of a new being’s body *in ovo* is neither preformed by God nor the product of its own self-making: rather, it is “Forming” under the hands of numerous social actors who precede it in a “World” that Blake mischievously describes as itself “Egg form’d” (*M34*, 34). Here the macroscopic world is the microcosmic body’s worldview and not its analogy: the world’s shape matches that assumed by the sensing body’s forming organs.

b) *Epigenesis without organicism?*

As I suggested at the outset of this section, by 1800, the question concerning generation was a question less of epigenesis vs. preformation, than of *what kind* of epigenesis – how to conceive and name the force, drive, power, disposition productive of living form and development and how to characterize its material or immaterial, immanent or transcendent, causality and ontology. The diverse implications that rival theories of the organization of the body natural held for organizing the body politic, as L.S. Jacyna showed years ago, were lost on no one.³¹ Though Coleridge, Erasmus Darwin, Shelley, and Blake, to name a few, were all, broadly speaking, invested in epigenetic accounts of form and body (animal and textual), the versions of epigenetic generation they espoused are as different as their respective politics and poetics.³²

The synthesis of epigenetic theory best known to romantics derives, appropriately, from Kant’s *Third Critique*. In the *Critique of the Teleological Power of Judgment*, pendent to that of *Aesthetic Judgment*, Kant influentially recognized that epigenetic natural philosophy had in effect delineated a specific type of natural being for its object – the “organized and self-organizing being” – a type of natural being whose “self-propagating formative power,” he set out to show, is “not analogous with any causality we know” (§65, 245-6). The key distinction, he explains, is that the organism presents as both “cause and effect of itself”: the developed whole seems to have functioned as the governing *telos* behind the parts’ formation, and yet also to have first come to exist as their consequence (§64, 243, §65, 244-5). Thus the “self-organizing being” is an auto-telic “natural end” without analogue in the domain of inert, material bodies – bodies obedient to “blind mechanism” and “in the highest degree contingent” (§65, 244, §61, 234). The

organism is rather a “causal nexus,” meriting investigation under the rubric of its special, teleological insularity – and indeed licensing teleological thinking on the part of researchers, a regulative “way of judging” not justifiable otherwise (§65, 244, 247).

Coleridge’s rich reception of Kant and post-Kantian Jena Romanticism accentuates the parallelism evident in the *Third Critique* between the self-sufficient objects of aesthetic judgment that populate its first part and the self-sufficient organisms of teleological judgment that populate its second.³³ In the 1812-13 lectures on Shakespeare, “organic form” becomes an explicit criterion of art. It distinguishes Shakespeare’s “living power” from “lifeless mechanism,” his “free and rival originality as contradistinguished from servile imitation.”³⁴ Coleridge proceeds to recapitulate precisely Kant’s definition of the exceptional means-ends relation at work in organic causality, this time as a principle of poetry’s “living power”:

The spirit of poetry, like all other living powers ... must embody in order to reveal itself; but a living body is of necessity an organized one—and what is organization but the connection of parts to a whole so that each part is at once end and means! (*CCS*, 52)

“Genius,” which in this passage is a descriptor of both artworks and their creators, consists in “the power of acting creatively under laws of its own origination,” so that the best poems and poets are distinguished by the very auto-telic causal agency that Kant had ascribed to living organisms (52).

This notion of organic form – as form “without recourse to extraneous causes” – has been criticized as the very condition of possibility for the absolutism of Romantic self-positing and its ideological resilience: “only organically,” writes Helmut Müller-Sievers, “can the interminable chain of causes and effects be bent back onto its own origin, and only as organic can a discourse claim to contain all the reasons for its own existence.”³⁵ More recently Denise Gigante has celebrated an aspiration towards organic form – natural, societal, and textual – as the hallmark of “Romanticism as a shared intellectual project”: a project that emulated organic “pluripotent, even totipotent” power to regenerate fresh wholes, “from the ground up in the manner of epigenetic particulars,” rather than by “tinkering with” the “existing structures and organizations that constitute society” (*Life*, 126, 13, 25). “[O]nce life was viewed vitalistically as power,” she argues, “science and aesthetics confronted the same formal problems” (4). Yet neither of these views seems to account for the version of epigenesis towards which Blake has already begun to point us: one in which the language of epigenetic embodiment – the language of bodily tissues and lines taking shape in the present tense – permits the poet to describe a being as intricately enmeshed in, rather than triumphantly free from, “existing structures and organizations.” That is, Blake’s texts remind us that in releasing the embryo from the divine predetermination defended by preformist theory, epigenetic discourse did not only or always deliver it cleanly into autonomous self-determination. Here, epigenetic discourse turns the forming body over to the numerous powers operating in any historical present, helping to articulate a malleable body exquisitely sensible to external manipulation: “helpless it lay like a Worm / In the trembling womb/ To be moulded into existence” (*The [First] Book of Urizen*, 19:21-23).

Gigante and Müller-Sievers’s studies have the immense virtue of recognizing that the period’s interest in the problem of living form extended across disciplines, however emergent, to constitute a positive, philosophically defended “field” in its own right – rather than simply an unfallen, not-yet-disciplined form of inquiry. They named this field “organicism.” The aim of the

present study is to show the way the (still) ascendant “unifying principle of organic form” – which for Gigante unifies parts and whole not only for animal and textual bodies, but also for “Romanticism as a shared intellectual project” – was a contested one. In each of the chapters that follow, I show how a rival set of philosophical premises could also be mobilized to underwrite the collaboration between science and poetry on the question of life during the period, with different consequences for the rhetorical, animal, and historical materials involved.

Indeed, the heroic myth of autonomous self-generation has a name in Blake’s books: “It is Urizen.” Such, at least, is the assessment of the spectators in *The Book of Urizen*, who observe his “Self-closed, all-repelling” generation of a body and world with “horror” (3:6,1). It is worth glancing at Blake’s retelling of Genesis and generation science in order to uncover a critique of organicist epigenesis that has been overlooked.³⁶ Pinpointing self-reflexivity as lynchpin of that powerful organicist variant of contemporary epigenetic theory, the text parodies that discourse with a string of reflexives: “Self-closd,” “self-contemplating,” “self balanc’d,” “self-begotten” – “In anguish dividing & dividing” (3: 3, 21, 4:18, 13:7.52). The book simultaneously establishes Urizen as the uncompromising, law-giving, paternal God – “no flesh nor spirit could keep / His iron laws one moment” (23: 25-6) – and aligns his oppressive monomania with that uniquely “Self-closed” causal circuit of organicist self-generation.³⁷

Circling in “Eddies of wrath ceaseless round & round,” Urizen produces a “dark globe” that is at once our “pendulous earth” and an epigenetic “globe of life blood trembling” (5:38, 15:12). Vaunting his autonomy and singularity – “I alone, even I!” – Urizen speaks an organicist rhetoric (“Life is I myself I!” Coleridge would enthuse in a letter soon afterward): but in Blake this adamant singularity resounds in his laws to totalitarian effect: “One command, one joy, one desire, / One curse, one weight, one measure / One King, one God, one Law” (4:38-40).³⁸ Blake’s alignment of “striving, stuggling,” “beating,” “surgeing,” “Heaving,” vitality *with* mental, moral, and physical laws of “iron” is a rare subversion (11:20, 5:36, 10:21, 32). It neatly undermines what Donna Jones has recently discerned as the shared strategy of vitalist discourses from Bichat to Bergson: they turn to “unfathomable life” as “raw, unverballed, lived experience” capable of resisting “the petrification of social forms and personalities ... sedimented categories and schema” (4).

Blake’s critique of this move is precise. Again and again, his books picture organs that simultaneously self-generate *and petrify*, as when Urizen’s ears “Shot spiring out and petrified / As they grew” (11:23-24). As a perfect paragon and parody of organic autonomy, Urizen even builds his own “petrific” womb. One falls into law-bound rationalist subjectivity and the raw, pulsing, self-organizing body *at the same time*. Against the view – prevalent in both Blake’s time and ours – that vitalism is mechanism’s opposite, *Urizen* depicts a suspicious isomorphism – a “conglobing” – between the quivering “globules” of organic form and the solid particles “without fluctuation” of a mechanical universe. Indeed, Blake sees the two discourses converge in a rigorous and basic individualism: the (etymologically in-divisible) atom and the strictly “self-clos’d” organism partake in a Urizenic love of “one” that stretches from Newtonian physics to organicist physiology, to individualist subject formation, to the totalitarian societal organization “One King, one God, one Law.”

It would be possible to explore Blake’s “sweet” scientific alternatives to this predicament, but not in the context of an introduction, where I have perhaps already descended too deeply into his case.³⁹ We will instead answer this question by turning to Goethe, who recruits an atomism rife with fluctuation and sociability (unlike Urizen’s) in order to work out an alternative to the auto-telic and vitalist logic of organic form.

3. Chapters

In Chapter One, “Equivocal Life: Goethe’s Journals *On Morphology*,” I translate previously unavailable pieces from Goethe’s microscopy logs (1785-6) and *On Morphology* periodicals (1817-24) as emblematic of the broader contemporary interest in studying living beings as composite, rather than organic forms. Here, each “seeming individual” is as a “being-complex,” a fractious “assemblage of independent beings.” Morphology, moreover, redirects biological inquiry from the question of new life (generation) around which the discipline had coalesced, to the biology and poetics of decomposition and senescence – or, as Goethe names one essay, “Going to Dust, Vapor, Droplets.” What, Goethe’s essay begins to ask, might life look like from the perspective of the non-reproductive, but communicative, effluvia that mediate between beings? What arts of discomposure would be adequate to this view? Focusing on an experiment in which a cut mushroom “draws” its own image in spores, I argue for the credibility in the period of non-human acts of representation: that is, for material (neo-Lucretian) images that emanate not just from agents, but from things.

Chapter Two, “Tender Empiricism: Thinking Like an Object, Contra-Kant” concerns the aesthetic and poetic stakes of the experimental method Goethe calls “tender Empiricism,” an approach to composite life that I read as a sly critique of Kant’s durable accounts of aesthetics and organism. From Goethe’s perspective, Kant’s celebrated epistemological modesty – his concern that a man not “presumptuously . . . tack a whim . . . to the objects” (Goethe’s paraphrase) – screens a more significant hubris: the presumption that a person could produce whims without objects and a sensing body, and, more basically, that what is important about a subject is the way in which he is not a natural object. Re-valuing the passive quality of tenderness as an epistemic virtue, Goethe experiments in “objectively active thinking,” permitting the way the self is (also) an object to re-enter natural and aesthetic philosophy. The chapter culminates in a re-reading of the didactic poem *Dauer im Wechsel* [“Durance In Change”] from the perspective of objective figuration, centering on a neo-Lucretian simulacrum that, I argue, Paul de Man consequentially mistook for a symbol.

In Chapter Three I move from Goethe’s poetic morphology to Shelley’s “poetry of life.” “Growing Old Together: Composite Physiognomy in *The Triumph of Life*” examines the way Shelley’s *Triumph* revives Lucretian corporeality in order to rebuke the markedly triumphalist rhetoric of both contemporary vitalist physiology and post-Waterloo historiography. Offering a new account of the face-giving trope of prosopopeia in the poem, I argue that Shelley mobilizes Lucretian simulacra in order to think through the way personal bodies produce and integrate passages of historical time. Representing aging faces as mutable registers of the “living air” of a post-Napoleonic interval, *The Triumph* depicts senescence as the unintended work of multitudes, pressing towards a biology and epistemology of transience that holds rhetorical, vital, and historical materialisms together.

The first three chapters move outward from the intimate subject-object relations within scenes of experiment to the collective historical atmosphere that sculpts particular subjects. In Chapter Four, “The Natural History of Violence: Atomist Pre-Histories for Shelley’s *The Mask of Anarchy*,” I continue the increasingly historical trajectory of the dissertation’s materialism by turning to Shelley’s poetic representation of the 1819 “Peterloo Massacre.” Here, I attempt to put the dissertation’s valuation of epistemological “sweetness” and “tenderness” to the test of

representing an event in which subjects' vulnerability was tragically violated. Focusing on the *The Mask's* preoccupation with the way wrongly spilled blood enters geological and meteorological cycles, I argue that the poem, which Shelley called "wholly political," is also a form of natural history. I recruit Erasmus Darwin, William Cowper, and James Thomson as well as Walter Benjamin to argue for a didactic natural historical mode in which a poem speaks polemically for blood-stained materials that do not, in themselves, disclose their provenance. In this way I suggest that, despite its reputation, pre-Darwinian natural history – and especially its poetry – is anything but a-historical or a-political.

In the dissertation's Coda, "Marx's Sensuous Science" I pick up this materialist current at the start of the historical materialism more familiar to present-day critics: Karl Marx's doctoral dissertation on classical atomisms. I link Marx's reception of Lucretius to the idea of natural history that emerges in his *Economic and Philosophical Manuscripts of 1844*. These paraphrase Goethe on tender empiricism, and argue (like Blake, Wordsworth, and Shelley) that any sensation-based science needs to countenance the senses' susceptibility to historical re-configuration. The *Manuscripts* strain, very much in the tradition my chapters lay out, towards what Marx calls a "sensuous science" steeped in his doctoral dissertation's Lucretian conclusion that "sensuousness is embodied time." Like Goethe and Shelley, Marx presses past the biology of organicism in order to adumbrate "man's inorganic body" – a body neither contemporaneous nor coincident with what Blake calls "the Selfhood," and a life traversed by and contingent upon innumerable others. I also interrogate an apparent paradox. As I argue in the dissertation's chapters, for multiple prior thinkers, leaving behind the aesthetic and organic preoccupation with autonomy meant courting the objective aspects of self. However, as Barbara Johnson recently observed in *Persons and Things*, while there are numerous rhetorical figures that confer personality to things, we have none for the reverse effect – merely "names for an involuntary and lamented process." First among these, of course, is Marx's term, reification. In the coda I take this cue to compare Marxian and neo-Lucretian ideology critique, asking how the embodied impressionability valued in "tender," "sweet," and "sensuous" sciences may run, but may also outrun, the risk Marx named "reification."

Notes

¹ Blake citations refer to Erdman, *The Complete Poetry and Prose*.

² When it comes to “REASON, and SCIENCE,” wrote Hobbes (metaphorically) “*Metaphors*, and senseless and ambiguous words, are like *ignes fatui*” whose effect is to “deceive others”; for Locke, “the artificial and figurative application of words” are “perfect cheats” to be avoided “in all discourses that pretend to inform or instruct”; Bacon’s *Parasceve* banishes “all that concerns ornaments of speech, similitudes . . . and such like emptinesses”; and Sprat famously railed against “the mists and uncertainties these species Tropes and Figures have brought upon our knowledge” (*Leviathan* 1.5, 22, 4, 13, *Essay* 3.10:34, 146, Bacon and Sprat, qtd. in Walmsley, *Locke’s Essay*, 107). Of course, under scrutiny, none of these nominally anti-pictorial, plain style programmes fit their caricature as unambiguous or naïve regarding the role of rhetoric in thinking and sensation. See Richard Kroll, *The Material Word*, for English Restoration culture’s (differently neo-Epicurean) plastic, pragmatic, “social and positional” view of language – here, Kroll argues, synecdoche and metonymy, rather than metaphor, were valued figures. See Peter Walmsley, *Locke’s Essay and the Rhetoric of Science* for a sensitive and wide-ranging account of his subject, especially illuminating on historicity and decay in the Lockean theory of language and mind. See Jules David Law, *The Rhetoric of Empiricism*, for empiricism’s under-recognized sophistication regarding the rhetoric of perception. Its “complex drama of surfaces, depths, and reflections,” Law argues, mobilizes these terms in the most literal and most metaphorical of ways, staging sensation and its language as dialectical, “normative constraints on one another,” such that “sensory or visual terms functio[n] as metaphors for mental and linguistic processes *and* linguistic terms function as metaphors for sensory perception” (13).

³ Surely, this reading enacts a kind of naturalization, but one that differs from the recent critical sense of passing off as necessary and permanent a construct rightly understood as historically contingent. On the contrary, in order to “naturalize” Urthona’s reign as an elemental rain, we had to listen for, not suppress, the prior history of the poem’s earth, noticing the “Spectre” of Poetry not wholly Los(t) in this transition between worlds. The poetry continually punctures the power of this “reign,” not only by turning Urthona’s armor to mist but also, with line 4’s unmarked caesura and enjambment, letting stand a patent contradiction to this figure’s “rise” and “strength” (7-8): “Urthona is arisen in his strength *no longer* now” (4, emphasis added). In Chapter Four, I examine in depth the way natural historical poetry uses the suffusion of historical events into natural elements as an opportunity to tell, rather than suppress, particular histories. For the way “strangely anachronistic concepts of nature still covertly prevail” in critical theoretical unmaskings of “naturalization,” see Gillian Beer, “Has Nature a Future?”

⁴ *Ars Poetica* (c. 16 BCE) 343-4, *DRN* 1.933-50).

⁵ Loeb, 112nb. Among the late-twentieth century philosophers whose engagements with ancient materialism center on the question of the *clinamen* are Gilles Deleuze, Jacques Derrida, and Louis Althusser. (This study instead attempts to approach the issue of contingency through Lucretius’s accounts of figuration and equivocal generation.) For an elegant overview from the perspective of the theory of sexuality, see Jonathan Goldberg, *The Seeds of Things*. My Coda takes up Althusser’s turn to Lucretius and Epicurus in his late attempt to theorize an aleatory, rather than teleological or deterministic, materialism. For the moment, we can point towards his insight that with the *clinamen*, Lucretius audaciously permits chance to precede reason, law, form, and meaning – chance chances to generate the categories that occupy the space of origin in Plato, Aristotle, and related philosophies. In a section called “The Genesis of Sense” in his monograph on *De Rerum Natura*, Michel Serres lucidly observes that the Lucretian account of the rain of atoms and its interruption by the *clinamen* rather reverses our expectations regarding unmeaning chaos and meaningful order. Lucretius, he points out, depicts “univocity” – the unidirectional, parallel, laminar flow of atoms – as non-sense, “white noise,” an order so

extreme that “nothing stands in relief, nothing appears.” Signification occurs only in deviation from equilibrium (*Birth of Physics* 144-51). In our context, this facet of *De Rerum Natura* manifests in the text’s status as a locus classicus for the heretical materialist doctrine of “equivocal generation,” the production of a living being, without parents, from a propitious conjunction of materials. This issue recurs in Chapters One and Three, as well as in the Coda, where it is surprisingly crucial to Marx’s early, historical materialism. Serres, again writing of the *clinamen*, gives a beautiful formulation of the facet of the text which preoccupies this introduction: the way *De Rerum Natura* spreads tropological activity generally among all natures, not just human and linguistic ones: “since existence only appears in and by deviation from equilibrium, physically speaking, I’m willing for this deviation to be the primary space in which every metaphor finds its place and time. The *clinamen* is transport in general” (150).

⁶ In this Introduction, which focuses more than any of the following chapters on *De rerum natura* itself, I move freely among translations of the poem, generally favoring those available in the early-nineteenth century (Thomas Creech, John Evelyn, John Mason Good), but also using the contemporary Loeb translation when fidelity to the Latin text is important. Most of the Romantic era writers in question would have also read the text in Latin – indeed, as discussed in Chapter One, Goethe was involved in its translation, and we know the Shelleys to have owned Good’s facing translation of the text. Blake, while composing the *The Four Zoas*, was living in Felpham and enthusiastically learning Latin, Greek, and Hebrew under the guidance of his employer and patron there, William Hayley. Hayley had just completed his *An Essay on Epic Poetry*, and Blake explicitly worked up *The Four Zoas* as an epic in classical and Miltonic style (Ackroyd, *Blake* 214). Hayley commissioned Blake to provide many of the engravings for his *Life of William Cowper*, which mentions Cowper’s use of the Lucretian honeyed-cup topos in describing “Table-Talk” (Hayley, *Life and Posthumous Writings of William Cowper, Esq.* Vol. 4, 216-217).

⁷ Gay, *The Enlightenment, An Interpretation*. Among early modernists, specifically neo-Epicurean and Lucretian classicisms are a vibrant subfield. Important studies include Richard Kroll’s *The Material Word*, John Roger’s *The Matter of Revolution*, Catharine Wilson’s *Epicureanism at the Origins of Modernity*, Natania Meeker’s *Voluptuous Materialism*, Stephen Greenblatt’s *Swerve*, and Alison Brown’s *The Return of Lucretius to Renaissance Florence*. Jacques Lezra’s *Unspeakable Subjects* opens with an extraordinary account of Lucretian materialist poetics as effecting the consequential elision of action and event. Romanticists have explored this avenue much less, although Martin Priestman argues that the period from 1790-1820 “deserves to be called the second British Lucretian moment” – second after the late-17th Century Epicurean revival Kroll documented as a pan-cultural atomism crossing literary, scientific, and political domains (Priestman, “Lucretius in Romantic and Victorian Britain,” 289). Priestman’s *Romantic Atheism* is an important step in beginning to uncover the scope of neo-Lucretian Romantic culture. So, more incidentally, was Marilyn Butler’s *Romantics, Rebels, and Reactionaries* when it defined the contours of a culture war between a “post-war right wing cult of the Germanic,” emblemized by Coleridge’s *Biographia Literaria*, and a “left-wing cult for the classical” involving Byron, Shelley, Keats, Peacock, Hunt and Hazlitt (121-22). In her pivotal rewriting of Romantic and pre-Romantic poetics under the sign of the Georgic, Kevis Goodman’s *Georgic Modernity* can also be read as indirectly registering the mediated persistence of a Lucretian didactic mode: Virgil, as Lezra notes, was an “extraordinarily acute interpreter of Lucretius” (22). See also Jonathan Sachs’s *Romantic Antiquity*, which among other illuminating theses, argues for the increasing appeal of Roman classical models for a post-Waterloo British culture increasingly aware of itself as an empire.

⁸ The expectation that philosophy will be associated with the work of illumination and enlightenment is so powerful that even sensitive readers of *De Rerum Natura* frequently reverse Lucretius’s negation of the power of bright rays. See, for instance, Monica Gale, “the power of *naturae species ratioque* to drive away our fears is compared to the power of the *radii solis* to drive away the darkness,” confirming the “illuminating power of philosophy” (*Myth and Poetry* 203).

⁹ Compare Creech “those eternal Rules / Which from firm Premises true Reason draws / And a deep Insight into Nature’s laws” (1.178-80); and John Mason Good (1805) “These [terrors] alone / To Nature yield, and Reason” (1.165-6). Lucy Hutchinson’s “nature’s contemplation” is more generous towards Lucretius’s emphasis on the visible look of things. Her translation, probably completed in the 1640s or 50s, was first published in 1996.

¹⁰ See Goodman, *Georgic Modernity*, 17-22; and Daniel Tiffany’s Chapter on “Radiant Species” in *Toy Medium*, esp. 199-211.

¹¹ Tiffany’s *Toy Medium* is kindred to this study in so far as it examines the potential consubstantiality between physical and poetic matter. But Tiffany, who focuses on lyric, discovers this coincidence in the purported aporia atomism and poetry both posit between the sensible faces of things and their real substructure. In their investment in the unseen, Tiffany argues, lyric poetry and atomist physics agree that “what matters about the world often defies intuition” – their images “do not bear witness to empirical entities but rather serve as models of unobservable phenomena” (5). In a related vein, James I. Porter, in an illuminating essay on the relevance of the *DRN* to the aesthetics of sublimity, argues that atomism performs the “radical negation of all that is and has sense, unsettle[s] conventional frames of reference and threaten[s] to annihilate phenomenological meaning...Indeed, atomism seems practically designed to elicit feelings of sublimity, of fear and awe” (168).

But there is a profound irony in this interpretation that atomism works to alienate the subject from the world of sense, an interpretation with a long and venerable history that does indeed continue into Romantic and post-Romantic aesthetics of sublimity. As we have seen, Lucretian atomism sets out precisely to disperse, rather than to elicit, fear, and it affords radical credibility to the face [*species*] of things. Indeed, for Epicurus, sensation is the first and irrefutable criterion of truth: “What,” Lucretius asks, “can we find more certain than the senses themselves, to mark for us truth and falsehood?” and “unless our belief in sensation is first firmly established, there will be no principle of appeal in hidden matters” (1.699-700, 423-4, Loeb). Lucretius and Epicurus derive their theory of sub-sensible particles and motions – hidden matters [*occultis de rebus*] – from attending to the details of the observable world. In their view, things enter into appearance by way of their sub-sensible motions, and in this way, disclose them: the visible faces of things [*species*] are signs through which reason [*ratio*] construes their hidden matters (see Asmis 220). They “show,” as Lucretius puts it “the tracks of knowledge” (2.124, Loeb).

For instance, in an image that both Shelley and James Thomson appropriate, Lucretius directs his auditor’s attention to the visible dancing of dust-motes in a sunbeam, initially as a *likeness and image* [*simulacrum et imago*] of the tossings and crossings of atoms in the void that the speaker wishes to illustrate. But before long, Lucretius begins to recapitulate the empirical derivation of atomic motion from such sensible images, viewing the motes not only as an analogy, but as an *instance* of ongoing atomic motion: the motes’ tumultuous movements “indicate [*significant*] that there are ... unseen motions also hidden in matter” – material movement that “ascends from the first-beginnings and by successive degrees emerges upon our senses” (2.127-8, 138-9, Loeb). As Gilles Deleuze observes rightly in “The Simulacrum and Ancient Philosophy,” for Lucretius, analogy works by gradation, “a gradation which causes us to pass from the thinkable to the sensible, and vice versa” (*Logic of Sense*, 275). This is not a case of the radical breach between being and appearing. In fact, as we will see in the subsequent pages of this Introduction, that which is real in Lucretius is necessarily productive of images, although not necessarily of a type that human sensoria are apt to consciously perceive.

Tiffany passes over this basic and radical validation of appearance, which Goethe will explain for us in Chapter One, when he argues that with the empiricism of Epicurus and Lucretius, atomism reaches an “incoherent” impasse between ontology and epistemology: “only atoms truly exist, yet, according to the premises of empiricism, they are unknowable and indeed inconceivable. From the standpoint of radical materialism, imperceptible entities can play no part in or knowledge of the world—in fact, things

without bodies do not exist” (171). On the contrary, in *De Rerum Natura*, ontology issues into epistemology, being into sensuous perception and knowledge, and vice versa. Is this, perhaps, an issue of genre? Tiffany’s study of the radical disjunction between the two senses of “sense” in physics and poetry is a study of the lyric. Yet the fullest exposition of Epicurean materialism that came down to the moderns had a poetic form, and that form was not lyric, but didactic and epic. Understanding the way atomist materialism purports to relate science and poetry, and sensible and insensible realities, requires attention to the premises and possibilities of this poetic form – premises and possibilities that lyric’s primacy in post-Kantian aesthetic criticism might tend rather to occlude than to illuminate.

¹² quod obscura de re tam lucida pango
carmina, musaeo contingens cuncta lepore.
id quoque enim non ab nulla ratione videtur;
sed veluti pueris absinthia taetra medentes
cum dare conantur, prius oras pocula circum
contingent mellis dulci flavoque liquore,
ut puerorum aetas improvida ludificetur
labrorum tenuis, interea perpotet amarum
absinthii laticem deceptaque non capiatur,
sed potis tali pacto recreata valescat,
sic ego nunc, quoniam haec ratio plerumque videtur
tristior esse quibus non est tractata, retroque
volgus abhorret ab hac, volui tibi suaviloquenti
carmine Piero rationem exponere nostram
et quasi musaeo dulci contingere melle,
si tibi forte animum tali ratione tenere
versibus in nostris possem, dum perspicis omnem
naturam rerum qua constet compta figura.
(Loeb, 1.933-50)

¹³ Compare Fitch and Schuler, “Theory and Context of the Didactic Poem” (esp. 4-5), and Harold Donohue, *The Song of the Swan*, 126-135.

¹⁴ I am grateful to Kevis Goodman for her help with this line’s Latin.

¹⁵ Asmis, *Epicurus’ Scientific Method*, 30.

¹⁶ See Law and Walmsley, above n.2, for the way Enlightened empiricism “preaches but does not practice” its rigorous distinction “between literal and figurative language” (Law 17).

¹⁷ For Lucretius, mind [*animus*] is an effect of the “sense-giving motions” [*sensiferos motus*, 3.357] of particularly delicate, minute, and mobile particles (3.425-6) intermixed and interwoven [*inplexis*, 3.331, *permixtam*, 3.351] in the grosser textures of a body. Touched, say, by ambient simulacra, “they go buffeting over... great intervals, run together, meet together, and leap apart in turn” (3.394-5). In this view, what we call mind and body are both matter: the particles that contribute to our sense of mind are comparatively fine ones contained in our denser tissues; the friction of their movements through the coarser textures of our body produce our mental life.

¹⁸ Goethe, in “Meaningful Progress By Way of a Single Witty Word [*Bedeutende Fördernis durch ein einziges geistreiches Wort*]” (1823) (*Zur Morphologie* II.1, MA12 306-9), 306. See Chapter 2, below.

¹⁹ In *The Therapy of Desire*, Martha Nussbaum concludes that in Lucretius’s appropriation of Epicurean philosophy, finitism, “yielding to life,” trumps Epicurus’s emphasis on invulnerability. *De Rerum Natura*,

she argues, tends rather to foster than to eradicate “ties of interdependence and mutual need,” instructing its audience in a willingness “to live as a soft body rather than an armed fortress” (277, 498, 250, 275).

²⁰ In the honeyed cup passage cited at length above, we heard Lucretius call Epicurean doctrine “bitter,” “harsh,” and “sad” kind of medicine. At issue is Epicurus’s uncompromising emphasis on mortality: atoms are eternal, but the outcomes of their intricate arrangements – outcomes like a specific, irreplicable sentient person and her mind and memory – are irretrievably lost at death, when the contexture ceases to hold and the composite pieces disperse. Moreover, even while alive, living things are constantly passing away, as “many bodies are thrown off flowing from things in many ways” (4.860-61, Loeb). From worn paving stones, to thinning finger rings, to wasting elders, Lucretius writes, “we see each thing decreasing ... as it were ebbing through length of time, and age withdrawing them from our eyes” (2.68-70). I want to suggest that the above-outlined theory of figuration also sweetens this loss: through it, atomic attrition as a process that “withdraws [things] from our eyes” [*ex oculis vetustatem subducere nostris*] is redefined as that which showers our eyes with visions – transience enables sensuous experience. For bodies do not only decay, they decay into perceptibility, involuntarily giving over portions of their being over to the organs of another’s sense.

I mentioned above that in introducing the theory of simulacra, Lucretius compares them to – indeed, derives their existence from – more macroscopic exfoliations everywhere evident in the sensible world: as “when the slippery serpent casts off his vesture among the thorns (for we often see the brambles enriched with their flying spoils)” (4.60-62). The snake’s discarded skin is a perfect figure for figuration in the Lucretian mode: sensible experience is taken to reliably express similar motions that are too small to see, so that the poet’s gesture is not to create a fresh figure but to draw attention to this given form of disclosure: as if to say, look, there are figures for figuration caught everywhere on the bushes! But describing such husks as “flying spoils” [*spoliis volantibus*] by which the brambles are “enriched” [*auctas*], Lucretius also – and this is part of his *sweetening* – casts transience as richness and sweetness for life. In their involuntary and inevitable passing, the items of the world accidentally regale each other in spoils: “for assuredly we see many things cast of particles with lavish bounty [*largiri multa*]” (4.72). Even absent a sentient perceiver, this form of involuntary largesse augments and reshapes the bodies of other things “whenever bodies pass away from a thing, they diminish that form from which they pass and increase that to which they have come... and mortal creatures live dependent one upon another [*inter se mortales mutual vivunt*]” (2.72-3, 76). But Lucretius reminds the sentient readers of his poem, fearful of mortality, that their experience of sensuous life – of sensing and appearing – is co-extensive with their own and others’ dissolution. Without this, there would be no sight, touch, pleasure, pain or knowledge: nothing but an insensibility would differ little, after all, from death.

²¹ For refreshing exceptions to this model of Romantic subjectivity that stress modes of recessive and self-effacing rather than heroic disclosure, see Jacques Khalip, *Anonymous Life*, and especially, Anne-Lise François, *Open Secrets*.

²² In fact, for Jacques Derrida, whose writings can be particularly susceptible of this kind of caricature, an encounter with Epicurean atomism provides the means to insist that his notion of “the mark or trace” is broader than human language and casts linguistic signification as just one system among others: “If I speak of the mark or the trace rather than the signifier, letter or word, if I refer to these Democritean or Epicurean *stokheion* in its greatest generality, it is [because]...this generality extends the mark beyond the verbal sign and even beyond human language.” Language is “only one among those systems of marks that incline towards increasing the reserves of random indetermination *as well as* the capacity for coding and over-coding ... for control and self-regulation ... just a particular example of the law of destabilization” (“Mes Chances / My Chances,” *Psyche* I, 360). For a fine investigation of the way Lucretius courts but evades a form of linguistic monism to which some twentieth century constructivist philosophers of science succumb, see Duncan Kennedy, *Lucretius and the Textualization of Nature*.

²³ Scientific objectivity as we know it, Daston and Galison argue, took shape during this period as a kind of reaction formation, developed to counter the new form of post-Kantian, self-consciously over-weening subjectivity – a variety of subjectivity that was perceived, for the first time, as a threat to scientific observation. They show, broadly, that in “notable contrast to earlier views held from the Renaissance through the Enlightenment about the close analogies between artistic and scientific work,” the public personae of artists and naturalists split ways, as artists became specialists in a form of subjectivity that scientists sought purposefully to eliminate from their practice (37). See Chapter Two, below.

²⁴ Among the most valuable studies that have established the study of English Romanticism and the pre-Darwinian life sciences as a self-evidently legitimate field in its own right over the last decade, are, in order of appearance: Maureen McLane’s *Romanticism and the Human Sciences* (2000), Alan Richardson’s *British Romanticism and the Science of the Mind* (2001), Alan Bewell’s *Romanticism and Colonial Disease* (2003), Noel Jackson’s *Science and Sensation in Romantic Poetry* (2008), Ross Wilson’s (Ed.) *The Meaning of ‘Life’ in Romantic Poetry and Poetics* (2008), Richard C. Sha’s *Perverse Romanticism* (2009) and Denise Gigante’s *Life: Organic Form and Romanticism* (2009). Within Blake studies, important works include Tristanne Connolly’s *William Blake and the Body* (2002), Saree Makdisi’s *William Blake and the Impossible History of the 1790s* (2003), Kevin Hutchings’s *Imagining Nature: Blake’s Environmental Poetics* (2003), and John Mee’s *Romanticism, Enthusiasm, and Regulation* (2005).

²⁵ See Shirley A. Roe, *Matter, Life and Generation*, and Robert J. Richards “Kant and Blumenbach on the *Bildungstrieb*: A Historical Misunderstanding.”

²⁶ Blake did a commission for John in 1793, and John and William together patronized Blake’s engraving master James Basire and several of their circle as illustrators and original artists. William, most famous for his gynecological magnum opus, *Anatomy of the Human Gravid Uterus* (1774), was Professor of Anatomy at the Royal Academy while Blake attended (Connolly, 35). John, who by his own report “kept a flock of geese for more than fifteen years” in order to keep himself furnished with mundane egg specimens, makes an unflattering cameo as “Jack Tearguts” in Blake’s early manuscript satire *An Island in the Moon* (1784), and his posthumous writings fueled a sensational debate in the eighteen-teens about the “vital principle” controlling animal organization (Hunter, *Observations on natural history*, etc. ed. Owen, 204-5). The exquisite engravings Hunter commissioned to illustrate those egg vivisections, which peel away a “shell, composed of calcareous earth” to serially unfurl “a pretty large opaque membrane, which... can be divided and subdivided into a number of layers” (*DIC5*, xi), give professional, anatomical substantiation to Blake’s view of the Mundane Egg in *Milton*: “The Mundane Shell, is a vast Concave Earth... a cavernous Earth/ Of labyrinthine intricacy, twenty-seven folds of opakeness” (*M17*, 21, 25-6). [*Fig. 1*] (On John Hunter and the vitality debate, see Raston, Jacyna, and Chapter Three, below). Blake’s publisher Joseph Johnson is also a key figure here: F.B. Curtis notes that Johnson was one of three major London medical publishers, producing 60 works of anatomy, surgery, and physiology from 1792-1803 (Connolly, 34). Among the prominent medical works Blake illustrated – though these are portraits, allegorical and object illustrations, not anatomical illustrations – are John Brown’s *The Elements of Medicine* (1795), Erasmus Darwin’s *The Botanic Garden* (1791) and *The Poetical Works* (1806), David Hartley’s *Observations on Man* (1791), and Rees’s *The Cyclopaedia* (1820). See Essick, *William Blake’s Commercial Book Illustrations*.

²⁷ See Elizabeth A. Williams, *A Cultural History of Medical Vitalism*, Anne C. Vila, *Enlightenment and Pathology*, and John H. Zammito, *Kant, Herder, and the Birth of Anthropology*.

²⁸ C.f. Bonnet, “Some people wish to judge of the time when the parts of an organized body begin to exist by the time when they become visible to us. They do not reflect that minuteness and transparency alone can make these parts invisible to us although they really exist all the time” (Cited in Joseph Needham, *History of Embryology* 213).

²⁹ Haller, “Preface” to the German Translation of the second edition of Buffon’s *Histoire Naturelle*, cited in Roe, (28-29). Though I have checked Haller’s original, I cannot discover this precise formulation in his French.

³⁰ “Cambel” is a recurring character in Blake’s books, a “Daughter of Albion” whom S. Foster Damon calls “the Warring Female” and associates with England’s Southern coastal counties (66).

³¹ “Immanence or Transcendence: Theories of Life and Organization in Britain, 1790-1835.”

³² There are charged differences between, for example, the consummately teleological ideal of organic form that Coleridge appropriated from Kant and idealist *Naturphilosophie*, Erasmus Darwin’s vitalized economy of nature and voluptuous didactic verse, Shelley’s fragmentary atomist rebuttal to organicism in *The Triumph of Life* (Chapter 3), and what Saree Makdisi has taught us to see as Blake’s manifold critique of organ-ization of bodies natural, textual, political, and divine. For Blake, Makdisi writes, “there is a seamless continuity among the social legal, economic, and political organizations and the organisms inhabiting the world defined by them” (83).

³³ See Charles I. Armstrong’s detailed analysis of this selective appropriation in *Romantic Organicism: From Idealist Origins to Ambivalent Afterlife*. Armstrong points out that in Coleridge’s importation of Jena organicism, its most volatile and self-critical component – the theory of the fragment – is expunged as if by “immunising repulsion” (51) from Coleridge’s explicit theoretical work (51-80).

³⁴ Notes for a lecture given in the 1812-13 series at the Surrey Institution, *Coleridge’s Criticism of Shakespeare (CCS)*, 51-53.

³⁵ *Self-Generation: Biology, Philosophy and Literature Around 1800*, 4.

³⁶ *The Book of Urizen* is among other things Blake’s dissenting adaptation of Genesis and Harvey’s *De Generatione*, and Blake’s text plays on the way both sources depict genesis as creation by “obscure division.” Harvey writes that “the parts are at first delineated by an obscure division, and afterwards become separate and distinct organs,” going on to make his own connection to the God of Genesis:

Just as if the whole chick was created by a command...of the Divine Architect “let there be a similar, colourless mass, and let it be divided into parts, and in the meantime, while it is growing, let there be a separation and delineation of parts; and let this part be harder, and denser ...” and it was so.

It is as if Harvey, sensible of the threat epigenesis posed to theology, over-compensates by placing God in a mundane egg – and yet the analogy backfires, too, seeming to grant the embryonic chick truly God-like powers.

³⁷ *Ur-Reason* and *Your-Reason* and its confining *horizon*; and more hopefully, *You, Risen*.

³⁸ Coleridge to Thelwall, 31 December, 1796, cited in Ian Wylie, *Young Coleridge and the Philosophers of Nature*, 124.

³⁹ I attempt this in a forthcoming essay in the volume *Marking Time: Romanticism & Evolution*, ed. Joel Faflak (Toronto: U of Toronto Press).

1.

EQUIVOCAL LIFE: Goethe's Journals on Morphology

By the end of the eighteenth century, “beings were definitively separated from things.” Or so, at least, François Jacob announced unequivocally in *The Logic of Life* (1970):

From that time onwards, there were only two classes of bodies: the inorganic was non-living, inanimate, inert; the organic was what breathes, feeds, and reproduces; it was what lives and is ‘inevitably doomed to die.’ Organization became identified with the living. Beings were definitively separated from things. (87)⁴⁰

Goethe gave his late attempt to curate and issue three decades of his published and unpublished scientific writings a divided, double-structure that seems to exemplify Jacob, Michel Foucault, and Georges Canguilhem’s seminal theses about the epistemological re-structuring that produced “life” as a bounded and sovereign issue at the turn to the nineteenth century.⁴¹ The scientific periodical project, published between 1817-1824, dutifully divides each number into separately bound parts, one for living, the other for nonliving objects: *On Natural Science* [*Zur Naturwissenschaft*] comprises mostly meteorological, geological, and optical studies; the other part, *On Morphology* [*Zur Morphologie*] collects pieces concerning “the formation and transformation of organic natures.” But an unwieldy (and rarely-cited) umbrella-title stretches over this clear distinction between the sciences of living and non-living nature, tipping them into indistinct and asymmetrical relation. The double-journal’s full name reads: *On Natural Science in General, Especially [particularly] on Morphology* [*Zur Naturwissenschaft überhaupt, besonders zur Morphologie*].⁴²

This chapter is about the subtle maneuver contained in that *especially*, about Goethe’s apparently anachronistic attempt to re-contain the science of life – by this time considered, albeit emergently and variously, as an epistemologically and institutionally distinct area of inquiry – within a more general study of nature. Here living forms are gently demoted to an “especially” engaging but by no means fundamentally distinct set of objects for empirical investigation. And inversely, the science of shape-shifting (*morphology*) that living beings elicit, for Goethe, extends past them to encompass many of life’s purported opposites: the mineral, the textual, the decadent, and the dead. In this chapter, I examine the way an equivocal, neo-Lucretian notion of corporeality licenses this unusually permissive biology, both before and after the much-attested epochal shift to an organicist conception of life.⁴³ From his 1780s experiments on infusoria to the composite life forms (including the scientist!) inhabiting the demi-journal “On Morphology,” Goethe’s life-scientific writings tend subtly to resist the ascendant biological and aesthetic virtue

of “organic” form, as well as established protocols for subjective and objective behavior in each domain.

These decades are not accidentally coincident with another fraught, thirty-year project in which Goethe was intimately involved: his longtime friend Karl Ludwig von Knebel’s production of the first full German verse-translation of Lucretius’ *De rerum natura*, which Knebel began, at Herder’s prompting, in the 1780s, and published at last, in 1821. (“Finally, dearest friend,” responded Goethe.⁴⁴) Goethean science tends to inhabit both sides of the epistemic ruptures historians and sociologists have placed “around 1800”: the work turns towards ‘life,’ but keeps it in the company of other natures; it employs the literary forms of natural historical representation Wolf Lepenies diagnosed as dying out with Buffon’s reputation, but does so in the periodical-form emblematic of the new models of scientific authority;⁴⁵ its practices of looking, in Jonathan Crary’s *Techniques of the Observer*, pioneer optics’ modern entry into “the unstable physiology and temporality of the human body,” whereas in Lorraine Daston and Peter Galison’s *Objectivity*, they exemplify the prior century’s mode of “truth-to-nature” observation.⁴⁶ I suspect that this resistance to periodization is connected to *De rerum natura*’s belated (but enthusiastic) German reception: in effect, one of the materialisms canonical to French radical Enlightenment hit Weimar-Jena at the time of that Enlightenment’s palpable obsolescence.⁴⁷ At stake, of course, is a different *De rerum natura*, answering to a different set of exigencies: less a humanist polemic advocating the power of natural knowledge against the tyranny of superstition than a poetic science so attuned to this world’s old age that it affords a distinct history to its every particle.⁴⁸ This second text, I suggest by way of examples in Goethe and Shelley over the next chapters, models a kind of poetic materialism nuanced enough to undermine the easy antithesis between German and British Romantic era writings and all things materialistic, atheistic, high-Enlightenment, and French.

According to a now familiar argument about the convergence between literature and the life sciences in the early-nineteenth century, one predicated above all on Coleridge’s reception of Kant and related German idealist *Naturphilosophie*, poetics and biology are thought to have found common cause in an ideal of “organic form” that envisioned organisms and artworks as exceptionally self-sufficient wholes, animated by immaterial “powers” of “life” and “imagination.” This chapter and the next examine Goethe’s late, multi-generic writings on life and form as exemplary of a different, lesser-known ontology and epistemology that also contributed to the period’s prolific indistinction between science and literature – but with different consequences for the theory of life and form. At stake is a materialism for which every body that appears – whether textual, animal, vegetable, or mineral – is a transient composite of smaller ones whose “figure” in the usual physical, morphological sense decays into “figures” in a rhetorical, but not merely linguistic or human, one. From this perspective, I argue here, Goethe is able to practice and theorize a non-vitalist biology: a logic of life that declines to define itself against mere matter, decay, vulnerability, or death, and declines to take organic autonomy as its ideal. Morphology, Goethe’s science of figures, shapes, and forms, manages to represent “life” as a susceptibility rather than a power, to turn from auto-telic integrity toward a proto-ecological notion of contingency and interrelation, and to experiment in theorizing and writing “life” from the perspective of senescence rather than self-generation.

On Morphology’s opening essay apologizes for the science’s composite and serial medium, for the fact that “what I, in youthful spirits, dreamt of as one work, now comes forward as a draft, indeed as a fragmentary collection [*fragmentarisches Sammlung*]” of the “sketches of many years.”⁴⁹ The items in this collection not only range from gnomic epigram to osteological

treatise, but tend to erode generic bounds internally: between personal essay and scientific trial, between lyric and didactic poem, between the methods and conclusions of experiments.⁵⁰ Nor are the journals temporally consistent: instead, Goethe sprinkles his own and others' new writings among three decades of published and unpublished work. The result is a tissue of multiple times and voices, marked and unmarked – no accident, given the decadent and composite notion of organic life bodied forth here. The journals actively antique and disperse the “youthful” mode of romantic subjectivity that a younger Goethe had helped invent and dim the focus on new, embryonic life that around which the young life scientific disciplines had coalesced.⁵¹ For what that first “apology” frames as a formal failure – the journal’s status as a disorderly assemblage of disparate pieces and times – emerges in their course as nothing less than the contents of its life-scientific contribution. Against the influential Kantian model of “organism” as an auto-telic integration of parts and whole that had described and motivated much philosophical and experimental research into organic form over the prior two decades, “Morphology” set out to address its living objects as unfinishable, heterogeneous “assemblages of living independent beings” („Die Absicht eingeleitet [The Intention Introduced],“ *ZMI* 1, *MA* 12, 14.)⁵²

This two-part chapter makes the case that an equivocal approach to matter entwines, in Goethe’s texts, with a non-vitalist mode of life-writing sensitive to the relational, contingent, and obsolescent aspects of embodied science. Part I situates Goethe in the field of contemporary life-scientific research. It follows the microscopic points that equivocate between life and nonlife in Goethe’s early experiments on spontaneous generation through to his late methodological essays in *On Morphology*, arguing that Goethe studies beings as collectivities whose vitality depends on timing and who contribute materially to the medium through which they are seen. In Part II, “Decadent Science,” I interpret an essay from the journal *Zur Morphologie* as carving out a space for non-generative processes within the botany of generation and redirecting biological enquiry toward the processes and poetics of decomposition. What, this essay begins to ask, might life look like from the perspective of the non-procreative, but perhaps communicative, effluvia that mediate *between* beings? What arts of discomposure would be adequate to this view? Focusing on an experiment in which a cut mushroom “draws” its own image in spores, I argue for the credibility within this science of non-human acts of representation: that is, of material, neo-Lucretian images that emanate not just from agents, but from things.

1. “*The Dance of the Infusoria*”: *Equivocal Points in Goethe’s Morphology*

a) *Endlessly small points, 1785-6*

In 1785 and 1786, Goethe conducted a spate of experiments touching the controversial phenomenon of spontaneous or equivocal generation, preparing a number of mostly vegetable infusions (cactus, truffle, boletus mushroom, lentil, rye, pepper-corn, potato, morel, beer, banana) and exposing them to sunlight in order to observe the resulting proliferation of microscopic forms – “the dance of the infusion-animalcules” – as he described it to a Charlotte von Stein.⁵³ Such microscopic research so preoccupied Goethe, Knebel, and Charlotte von Stein at this time that Herder reportedly quipped that his friends risked “becom[ing] infusoria,”

warning them not to “let the large-scale world become fatal to [them] just because the little seed- and tree-world is so adorable.”⁵⁴ Goethe’s attentive experimental log documents something like a liveliness gradient rather than a stark antinomy between animate life and inert matter: the minimal observable products of Goethe’s cloudy and stinking infusions are called simply “points [*Punkte*],” and range in character from those with “the most beautiful round form...without the least trace of life,” to those “lacking only movement to be considered infusoria,” to those “in lively motion” to “life-points [*Lebenspunkte*],” “Point-animalcules [*Punkt-tierchen*]” and “Point-animals [*Punkt-Tiere*]” (“Infusions-Tiere,” *LA* I.10, 25-40).

To read these and other eighteenth-century infusion experiments is to be reminded that microscopic vision did not only foster the organicist strand of epigenetic life science – life as the power of self-organization – that gained momentum as researchers from William Harvey to C.F. Wolff witnessed minute organs take shape, at the time of their watching, within the material chaos of fertilized egg-yolks and other controversial experimental objects. Microscopic infusion scenes also correlated profoundly with experimental philosophy’s older, corpuscular imaginary: that pre-biological way of looking, fueled by the rediscovery of ancient atomisms; inclined to view sensible bodies as open-textured aggregates of sub-sensible ones, and to attribute all manner of action-at-a-distance to the subtle interaction of particulate effluvia.⁵⁵ John Turberville Needham, for instance, had described his Wheat infusions as “teeming with Life,” but this – equally epigenetic – version of life was productive of “Clouds of moving Atoms,” “bringing forth...Particles of various forms, oval, oblong, and cylindrical, which advanced in all Directions spontaneously (26).”⁵⁶ Goethe’s infusions, too, bristle with the little bodies [*Körperchen*] that made up corpuscularian natural philosophy: particles [*Teilchen*], globules [*Kügelchen*], bubbles [*Bläschen*]; and rodlets [*Stäbchen*] (“of great beauty,” themselves “assembled” from concatenated points (10. Mai, 38)). Above all, he notes “innumerable,” various, and “endlessly small” points and “pointlets” [*Pünktchen*] (14. April, 28-31, e.g.).

There is no question here of preformism, no rhetoric of unfolding: Goethe’s notes document the successive emergence of increasingly complex animal structures (threads, fibers, tissues, plants, and ultimately animals) from the unorganized matter at hand, testifying implicitly and without polemic to the epigenetic account of generation. What is striking, though, is that the “Infusoria” notes do so without mention of a governing force, power, or drive: they distribute the adjective “lively” with a significantly casual – rather than vehemently *causal* – logic. That is, to return (with a difference) to François Jacob’s observation cited at the start of this chapter, here organization is *not* identified, not exactly co-extensive, with the living: Goethe discovers emergent composite structures, some of extreme subtlety, that he nonetheless describes as evincing “no sign of life”⁵⁷ – and others, of maximal simplicity, that do.

Nor does life, in these papers, inhere exclusively in certain types of material as its special, ontological substance. Instead, basic material minima – whether pointlets, corpuscles, particles, or bubbles – acquire prefixes, suffixes, and lengthy descriptors that express diverse degrees of liveliness, animality, and motion at diverse moments of observation. “Points” and “pointlets,” for example, are inflected in some of the following ways in the text: points “with no trace of life;” “inanimate,” “immobile” and “resting” points; points “whose movement I could not perceive;” points “full of life” and “moving themselves livelily;” points “that moved slowly;” “point-animalcules;” and, rather beautifully “a few bright, motile Life-points” (25-40). This is not yet to mention the social collaborations among points that Goethe describes, their textual/graphic dimension in the manuscript, or the connotation of “point” as a unit of thought that will be discussed in Chapter Two. Written a few years after Blumenbach coined the catching phrase

Bildungstrieb [Formative Drive] (1780) and a few years before Kant gave the notion his influential endorsement and epistemological justification in his *Third Critique* (1790), Goethe's *Infusoria* notebooks are "especially" interested in sighting animal "Life," but are not concerned to assert its state of exception, police its bounds, or attribute its activity to unique forces or powers.⁵⁸

b) *Life is not a power*

This permissive, alternative logic of life appears to have endured through a moment in 1830, when "vitalism" could be named and denounced. In that late year, Goethe appears to have received, bound, and kept an article from the *Gazette médicale de Paris* in which the comparative anatomist Étienne Geoffroy Saint-Hilaire rather theatrically breaks his longstanding public "neutrality" and comes out as a skeptic of what he calls "*la proposition absolue des vitalistes*": "that living beings resist the laws of affinity of brute bodies, and the composites that they form are indebted to other laws than the ones that operate upon chemical mixtures." What Saint-Hilaire particularly denounces, in fact, is the *absolutism* of vitalist expression, which proclaims its "vital forces" with such "certainty," "conviction," and "positiv[ity]" that contributions from sciences of "brute bodies" are silenced by fiat. But the climate, he hopes, is changing: the Academy has just given an honorable mention to a paper that applies "physico-chemical researches to the study of animal organization."⁵⁹ By this time we are at the threshold of the *next* "revolution" in biology – cell theory – that shifts attention back from organic wholes to their quasi-independent *parts*.⁶⁰

Meanwhile, at the time of Goethe's *Infusoria* experiments, Johann Friedrich Blumenbach's popular coinage, *Bildungstrieb* [Formative Drive] (1780-81) exemplified the emergent absolutist approach, and did so in the rhetoric of indisputable conviction that Saint-Hilaire could diagnose decades later as a hallmark of vitalist discourse: "One cannot be more inwardly convinced of something," writes Blumenbach, "than I am of the powerful gulf, that nature has fixed between the animate and inanimate creation, between the organized and inorganic creatures" (80). This insistence, and its quasi-theological rhetoric of inner conviction and personal testimony, touches a recurrent feature of the organicist strain within early biological, epigenetic thinking. With the same stroke, Blumenbach's treatise both re-situates formation within present, bodily material (the essential epigenetic gesture) and, though this need not follow, cleaves matter into two ontologically distinct kinds. "Organic" matter names that which is dignified by its drive to self-organize and procreate, its *Bildungstrieb*. Though other, "unorganic [*unorganisch*]" matter may indeed exhibit "extremely regular shapes formed out of previously unformed stuff," such matter is not to be credited with a *Bildungstrieb*. This is because, Blumenbach continues circularly, the *Bildungstrieb*, "is a life-force and as such is consequently unthinkable in the inanimate creation [*denn der ist ein Lebenskraft und folglich als solche in der unbelebten Schöpfung nicht denkbar*]" (89).

In the *Critique of the Teleological Power of Judgment*, pendent to that of *Aesthetic Judgment*, Kant influentially recognized that epigenetic natural philosophy had delineated a specific type of natural being for its object – the "organized and self-organizing being" – a type of natural being whose "self-propagating formative power," Kant argued, is "not analogous with any causality we know" (§65, 245-6). The key distinction, he explains, is that the organism presents as both "cause and effect of itself": the developed whole seems to have functioned as

the governing *telos* behind the parts' formation, and yet also to have come to exist as their consequence (§64, 243, §65, 244-5). Thus the "self-organizing being" is an auto-telic "causal nexus" without analogue in the domain of inert, material bodies – bodies obedient to "blind mechanism" and "in the highest degree contingent" (§65, 244, §61, 234). The organism is rather a "natural *end*," Kant argues, meriting investigation under the rubric of its special, teleological insularity – and indeed licensing teleological thinking on the part of researchers, a regulative "way of judging" not justifiable otherwise (§65, 244, 247). He cautiously endorsed Blumenbach's term *Bildungstrieb* as the best available designation for the causal agency controlling the consummate self-sufficiency of organic form (§81, 292-3).⁶¹

The whole of Goethe's changing and multi-generic output on the questions of *Bildung*, morphology, and metamorphosis has to be taken as his response to this epochal problem of formative life. But it seems important simply to notice that while many contemporaries named formation a power, force, or drive, (*-kraft, -trieb, vim*), Goethe named it an "-osis." *Metamorphosis* makes shape-change a noun of condition, and not a power. Its logic, *morphology*, as I have suggested, would eventually decline the stark antinomy between life and non-life constitutive of rival biologies. It may seem trite to focus on the grammar in this way, but when Goethe, much later, finally weighed in openly on the *Bildungstrieb* issue, it was to suggest that Blumenbach's grammar and rhetoric were precisely the problem. In a short critique of the language of "organic" powers and materials, called simply "Bildungstrieb" and published in the second issue of the *Morphology* journal (1820), Goethe takes Kant's praise of Blumenbach as his starting point, and then analyzes Blumenbach's precise reformulation of the term *vim essentialem* [*wesentliche Kraft*, essential force], that the pioneering epigenetic experimentalist C.F. Wolff had used (*MA* 12, 100-2).⁶²

Wolff's work, Goethe writes, had been unsatisfying in so far as "that which is supposed to organize itself out of that [Wolff's 'organic'] material remains a dark, incomprehensible point [*ein dunkler unbegreiflicher Punkt*] for us." But Goethe next devastates Blumenbach's improvement upon Wolff's epigenetic theory with praise, calling it (merely) brilliant word-play (101-2). In replacing Wolff's overly "physical" and "mechanical"-sounding word *Kraft* [force] with the term *Trieb* [drive],

Blumenbach achieved the highest and ultimate [form] of this expression; he anthropomorphized the word of the riddle [*anthropomorphosierte das Wort des Rätsels*], and called that which was under discussion a *nisus formativus*, a drive, a vigorous activity [*heftige Tätigkeit*], through which *Bildung* was supposed to be effected. (101)

Even more than "force," Goethe goes on to suggest, a word like "drive" effects an anthropomorphic trick: it invokes an agent, makes the riddle about life into an agon between actor and object, and conjures up a subject...well, *verbing*...upon a passive, material element. "Personified," Goethe continues with almost Nietzschean (or Lucretian) iconoclasm, this actor-object combo "confronts us as a god":

Observing the whole issue more precisely, we might have handled it more concisely, suitably and perhaps more soundly had we admitted that in order to observe the matter at hand, a prior activity had to be conceded; and that, when we want to think an activity [*Tätigkeit*], we underlay it with a fit element that it can act upon [*wir derselben ein schicklich Element unterlegen, worauf sie wirken*]

konnte]; and lastly, that we have to think of this activity with this underlay [basis] from then on, as existing together and always simultaneously at hand. Personified, this monster confronts us as a god, as creator and sustainer, which we are summoned to honor and to praise in every way. (101)

Caught in the act of deifying creation, epigenesis strangely resembles the preformist doctrines it so noisily denounces.

Goethe suggests in this essay that the controversy between “epigenesis” and “evolution” – which still looms large in the histories we presently tell of the period – present a false choice, and “seem to be words with which we only hinder ourselves.”⁶³ Once “an organic being has emerged into appearance [*ein organisches Wesen in die Erscheinung hervortritt*]” he argues, we will need “the concept of metamorphosis” in order to grasp its activity (101-102). I want to suggest that the *Infusoria* experiments of the 1780s handle life as a *condition* and not a *power* and in this way lay the groundwork for a perspective capable of countenancing the activity of “mere” objects and materials and of avoiding the vitalist antinomies that cast deficiencies of power - obsolescence, vulnerability, minority – as pernicious to life.⁶⁴

c) *Equivocal bodies*

Goethe’s experiments bear nonchalant witness to the notorious possibility of “equivocal,” or “spontaneous generation” – generation without parents, without seeds, without sexual intercourse – in both its forms: the *abiogenesis* of animals out of utterly inanimate materials [“mere *brute matter*”], and their *heterogenesis* out of once-living, but categorically *different* bodies [“*organic particles*”].⁶⁵ And the glancing way, as we have seen, the adjective “lively/alive” [*lebendig*] sometimes modifies the bodies under view in Goethe’s text, and sometimes does not, seems to reflect the contingent causality at issue in this illicit type of generation, for which the *De Rerum Natura*, heavily read in Goethe’s Weimer circle, furnished the preeminent classical example. As Joseph Priestley would fume, representatively, against Erasmus Darwin some eighteen years later – for the controversy remained live until Pasteur’s mid-nineteenth century bacteriology – equivocal generation “is unquestionably atheism” precisely because of a cause and effect violation (120):

[O]rganized bodies, of specific kinds, are maintained to be produced from substances that could not have any natural connexion with them, or particular relation to them. And this I assert is nothing less than *the production of an effect without any adequate cause*. (“Observations,” 128)

The system of nature, Priestley maintains, proceeds through analogy, and “causes have a regular connexion”: in the sensible world, like parents produce like offspring and do so via an “organized germ” particular to their species; the same must hold true for microscopic life. Aberrations from this causal sequence in nature are “*events without a cause*” and belong to that department natural philosophy leaves to God: miracles. Even an enthusiastic epigenesist like Needham, eager to boast of “what I may call a microscopical Island, [of] Plants and Animals” spawned from a single plant cutting, had taken pains to deny that “there is any Danger upon these Suppositions of falling into equivocal Generation; because the specific *Semen* of one Animal can never be moulded into another” (652, 654). Thus the “Island” of variegated life he

cultures from a single vegetable clipping is laboriously explained as a set of permutations *within* the “certain and determinate,” God-given bounds of that vegetable species, a licit expression of “exuberating ductile Matter, actuated with a vegetative Force” (658-9). Goethe’s notes, by contrast, laconically gloss the following vegetable-to-animal metamorphosis in the mold-infusion #6, on the 12th of April: “very small Globe-animalculae [*Kugeltierchen*]. The specks of mold seem to become transparent and to transform themselves into Inf. animalculae” (*LA* I.10, 28). Nor does the ontological equivocation Goethe affords his material minima disappear from his thinking on life with the increasing success of vitalist biology. Rather, the vital, material and (as we shall see presently) social points return to constitute the “murky” medium [*Trübe*] of Goethean color theory and are explicitly recalled when, in his later morphological writings, Goethe attempts to focus on the broad array of particulate influences that pass between beings.

Goethe’s proximate model for the Infusoria-experiments of 1785-86 is Wilhelm Friedrich von Gleichen’s *Abhandlung über die Saamen- und Infusions-Thierchen* [Treatise on Seed- and Infusion-Animalcules] (1778).⁶⁶ Von Gleichen keeps *Generatio aequivoca* at a strategic distance, prefacing his findings with Charles Bonnet’s admonition that the philosopher who would maintain that “the Infusion-material itself transformed into animalcules” would be promoting “a Physick that both reason and experience strongly contradict” by “warming-up that long falsified *aequivocam* again.” Von Gleichen, who suggests that a “mild fermentation” between water and air activates a “principle of Life” residing in the inmost components of water (not, as for Needham, the infused plant or animal body), prefers not to get into whether or not his explanation “reheats that rusty doctrine.” Does the fact that his own theory “also happens to transgress the bounds of our current concept of generation,” he asks, make it “without exception, the theory of *Generatio aequivoca*?” But he is bold and unusual to situate Life in the physical medium (water, air) rather than in the infused animal or vegetable matter, and another rhetorical question follows. Von Gleichen wonders if it is not “far more sublime and noble” to envision a God who “impressed the elements with the power to effect the formation of bodies through the coming-together of atoms determined for organization” than one who, “pieced them together himself, like a workman of men”:

For we see everyday that it is given to the elements to compound and to disintegrate according to general laws, and that they are in this way the repository of the principles – genesis, preservation, annihilation – of all possible beings of our planet. (72-73)

Goethe and von Gleichen are particularly interested to watch the ways in which minimal bodies compound and disperse, collaborating to form and un-form tissues and animals. It is not always easy to distinguish living tissues from the slimy-membranes and jellies that thicken in the vessels: “on closer observation what I had called a mucous/slime-membrane [*Schleimhaut*] was moving at the edges and at last I could recognize the inner movement of the whole skin, and so that it is composed of simple, very little infusoria” (Goethe, 14. April, No. 2, *LA* I.10, s. 29). The structures are described as fragile and provisional assemblages, rather than inseparable wholes, and their organizations are described not in the language of “*self-organization*,” but of sociability:

[U]nified Globe-animalcules [*Kugelthierchen*], or rather, those going about in near proximity to one another, give us another curious display. Two, three, four, and five of them revolve sociably and slowly about their axes, not touching one another, but keeping

a fair distance, and taking up different positions and forms in this procession, so that they often seem to flow together like bubbles, and to continue on their way as a simple animal, and also to separate again now and then. (von Gleichen, 76)

Goethe's notes are at their most expansive and enthusiastic in describing points in relationship of dance, play, collaboration, and urgency, such as the "endlessly small but very beautiful point-animalcules that seemed to linger in a bunch and play with one another." The animalcules of the potato-infusion evince a particularly "sociable being," "gliding much more gently up to one another, around one another, returning again, and seeming to sniff one another with their forward, pointy tips," all in all, "behaving towards one another in a way that would have befitted much more organized animals." (When the Goethe adds a drop of pepper-corn animalcules from the neighboring infusion, however, these sociable beings curl up and play dead! (16. April, no.9 s. 31-32)).

The notion that a living being, when it "comes forward [obtrudes] into appearance," is already a collective of others seems to stem from the microscopic communities observed during the 1780s and to intensify as the *Morphology* journal-project takes its notably composite shape. In an introductory essay dated "1807" and published in *On Morphology's* first issue (1817), Goethe puts it this way:

Each living thing is not singular, but rather a plurality [*Mehrheit*]; even in so far as it appears to us as an individual, nevertheless it remains an assembly [*Versammlung*] of living, independent beings.... Some of these beings are already bound together from the start, some find and conjoin with one another. They divide, seek each other again, and in this way effect an endless production in every way and in every direction. ("Die Absicht Eingeleitet," *MA* 12, 14.)

De rerum natura will often call a body *concilium*, joining, as does the word *Versammlung* [gathering, convention, assemblage] here, the sense of material *assemblage* and social/political gathering or assembly. The earlier infusoria experiments give an expression such as this one a stubbornly literal and empirical sense that is frequently explained away when Goethe's morphology is referred back to its ideational pole.⁶⁷ Bodies – "especially," but not exclusively living ones – are fractious, unfinished, and heterogeneous forms, shaped by losses and incorporations, and subject to a not-always-sensible politics of parts.

When Albrecht von Haller, whose research on sensible and irritable corporeal filaments had ignited the efflorescence of epigenetic generation science in the latter half of the 18th century, became one of the doctrine's most vocal skeptics, he demanded that his epigenesis opponents reveal "the missing building-master" capable of overseeing the intricate construction of living bodies.⁶⁸ As we have seen, many answered with power, personified. But reading Goethe and Von Gleichen on infusoria reveals another available means of thinking organization that emphasized the provisional, lateral encounters and attachments among neighboring corpuscles. Here Goethe's descriptions of clustering animalcules resonate meaningfully with Diderot's famous, explicitly neo-Lucretian vision of sensible body as a swarm of bees in *Le rêve de d'Alembert*: "Countless animals in a drop ... moved among each other with unspeakable agility and shortly gathered themselves together into a thick, swarming cluster" (11. Mai, No. 9, s. 39). Diderot's text was composed in 1769 but unpublishable into 1831.⁶⁹ We might justifiably borrow, I think, Althusser's designation of an "underground materialism of the encounter" in order to designate the recurrence of a certain kind of equivocal materialism within

the early experimental life sciences and their philosophies, a pattern linking thinkers on both sides of the archeological shift towards organic exceptionalism “around 1800.” Unlike in the famous formulations of Kant, Blumenbach, or Coleridge, here the distinction between living and non-living form quite honestly *depends* – upon a set of favorable encounters, a fortuitous assemblage – rather than an up immanent or transcendental form of teleological determination.⁷⁰

d) *Lucretius’s equivocal matter*

In striking contradistinction to the absolutism of both rhetoric and contents that Saint-Hilaire (1830) and Muller-Sievers (1997) diagnose in the early biologies of the turn to the nineteenth century, Lucretius gives his profoundly equivocal doctrine concerning matter and life in appropriately equivocal language:

I shall disclose the first-beginnings of things [*rerum primordia pandam*], from which nature creates, increases, and nourishes all things, and into which the same nature again reduces them when dissolved—which, in discussing philosophy, we are accustomed to call matter, and bodies that generate things, and seeds of things, [*materiem et genitalia corpora rebus...et semina rerum*] and to entitle the same first bodies [*corpora prima*], because from them as first elements all things are. (I. 55-61, Loeb)⁷¹

Instead of importing Epicurus’s Greek term “atom” into Latin, Lucretius gives the material minima a lush list of presumably interchangeable alternatives: matter *and* seeds *and* life-giving bodies. This *and, and, and*, conception of elemental bodies matches the “especially” remarkable, but not essentially unique place life is to occupy in Goethean practice and philosophy of science, and fits the glancing manner in which the word “lively” describes the corporate tissues and bodies Goethe sees through his microscope. Lucretius’s calm leveling of terms that must have rung out, in late-eighteenth century ears, as the loaded key-words of the contemporary debate (the preformists’ “seeds” vs. the epigenesists generative bodies), agrees with Goethe’s rare sense that such terms were more interchangeable than antithetical. Better, this *and, and, and* conception could serially mark out separate moments in a minimal body’s eternal career, in which it would play different roles as a member of different configurations.

Generative or not unto themselves (for the single atom is an abstraction, whose likelihood Epicurus and Lucretius deduce from the behavior of sensible, compound bodies), first elements produce things by collocating in the plural: when it comes to giving an account of the composition and disintegration of things, living or no, both texts give much greater weight to the *relations between* particles than to their independent endowments. What permits nature’s little bodies to produce worlds, Lucretius argues, are “the various connections, weights, blows, meetings, and motions by which all things come to pass [*varios conexus pondera plagas /conkursus motus, per quae res quaeque geruntur*]” (1.633-4). Such encounters and entanglements first produced the structures of the perceptible universe and continue to motivate its incessant change. Once a thing – a “being-complex” [*Komplex des Daseins*, Goethe] or a “contexture” [*contextum*, Lucretius] – emerges, the work of natural philosophy is to produce an account of its shape-change: “for,” to follow Lucretius, “nothing remains like to itself; everything moves about; Nature alters everything and forces everything to change”; or, in

Goethe's words, "nowhere do we find a stable, resting, or closed thing; rather everything fluctuates in constant motion" (*DRN* 1.243, 5.830-2 Loeb/Geer; Goethe, „Die Absicht Engeleitet," *ZMI* 1.1, *MA*, 12 13).

Another emphatic feature of Lucretius' first particles is that they are conventions of philosophic speech, things which "*in discussing philosophy, we are accustomed to call matter, and ...and....*" Goethe's intercession in contemporary debates over formative life, as we have seen, is equally preoccupied with the matter of naming. Although the next chapter will take up what this ontology entails for Goethe's poetics, the point here is not to reduce corporeality to linguistic constructivism or purely textual materialism. On the contrary, what is perhaps most provocative about their sort of equivocal substance for twenty-first century thinking is that it tolerates an easy cohabitation between dimensions of "matter" – social, textual, biological, mechanical – that have increasingly specialized careers in later centuries. It is no accident that revising the story of equivocal generation's unequivocal mid-nineteenth-century "defeat" at the hands of Louis Pasteur served as an object lesson for the new, constructivist scientific historiography.⁷² Ontologically equivocal "pointlets" like the ones Goethe and Lucretius implement seem to offer themselves as atoms for the type of revisionary anthropology of scientific modernity Bruno Latour has attempted to inaugurate: one capable of describing "things" as they have been all along, "*simultaneously real, like nature, narrated, like discourse, and collective, like society.*"⁷³ And indeed, *De Rerum Natura* contributes, if indirectly, to the complex and interdisciplinary genealogy of late twentieth-century science studies.⁷⁴ One explanation for the monstrous form of the scientific-journals – in which self-reflexive methodological essays, reception-critiques, and variously poetic, literary, and aphoristic approaches to the object proliferate around each straight-forward "finding" – might be Goethe's attempt to do justice to each of these dimensions of an experimental object. In the key *Morphology* essay taken up in the following chapter, the thinking-body of the scientist is depicted much like populous infusion, harboring the germs and traces of multiple encounters – and, after unpredictable periods of latency and gestation – giving birth to poetic and natural philosophical "points," graphic and conceptual, "leaves" botanical "fruits," and (sometimes), illegitimate children. All of which, as we will see, prompts the morphologist to tell his science "historically."

2. Decadent Science

Now ... how easily and quickly these images arise, constantly flowing off from things and gliding away. For what is on the surface of things is always welling up to be cast forth.

Lucretius, *DRN* 4.143-5 (Loeb/Geer)

Morph.
Formation, Transformation, Gestalt.
Moment of skin-shedding.

Morph.
Bildung, Umbildung, Gestalt
Moment der Häutung

Goethe, manuscript note (LAI9b, M39, s.42)

a) *The skins of things*

De rerum natura and the *On Morphology* project also correspond profoundly in their strong fixation on the skins and surfaces of things. Both texts link them literally and materially with the obtrusion of bodies into perceptibility. For precisely at the moment when, with the new biology (as Foucault and Jacob told it), living bodies defied the “lines, surfaces, forms, reliefs” legible to the old natural history to “turn in upon themselves” and their own inscrutably self-organized interiors, Goethe makes a curious case for the scientific pertinence of the visible:

MORPHOLOGY

Rests on the conviction that everything that is must also indicate and show itself. From the first physical and chemical elements to the intellectual expression of humans, we affirm this basic principle.

We refer equally to that which has form [*Gestalt*, figure, shape]. The un-organic, the vegetative, the animal[,] the human[:] all indicates itself, it appears as that which it is to our outer and to our inner sense.

Form is something moving, becoming, passing away. The doctrine of form is the doctrine of transformation. The doctrine of metamorphosis is the key to all the signs of nature.

[Ruht auf der Überzeugung daß alles was sei sich auch andeuten und zeigen müsse. Von den ersten physischen und chemischen Elementen an, bis zur geistigen Äußerung des Menschen lassen wir diesen Grundsatz gelten.

Wir wenden uns gleich zu dem was Gestalt hat. Das unorganische, das vegetative, das animale[,] das menschliche deutet sich alles selbst an, es erscheint als das was es ist unserm äußern unserm inneren Sinn.

Die Gestalt ist ein bewegliches, ein werdendes, ein vergehendes. Gestaltenlehre ist Verwandlungslehre. Die Lehre der Metamorphose ist der Schlüssel zu allen Zeichen der Natur. (LA I.10, s.128)]

Goethe here levels the tenacious metaphysical priority of being [*Sein*] over appearance [*Schein*], as well as that of inner “sense [*Sinn*]” as mind and meaning over outer “sense [*Sinn*]” as sensuous perception, describing their difference as a lapse of time rather than of truth or reality. Morphology will trust what “is” to “appear” and insist that what “appears . . . is,” and the passage’s last two lines suggest that transience – “moving, becoming, passing away” – is the conduit between the two.⁷⁵ The temporal difference sensible in changes of form or shape [*morph-*, *Gestalt*] is also the difference of signification: in *metamorphosis* something “indicates,” “signifies,” adumbrates or gestures toward itself [*sich andeuten*]; it “demonstrates,” “points,” presents or displays [*zeigen*], so that the study of metamorphosis Goethe calls *Morphology* perceives nature’s “signs,” “marks,” or “figures” [*Zeichen*].

A sheaf of Goethe’s notes related to Knebel’s translation of *De Rerum Natura* shows intense work around a fragment of a line from book two: “[as I have taught], and as the thing itself proclaims [[*ut docui*], *res ipsaque per se vociferatur*]” (2.1050, Geer/Loeb). Knebel settles, even more emphatically, on “*es spricht die Sache selbst durch sich laut aus* [things by themselves speak themselves aloud].”⁷⁶ This is license to turn to Lucretius to help understand morphology’s basic conviction that all things – not just humans, with their linguistic and artistic

signifying systems – are involved in forms of representation. *De Rerum Natura* also provides insight into the suggestion, in that string of present participles, that this showing is part of their dying: “*Gestalt* is something moving, becoming, passing away.”

In Book 4 of *De Rerum Natura* Lucretius claims that all things, as they decay in time, scatter fine atomic husks from the surfaces of their bodies. Like a snake’s discarded skin, the bark of a tree, or the shed coat of an insect, he writes, these *simulacra* “preserv[e] the shape of the object”: as they flit about in the air, each “bears a look” – *speciem*, ‘outline,’ ‘appearance,’ ‘mein’ – “and shape like the object, whatever it is, from whose body it is shed to go on its way” (4.69, 53, Loeb). Lucretius calls these slight but real films by names that, in most epistemologies, connote no physical being at all: *simulacra, figurae, imagines*. Yet for him they are also the data of sensation: as Goethe glosses the theory in the Historical Part of the *Farbenlehre*, “sight occurs because images detach themselves from objects and enter the eye” (*MA* 10, 485).⁷⁷ Sentient beings apprehend the world by means of the slight impacts of these airborne exfoliations, which set the perceivers’ own particles into motion.

Lucretius’s rare thought about simulacra confers an empirical, material truth to images: they are fractions of the real estranged from their sources, carrying to the senses a material husk of what they represent. It also confers to all matter, all body – not just the human kind – the capacity, indeed the necessity, for figuration. Being a body in time means shedding atoms of self – involuntarily re-presenting oneself – and weathering others’ particulate bombardment. As Goethe and Shelley will stage in the neo-Lucretian poems examined in Chapters 2 and 3, as embodied beings, we decay into perception, experiencing each other by means of an incessant exchange of similitudes that is neither willed, nor linguistic, nor without physical cost.

Meanwhile, Lucretius’s favorite analogies for these figures – membranes [*membranae*], bark [*cortex*], and coats [*tunicas*] (4.49,58) – echo through the “important axiom of organization” that Goethe provides in an introductory essay for the first issue of *On Morphology*:

[T]he whole activity of life [*Lebenstätigkeit*] requires a covering [*Hülle*] that shelters it from the external raw element, be it water, air, or light [and] protects its tender being [*zartes Wesen*] so that it can accomplish what is specifically incumbent upon it inwardly. Whether this envelope appears as bark, skin, or shell, everything that emerges into life [*alles was zum Leben hervortreten*], everything that acts vitally, must be enveloped. And so, in time, everything that is turned outward belongs, bit by bit, to death and decay. The bark of trees, the shells of insects, the hair and feathers of animals, even the epidermis of humans, are eternally self-detached, cast off envelopes, given over to nonlife [*sich absondernde, abgestoßene, dem Unleben hingegebene Hüllen*], behind which new coverings are always forming, and beneath these, then, superficially or deeper, life brings forth its creative web [*Gewebe, weave, text, tissue, fabric*]. (“*Die Absicht Eingeleitet*,” *MA* 12, 16-17).

As Lucretius put it, “what is on the surface of things is always welling up to be cast forth” (4.145, Geer). Goethe had suggested earlier in this essay that in contrast to anatomy, which works by dissection, Morphology would attend to the “outer, visible, graspable parts, in their connection.” But this passage, the essay’s last, makes the morphologist no less a student of decay than the anatomist: the morphologist’s sense-perceptions concern – and *are*, in the Lucretian sense – belated husks of their objects. Morphology’s interest in the “moment of skin-shedding” (above epigraph) and the object’s capacity to “show itself,” does not therefore lay

claim to exuberant acts of self-realization and new life (becoming-butterfly). Rather, *this* axiom of organization enjoins us to notice the way even the newest thing that shows is already aged, “given over to non-life,” and the way beautiful features of living bodies – their hair, feathers, shells – are not strictly alive at all. As an interesting counter-point, Kant had struggled to fit these very “concretions [*Concretionen*],” “skin, hair, and bones,” into his account of how each part of an animal body must comprise a teleologically contributive organ (§66, 5:377, p.249).

If Bichat’s vitalist physiology had defined “Life” as “a permanent principle of reaction” against “[being] influenced incessantly by inorganic bodies,” or “death,” this passage construes transience, a movement towards death, as a life’s sheltering envelope; it refigures the barrier of the skin as a site where organic and inorganic shade into, and lend themselves to, one another (*Physiological Researches*, 9-10). As Monica Gale has written of Lucretian science, “There are no separate forces of creation and destruction... simply atoms, aggregating and disaggregating in space, in accordance with one natural law” (“Traditions” 63). Here animation and decay belong to the same phase of activity:⁷⁸ living is a form of decadent disclosure, a “turning outward” toward “nonlife.” Though Goethe’s passage initially aligns its life/nonlife opposition with that age-old metaphysical (and new, biological) preference for depth over surface, it eventually turns this valuation inside-out: not only does Goethe’s repeated lingering on decaying surfaces elevate them as worthwhile objects of life-scientific attention but it also becomes clear that “behind” and “beneath” these coverings are only more coverings. The “whole activity of life” not only “requires” inanimate wrappings, but consists in weaving those integuments – “superficially or deeper.”

As usual, the infusoria provide a concrete example of the way organization needs to be thought permissively as the first inkling of a web or tissue that may or may not live, now or later, and in fact tends to blur that distinction. The very first snippet of the *Infusions-Tiere* manuscript is about the coming-to-visibility of a subtle covering connected to the larger body of a *Tremella* (what we would now identify as a species of blue-green algae): “I noticed that a light web [*ein leichtes Gewebe*] had covered the floor of the glass and its sides; it seemed connected to the mass above it, and also lifted itself up by degrees and merged with the rest” (*LA II 9a*, 507). Goethe’s comfort in not deciding whether “points” are organic or inorganic allows him – and this is another distinctive and enduring feature of Goethean empiricism – to pay particular attention to the problem of life’s dependence upon its *medium*. On May 11th he depicts the incorporation of pieces of ambient gelatin medium as a prerequisite for animalcular collectivities:

[W]ith the greatest intensity they grabbed a little piece of the gelatin that was floating all around and unified themselves quickly again into multiple clusters, I also saw many revolve around each other, lacking, it seemed, only a little piece of gelatin in order to hold fast to it and in this way lay the ground for a new society” (*LA I.10*, No 9, s. 39).

The few drawings that accompany the observations represent the contours of microscopic bodies with a hesitant touch that seems intent to mimic their fragile and versatile materiality: the faintest possible series of points suggest, at once, a porous distinction between animal and medium, as well as between a single and collective animal; and they accentuate how dots are what illustrators use to indicate the first perceivable intimation of a body, something less than a distinct outline (*GSA 26/LV*, 15, 1).

For the “open, subtle, fugitive” composite forms that we recognized in Goethe’s account of living objects, R. H. Stephenson, following Whitehead, has used the deft and beautiful expression, “conrescence” (*Goethe’s Conception of Knowledge and Science*, 1-2). In *De rerum natura*, the verb *conrescere* describes the fleeting figurative activity of the most delicate of material bodies – clouds and simulacra – which “never cease to dissolve and change their shapes...into outlines and figures of every kind” (IV. 140-2, Loeb). In fact, according to Lucretius, simulacra make up our general atmosphere in addition to streaming directly from present objects. Capable of “wandering” long-distance and long-term, and amenable to dissolution and recombination, they texture any perceived present with shades of distant and prior happenings.

Lucretius’s notion of an ambient atmosphere full of the attenuated touches of far-off things – mingled in with the more insistent bombardment of present ones – gives Goethe, as it will Shelley, the resources to conceive that beings change their forms according to a much more complex, oblique, reciprocal, and contingent set of causal relationships than could be imagined through the organicist notion of self-legislating *power*. Goethe’s, writings, late and early, first assume, and then insist, that apprehending the cloud of causes at work on and in living bodies will require holding at bay the strict distinction between the “organic” and “un-organic” elements of things. Fittingly, one of his most subtle and prescient statements on the morphological interdependency between organism and medium occurs in his “Attempt at a Meteorology (1825).” If, in the long passage about husks and skins cited above, Goethe primarily located life’s envelope-weaving activity beneath a beings’ present skin, in the following one, those vital coverings are the work of the others that surround and infuse it:

Now here is, above all else, the principle point to be heeded: everything that is or appears, lasts or passes, is not to be thought as wholly isolated, wholly naked; one thing is always steeped in, accompanied by, coated in, enveloped in, another [*von einem anderen durchdrungen, begleitet, umkleidet, umhüllt*]; it causes and suffers influences, and if so many beings work through one another, where in the end is the judgment, the decision about what is the ruling and what the serving thing, what is appointed to lead and what required to follow? (*LA I.11*, s. 245)⁷⁹

Goethe’s copy of Kant’s *Third Critique* shows a double-line marking Kant’s definition of a “natural end” – “a thing exists as a natural end [*Naturzweck*] if it is cause and effect of itself” – which Kant goes on to develop into the definition for that causally exceptional thing, an “organized and self-organizing being” (Engelhardt, 177).⁸⁰ In a posthumously published text roughly contemporaneous with the one cited above, Goethe subjects this rhetoric of “ends” and “purposes” to a critique comparable to that of “formative drive,” above. The text is an extended meditation on the reciprocity between structure and environment, one that Olaf Briedbach has aptly glossed as expressing a kind of co-determination more fundamental than the “adaptation of form to environment.” Here, “form is first constituted in an environment and absolutely according to that environment’s resources...a consequence of interactions that bind themselves into the different life forms” (*Goethes Metamorphosenlehre*, 240-2). Goethe ultimately suggests, in a proto-ecological vein, that our tendency to view form in terms of “determinations and purposes/ends [*Bestimmungen und Zwecke*]” will fall away in favor of a less teleological consideration of “relations and connections” and the manner in which “one species, if it does not precisely arise out of, at least sustains *itself* in and through the other.”⁸¹

b) *Life in the turbid medium*

On Morphology's permissive interest in body as web or tissue in uneven progress towards the visible has corollaries in Goethe's long-term study of optics and colors. The *On Natural Science in General* portion of the late journal project had immediately re-opened Goethe's finished *Theory of Colors* [*Zur Farbenlehre*] (1810), and in the fourth issue (1822) a new set of investigations, essays and schemata appear under the heading *Chromatik* [Chromatics] (MA 12, s. 553-609). The series begins with a table entitled, "Auge, empfänglich und gegenwirkend [Eye, receptive and reactive]," and among the thirty-one short pieces that follow is one that confronts the link between life, materiality, and visibility in explicitly Lucretian terms: "27. *Der Ausdruck Trüb* [The Expression Turbid]" (603-6). It describes how human observers see by way of "the tenderest material," positioning Lucretian materialism as a resource for the form of sensuous observation Goethe calls "tender Empiricism."

"Turbidity [*die Trübe*]" is, for Goethe, the indispensable medium of sight, the (notably clouded) "pure concept, upon which the whole *Color Theory* rests."⁸² In the little 1822 essay on the term, *Trübe* is described, much like life's "web" in passage on mortal envelopes, and the *Tremella*'s "light web" in the *Infusoria* experiments, as "a heterogeneous web [*ungleichartigen Gewebes*]" at the threshold of the visible:

The first diminution of the transparent, that is, the first, gentlest filler of space, the approach to something bodily, nontransparent, as it were, is the turbid [*die Trübe*]. It is thus the most tender material [*die zarteste Materie*], the first lamella of corporeality. (604)

Goethe repeatedly describes "*Trübe*" with that social-material term *Versammlung* [assembly, assemblage] that he used to describe living "being-complexes." Turbidity connotes an "assemblage of dissimilars [*Versammlung von Ungleichtartigen*]," and Goethe implements the atomist distinction between atoms and void to insist on the medium's irreducible heterogeneity: *Trübe* is "a collocation of transparent and nontransparent, a net-like film of opaque atoms and their transparent vacuums" (604). For Goethe, *De rerum natura* provides the best term for this contexture of dissimilars: "in so far as the disparate pieces, though sundered, still attach to or float near one another," they make "what the Romans called *rarus* (Lucret. II. 106)." (Gilles Deleuze agrees on this point, arguing that one innovation of Epicurus and Lucretius is to depict "Nature" as an infinite sum of diverse elements that will not be totalized, so that "Nature" connotes "a principle of the production of the diverse [that] does *not* assemble its own elements into a whole" (*Logic of Sense*, 266-7).) It is perception of this heterogeneity, Goethe thinks, that prompts the expression, "Trübe," which stems from "unity, stillness, and coherence *disturbed*." He constructs an etymology from the Latin *turbo-*, *are* (the term from which no lesser a modern Lucretian than Michel Serres chose to unfold his entire exposition of the DRN) to the French and English word *trouble*.⁸³ This disruptive atomic-level disparity is matched by a proliferation of turbid "aggregates [*Aggregate*]" at the sensible level. Air, as the "preminent medium between vacuum and solid, offers us *Trübe* in manifold degrees": "*Dunst* [haze, mist, exhalation] *Dampf* [damp, vapor, steam], *Rauch* [smoke, fumes], *Staubwirbel* [dust-eddy], *Nebel* [fog], *dicke Luft* [bad/heavy air], *Wolke* [cloud], *Regenguß* [deluge], *Schneegestöber* [snow flurry]" (604).

For the purposes of understanding Goethe's science of life, it is crucial that several of these material mists had been examined in the prior issue of the journal (I.3), albeit in its *other*, purportedly organic half, *On Morphology*. There, in a new, long essay "*Verstäubung, Verdunstung, Vertropfung* [Dissipation, Vaporization, Effluence [Exudation]]," many items in the turbid manifold cited above appeared as biological, not meteorological effluvia (*MA* 12, 212-24). This 1820 essay, then, suggests the way that the plants and animals that are morphology's principle objects, in producing turbidity, produce the medium through which they are perceived by the morphologist - and perhaps even communicate among themselves, independent of his looking.

c) *Going to dust, vapor, and droplets*

The 1820 essay's German title, „*Verstäubung, Verdunstung, Vertropfung*” plays on the work of the common verb-prefix *ver-*, which indicates the object's transition into the state named by the stem, but also can indicate that the stem action has gone wrong: while *laufen* is to go in German, *verlaufen* is to get lost. This being an initially botanical essay, the first gerund, *Verstäubung*, plays darkly on the central issue of pollination, *Bestäubung*, making that traditional apex of plant procreation chime instead with a verb for passively gathering dust: *verstauben*; and bringing into relief the place of mere dust [*Staub*] in the word for pollen [*Blütenstaub*]. Following a particle through solid [*Staub*, dust], gaseous [*Dunst*, vapor], and liquid [*Tropfen*, drop] states, the very title brings botanical effluvia in touch with their inorganic correlates in physical science. *Staub* [dust, pollen], then, is deployed as a quintessentially equivocal particle in the Lucretian sense – *materiem* and *genitalia corpora rebus* and *semina rerum* – that we have been following here.

Citing mostly Goethe's very *Verstäubung* essay, Grimms' *Deutsches Wörterbuch* gives the Latin *dissipatio* for *Verstäubung*, suggesting “dissolution, disintegration into the constituent parts” [*auflösung, zersetzung in die bestandtheile*] as a definition. Indeed, the non-vital inflections of the essay's title justly gloss an essay that, on my reading, experiments in sidelining reproduction altogether as the defining issue of botanical life. Instead, it re-directs botanical attention towards a plant's non-procreative processes: toward effluvia emitted in obsolescence, after death, under duress, to excess, and in ways that do not produce like by like. Indeed, in this essay, life, form, and representation are viewed under the aspect of their transience, transitivity, and even *disorganization* – in subtly provocative divergence from the focal quandaries of generation, teleology, and organization constitutive of the better known Romantic science of life and poetics of genius.⁸⁴

Recent editors have presented the open-ended, catalogue-like *Verstäubung*-essay rather dismissively as a “loose grouping” of observations that modern science can now identify as relating to “asexual propagation in mushrooms.”⁸⁵ But recognizing the Lucretian materialism at issue reveals the essay's very aimlessness to be an experiment in displacing the entire telos of his prior work on metamorphosis. For here Goethe entertains the role of contingency in generation, implicitly reviving the category of “fortuitous metamorphosis” that had been named and expressly excluded from his prior botany. At moments in the 1820 *Verstäubung* essay, Goethe subjects those prior writings to a revision akin to that of Freud's *Beyond the Pleasure Principle*, such that *Verstäubung* conjoins to the eros of pollination an entropic death drive, an “ultimately destroying” form of self-annihilation that “spills over into nullity” (216). But at its most

subversive, this essay ceases to worry the life/death opposition, permitting a set of decadent, excessive, and contingent processes to enter and redefine the category of “life.”

“Form,” to recall Goethe’s Lucretian language in the last section, “is something moving, becoming, passing away,” and “if so many beings work through one another... where in the end is the judgment about... what is appointed to lead and what required to follow?” In the *Verstäubung* essay, reproductive pollination becomes a mere instance within a broader series of self-dispersive events within vegetable and animal life, whose causes are complexly bound to the exfoliations of surrounding beings. Like Percy Shelley’s “The Sensitive-Plant,” a poem of the same year, Goethe’s essay is concerned less with reproduction (the Sensitive-plant produces “small fruit”), than with the “shapes and odours” that pass *between* beings. Shelley’s poem calls this “reciprocal action from plant to plant” (Goethe) a “mutual atmosphere”: “For each one was interpenetrated/ With the light and odour its neighbor shed.../ Wrapt and filled by their mutual atmosphere” (‘Conclusion,’ l.18, ‘Part First,’ l.66, 67, 69).⁸⁶ In Goethe’s essay, as in Shelley’s “poetry of life” in the 1820s (Chapter 3), the effects and character of punctual scatterings – as germs, as dust, color, odor, influence, and especially, as (neo-Lucretian) simulacra – simply *depend*, on timing, on ambient conditions, and on who might be there to receive. What, Goethe’s *Verstäubung* essay is beginning to ask, might life look like from the perspective of the mundane exfoliations, exhalations, and representations that that mediate *between* beings? What arts of discomposure might be adequate to this view?

d) *Trying not to think about sex*

The first term of Goethe’s title, *Verstäubung*, is in fact borrowed from the Jena botanist Franz Joseph Schelver (1778-1832), and appreciating the veiled provocation in Goethe’s essay requires understanding its subversive ventriloquism of Schelver’s already heterodox botany. Goethe opens his essay by reflecting on the dismal reception history of Schelver’s doctrine of *Verstäubung*, which had amounted to an assault on the sexual paradigm in botany: an assault, that is, on the assumption, central to botanical classification since Linneaus, that plants, like animals, possess male and female genital organs with which they reproduce sexually at pollination, when pollen produced by the “male” anthers fertilizes the “female” ovary. Chronicling the grim spectacle of Schelver-reception over the last sixteen years, the Goethe of the 1820 *Verstäubung* essay is troubled by botanists’ utter incapacity – especially his own prior incapacity – to seriously countenance a challenge to the sexual system. Even a very recent review of a book by one of Schelver’s protégés had confessed “dread” at Schelver’s audacity: “sexuality,” its anonymous author concluded, “is a thread that runs meaningfully and pleasantly through the whole of nature. Tear it in the Plant Kingdom, and understanding loses footing in nature and natural history” (*Isis* 10, 667).⁸⁷

In the *Verstäubung* essay Goethe confesses his own former complicity in the reigning “Dogma of sexuality,” admitting to having urged Schelver, years ago, to keep his “heresy” silent. In fact, the historical and ideological contingency of scientific progress is thick in this essay, which repeatedly presents consensus in this language of “dogma,” “heresy,” “faith,” and “conversion,” and uses the fate of the *Verstäubungslehre* – something like the doctrine of miss-pollination – to exemplify the equivocal outcome of untimely disseminations in print. As Goethe now acknowledges, his own, successful *Attempt to Explain the Metamorphosis of Plants* treatise (1790), republished in the first issue of *On Morphology* (1817), had adhered “religiously” to the

sexual system; and indeed, that work had depicted healthy plant metamorphosis as a teleological progression towards “that apex of nature, reproduction through two sexes” (30). But Goethe’s belated appreciation for Schelver’s idea, it turns out, holds the analogy to animal hetero-sex further at bay than Schelver had ever intended to do.

In fact, Schelver’s controversial *Critique of the Doctrine of the Sexes in Plants* [*Kritik der Lehre von den Geschlechtern der Pflanze*] (1812) had aimed not to discard the two-gendered paradigm entirely, but to exalt masculinity as the exclusive achievement of the highest – i.e. animal – order of life. Sexually active plants were a category violation within the three-tiered hierarchy of being undergirding Schelver’s *Naturphilosophie*.⁸⁸ This hierarchy ascended from inert mineral matter, “chained in exteriority and mass,” through plants, “striv[ing] to free themselves from the earth,” to ensouled animal life, which has “achieved in deed and power what in plants was only a drive” (74-75). Only animal life, “turning in on itself,” internalizes as sexual difference “the antithesis between male and female” that for plants manifests as a struggle between organism and environment (75, 67). Vegetable life, wrote Schelver, “never bestirs itself... never attains the male power. It is always the fertile, receptive wife of Nature, whose husband is still the general, external goad to development [*Entwickelungsreiz*]” – the water, warmth and light that excite seeds to life in the earth – rather than “an actual male” (66-7). Here, indeed, it becomes painfully obvious that Schelver’s critique never got far from the gendered analogy he proposed to suspend.

Rather, to protect procreative masculinity as the apex of natural life, Schelver had written a vast, assiduous botany against plant sexuality because it posited, among mere vegetables, something akin to male sperm (65). Rejecting pollination outright, Schelver argued that the moment of plant propagation takes place not in flowers, but in the ground, where general Nature excites his wifely seeds into development (73). The release of anther-pollen is not *Bestäubung*, procreative pollination, but *Verstäubung*, a climax of disintegration: the “explosion” through which the material dregs of the “old” plant are cast off to hasten the arrival of the “youthful” seed in the ground (78). As Goethe’s notes in his own *Verstäubung* essay, by denying gender difference among plants, Schelver had purified Goethean botany of the taint of “something external [*ein Äußeres*]” at the scene of metamorphosis, something “interacting” within, “beside,” or “even apart from” the individual plant, which Schelver preferred to depict as “raising itself upwards... by its own force and power” (214-15).

Of course, a set of interests almost diametrically opposed to these prompt Goethe’s essay on *Verstäubung* as I have framed it here. They include the sense that the bounds between mineral, vegetable, and animal life and their associated sciences need to be relaxed, not enforced; and that organisms, even the “highest” animal and human ones, need to be conceived “in and through” their elemental environments. Looking ahead to the next chapter, on Goethe’s “tender empirical” method, we can add to this list that Goethe does not accept the total inactivity of inanimate beings and that he revalues that characteristic Schelver ascribes to feminine vegetables – “receptivity” – as central to the coming, sophisticated empiricism that will outgrow the self-actualizing rhetoric that marked the conjoined discourses of organism and aesthetics at the turn of the century.

So there is a gentle parody of Schelver’s absolutism in Goethe’s re-visitation of his botany: just as there are “Ultra”-liberals and “Ultra”-monarchists, Goethe remarks, Schelver was an “Ultra” when it came to metamorphosis (214). He “assumes the most proper concept of healthy and regulated metamorphosis... which progresses, ennobling itself, such that everything material, low, common is little by little left behind,” permitting what is “higher, better, spiritual

to emerge in great freedom” (214). Goethe’s own inflections of *Verstäubung* increasingly avoid this rhetoric of purification and transcendent interiority, following not the upward trajectory of spirit, but the lateral movements of the material “left behind.”

But what Goethe seems to have found worthy of imitation in Schelver’s thinking is its willingness to implement a radical perspectival inversion: with quasi-Copernican daring, Schelver’s work had designated a *different* point as the origin and end of the vegetable life, germination in the earth, rather than pollination in the flower. To cast a pollen-grain as a particle of death rather than of prolific life – “in it,” Schelver had written, “is the moment of maturity, of death” – cedes significant space, time, and structure to dying in the ostentatious “life” of plants. And to do so issues a provocative challenge to Goethe, whose earlier *Metamorphosis of Plants* treatise had given little room to death, none to decay, and pride of place to heterosexual reproduction.⁸⁹

The *Verstäubung* essay responds by demoting pollination to just one item in a rich catalogue of *non*-reproductive scatterings and exhalations – of moisture, powders, scents, contagions and invisible influences – that the morphologist has observed among aged, diseased, and dying plants and animals. These include plants that produce pollen-like dust or nectar-like droplets on parts other than their purported sexual organs and at times other than blossoming: *after* flowering, for instance, reproductively useless “pollen/dust points [*Staubpunkte*]” appear on the *stem*-leaves, not the flowers, of the *Berberis* shrub, whose stem-leaves then mimic floral shapes. Several pages are devoted to the case of an old linden tree, whose leaves break out into a sweat of sticky nectar-like droplets, “excessive” precipitations that “squandered” the fluids that would otherwise have nourished the coming blossoms and fruit (218-22). Corn afflicted with necrosis, Goethe notes in a tone of cautious admiration, is capable of “belatedly” scattering a seemingly “endless quantity of “black dust” (216).

The lengthy case-studies investigate these emissions “that appear against the law” by taking in a complex network of accidental circumstances “external” to the organism and belonging to the inorganic sciences. In the case of the old Linden tree’s prolifically fruitless sweat, for instance, Goethe carefully correlates meteorological observations, the effect of ambient temperature and moisture on the plants’ capacity to release or retain fluid, the activity of insects, and a chemical analysis of the nectar conducted by his colleague Johann Wolfgang Döbereiner. In this way, the “*Verstäubung*” essay systematically explores contingency in botanical development: that notoriously Lucretian and materialist kind of causality that Goethe had deliberately excluded from his prior work on metamorphosis.

e) *Life depends*

That 1790 essay, reprinted in *Zur Morphologie*’s first issue, opened by distinguishing between “regular [*regelmäßig*], irregular [*unregelmäßig*], and accidental [*zufällig*]” metamorphosis” (MA12, 30-31).” Regular, or “progressive” metamorphosis “ascends step-by-step from the first seed-leaves to...that apex of nature, reproduction through two sexes,” and would be the primary object of the work. Irregular metamorphoses are didactically useful aberrations, and will be taken into account in so far as they help to illuminate aspects of regular metamorphosis. “By contrast,” Goethe proceeds, “we will turn our attention away” from that third, chance-driven type of metamorphosis, which “is effected from outside.” Considering “accidental” metamorphoses “could divert us from our simple way, and misdirect our aim

[Zweck]" (30-31). Perhaps, Goethe had intimated, "an occasion will arise elsewhere to speak of these...excrescences" (31). At a distance of thirty years, the notably errant *Verstäubung* essay seems to furnish just the occasion: here Goethe reviews botanical life without regard for its (purportedly sexual) aim, permitting accidental excrescences to occupy the center, not just the edges, of botanical life.

The instances in the essay's collection tend to unfold a spectrum between the production of live progeny and Schelver's notion of auto-annihilation. For Goethe, corn inflicted with necrosis exhibits a "remarkable," "boundless," albeit morbid, productivity:

[T]he kernels swell up to a big, misshapen bulb; the black dust [*Staub*] they contain is boundless; its endless quantity points to the compressed nutritive forces contained in the healthy kernel, which now morbidly decompose into endless particulars. (*MA* 12, 216)

On the one hand, Goethe puts this "irregularity of growth" to use, just as he proposed to do with irregular metamorphoses in the earlier *Metamorphosis of Plants*, to illustrate "healthy" metamorphic activities: the black death-dust is quickly redeemed as a sign, an illustrative perversion, of vital force. But here the possibility of this kind of emission is permitted not just to reinforce but to redefine – in cheekily political rhetoric – the taxonomic "realms" of nature by extending equal "citizenship" from "regular" to "abnormal" points:

So we see that one might well indeed rank anther-pollen, to which one would not deny a certain organization, within the Kingdom mushrooms and fungi. Indeed, one has already accommodated abnormal *Verstäubung* there; now one grants the same citizenship to the regular kind [pollination]. (216)

For anther-pollen grains, this honorary citizenship would be a dubious affiliation. Calling anther-pollen "fungi" strips them of their ennobling analogy to male, animal sperm and re-locates them among asexually reproductive spores. That is, doing so places them within Linneaus' notorious twenty-fifth and last class of plants: the *Cryptogamia*, a catch-all for sexual misfits with "very peculiar, hidden, or unrecognizable fertilizing parts."⁹⁰ Dispatching a plant's seed into a new kingdom while declining to re-classify the rest of its body, the passage also satirizes the exaggerated importance of sexual organs in orthodox taxonomy. The passage renders pollen flexible and cryptic, capable of occupying several positions on a spectrum that stretches from deathly "black dust," to fungal spores, to angiosperm pollen, to, as we shall see, animal "life-points." In the *Zur Morphologie* journals the equivocations of these material minims are not to be attributed to their omnipotence.⁹¹ Rather, they connote dependency – upon surrounding circumstances, timing, influences, and the bodily assemblage [*Versammlung, Komplex*] into which a point chances.

This helps to clarify the very first, very difficult point about points that occurs in the *On Morphology* periodical, where Goethe seems to have his earlier infusoria experiments in mind: "When one observes plants and animals in their inchoate states, they are scarcely to be distinguished. A life-point [*Lebenspunkt*], fixed, mobile, or half-mobile is that which is scarcely noticeable to our mind" ("Die Absicht Eingeleitet," *MA* 12, 15-16). These "first beginnings," the passage continues, "are determinable in either way [*nach beiden Seiten determinabel*]." The word "determinable" is critical here: at stake, just at the threshold where human sense that strains to catch life in the act, is not an innate and category-specific power, but a susceptibility. The

syntax, moreover, suggests that this contingent susceptibility is exactly Goethe thinks contemporary human thinkers are most likely to miss: being “determinable in either way”⁹² defines that which a mind will fail to grasp, this determinability is “that which *is* [*das was ist*]” barely noticeable. Here again, in nuce, is Goethe’s critique of the critical Kant’s idea of living form as a “self-organizing,” teleological “natural end.” As I argue in the next chapter, Goethe’s responds by theorizing an empirical habitus that positions susceptibility at the center of experimentalist life science: “tender empiricism” attends to this determinability in both the observer and the object under view.⁹³

In the context of this introductory matter to *On Morphology*, the 1780s infusoria return under the aspect of their *Verstäubung*:

There are infusoria that, in moisture, move in apparently simple form before our eyes; but as soon as this dries up, they explode, discharging a mass of grains; in the natural course of things, in moisture, they might also have dismembered themselves into these [grains], and in this way brought forth endless progeny. (MA 12, 16)

Here what matters in terms of the animate or inanimate status of the “grains” – which are not, it should be noted, conceived as eggs or sperm, but as all the particles of the discomposed parent body – is the presence or absence of ambient moisture.

f) *natural simulacra*

As in the infusoria experiments, beings in the *Verstäubung* essay change their forms according to a more oblique and polyvalent set of causal relationships than could be conceived through the organicist paradigm of an auto-telic *power* devoted to self-development and reproduction. For while Schelver had risked questioning whether the plant reproduction ought to be called “sexual,” Goethe’s lush repertoire of dissipations increasingly sidelines reproduction altogether. In the essay’s most striking instance of oddly prolific decay, Goethe offers the following example of fungal self-portraiture:

One lays a not yet open white mushroom, with a cut stem, on a piece of white paper, and it will shortly unfold itself, and so regularly pollinate [*regelmäßig bestäuben*] the pure surface, that the entire structure of its inner and under folds will be drawn most conspicuously; which illuminates that the *Verstäubung* does not occur here and there, but rather that every fold yields its portion in its native direction. (216)

The case gathers together many of the improprieties evidenced singly in the essay’s other examples: the mushroom performs an unwilling and untimely emission that will produce no progeny; it does so not from a dedicated sexual organ, but from “each fold” of its body; and this act is occasioned by external circumstances and concurrent with the mushroom’s decomposition.

But what emerges as powerfully here as the reproductive futility of this act, is its graphic success: dying, this mushroom makes an image of itself – to “draw” [*zeichnen*] is the verb Goethe uses – so that “the whole structure of its inner and under folds” can be seen “most clearly” on the white paper. Part of the surprise here stems from the morphologist’s literal and

matter-of-fact treatment of an act of nonhuman representation. Though metaphors of Nature as artist or artisan abound in *natura naturans* philosophies, in that rhetoric a particularly interesting fungal shape would be, itself, the artwork: a mode of Nature's unitary, plastic artistry. (There is plenty of this in the more Spinozist Goethe.) But here a particular white mushroom, quite cut off, is caught printing its likeness on paper. While there are undeniably elements of organicist rhetoric here – one could point to the emphasis on *self*-reproduction and to the wholeness of the image – it is important that in this accidental likeness particles behave neither like totipotent epigenetic germs (each productive of a whole organism) nor like unfolding preformist seeds (each containing an organism in miniature). Instead, they chance, by aggregate, to make a reproduction in another medium: a granular, atomized image in dust (like charcoal, pencil, or chalk), rather than flesh.

This essay thus renders a body's "points" circumstantially "determinable" in yet another direction: towards representation. The description wonderfully captures the fortuitousness of this effect: the points are a drawing because they struck paper instead of a different matrix. Nor can it be said that a human observer was needed to do the cutting and catching. In a pun never lost in these botanical writings, pieces of paper are called, as in English, leaves [*Blätter*], so that the various powders and droplets that continue to accumulate on (plant) leaves as the essay progresses only reinforce the suggestion that there are forms of drawing, painting, and printing at work that are indifferent to human observation. The example evidences the credibility, in Goethean science, of non-human acts of representation in the Lucretian style, that is, of material images that emanate not just from persons, but also from things.

In fact, once the mushroom has graphically revealed the possibility, a pattern emerges throughout the essay's loose catalogue of incidents: often, in "acts of scattering dust" (or vapor, or droplets), things leave images on each other's surfaces. Goethe's attention had been attracted, for instance, to the Linden tree's excessive honeydew because the tree had so "regularly spritzed [*regelmäßig gespritzt*]" the stones beneath with its "glossy" and "gummy Points" that it produced a noticeable circle of "laquered [*lackiert*]" gravel that mirrored the circumference of its branches (219). After the mushroom's spore-print comes an example of the animal *Verstäubung* from dying flies: "they will ... become stiff, and by and by spray a white dust from themselves," and "with ever increasing elasticity...so that the fine dust shows its traces over an increasing distance, until the resulting nimbus measures an inch across" (214, n. 818).

The mushroom episode has another notable effect: though initially given as an example of *Verstäubung*, the middle of the passage temporarily drops the *Ver*- prefix that had connoted "irregularity" to report that the mushroom "*regularly pollinate[s]*" [*bestäuben*] the paper-leaf on which it lies. In the next sentence, the term *Verstäubung* returns, but in de-pathologized form: it now describes a "regular" and thorough full-body activity that just happens to land on paper instead of soil, and therefore to produce, at least for the time being, a picture instead of progeny. This easy, circumstantial vacillation between "pollination" and "dissipation" – polemical antitheses in Schelver's botany – reveals the extent to which the question of the pollen's male sexual potency has diminished in importance.

This communication is no longer indexed to genital sex, to which, in any case, it bears little resemblance, but to the essay's diverse catalogue of particulate attritions: to that "wayward exfoliating contingency" that Theresa Kelley has ascribed to Romantic botany's at once figural and factual resistance to (its own) taxonomic and totalizing impulses ("Bites Back," 202). Here the stark antinomy between organic and inorganic being (mineral, textual, or dead) critical to the autonomy of early-century biologies, gives way to a situational dependency: a particle's status as

germ, dust, or grapheme simply *depends* (upon conditions of reception, configuration with others, and timing) rather than an inherent power or impotence. At stake is an equivocal corporeality, a materialism that, as Natania Meeker has written of Lucretianism in another context, “does not find its own origins in the split between representation and things-in-themselves” (11).

In this way, the mushroom’s spore print is a particularly “conspicuous” and artful item on a continuum of particulate effluences that are characteristic of botanical bodies subject to time, weather, influence, and interaction: Goethe lists the “effluvia” that “take shape as oil, gum, and sap on leaves, twigs, stems, and trunks”; the “delicate exhalations” upon which insects feed and the ones that make a plum “appear blue to our eye” (222-3). The catalogue concludes by attesting to the insensible “atmospheric element[s]” that communicate “reciprocal activity from plant to plant,” recognizable to gardeners by the effects certain plants have on their neighbors (223). I had occasion, earlier in this chapter, to speak of the “cloud of causes” that might factor into the morphology of things. In fact, this essay chronicles the constituents of that cloud, representations among them. Passing from the graphic clarity of the mushroom’s spore-print, to the cloud-form (“nimbus”) emitted by the dying fly, to insensible influences and communications that make up a “mutual atmosphere,” Goethe’s essay begins a life science of the laden atmosphere *between* beings (morphologists included) – an atmosphere bearing everything from odors to images and whose turbidity is the condition of sight.

d) *writing decadent life*

The essay’s opening sentence, channeling the “Ultra”-organicist Schelver, had positioned decadent activity as a fleeting, self-negating instant in the service of Life’s ceaseless forward march: perhaps one could legitimately view the three titular decompositions, *Verstäubung*, *Verdunstung*, *Vertropfung*, “as symptoms of an Organization progressing inexorably forward, hurrying from life to life, yes, through annihilation [*Vernichtung*] to life” (212). But the essay cannot, like Schelver’s book, challenge the heterosexuality of plant generation while leaving the life sciences’ founding fixation on generation (“from life to life”) intact. The essay instead delays the vitalist juggernaut that would hurtle “through annihilation to life” by dilating, indeed, expending its whole length, on the specific instances of “annihilation” that such a notion of supra-individual Organization would subsume. As this happens, the Life/organization – Death/decomposition binary relaxes, and a range of activities come into view that are neither heterosexually reproductive, nor definitively self-destructive. They are, as Goethe puts it, “productive in an abnormal way” – not of offspring, but of representations, communications, influences, and perceptions. In *disorganizing* acts of going to dust, vapor, or droplets things leave their shapes on neighboring surfaces and scatter their influence into the air. By the end of the “*Verstäubung*, *Verdunstung*, *Vertropfung*” essay, “from life to life” has come to connote not the frighteningly inexorable forward march of the species through particular, disposable embodiments, but the lateral transmissions between beings that share the same time.

Such a position might be called a mortalism, rather than vitalism: it gives equal space and time to losses (as art, effect, influence) and to the latter half of life, and renders death mundane and gradual, occurring little by little as one lives, senesces, and expresses. Rather than hurry “from life to life” as though one life were substitutable by another, neo-Lucretian texts stay attuned to the way that while “points” do not die, the living being they temporarily compose – an

unlikely multiple, assembled and shaped by an irreproducible sequence of events – is irretrievably lost at death, when the contexture ceases to hold and the composite pieces disperse. In the next chapters, readings of Goethe’s “*Dauer im Wechsel*” and Shelley’s “The Triumph of Life” will further examine this elegiac materialism – and its connection to historical thinking.

Already in the *Verstäubung* essay, one notices a palpable admiration for this casting-off of material, an “elastic” ability that actually seems to increase with the body’s age.⁹⁴

Verstäubung constitutes not just a late scientific interest for Goethe, but also a late poetics – an “art of losing,” in Elizabeth Bishop’s words⁹⁵ – that ceases to intend creative generation of whole, self-sufficient and seminal works, in favor of acts of serial self-dispersion. Just as the late morphology forgoes the generation-centered version of “life” advocated by organicist biology, the late style forgoes the analogy between aesthetic and organic forms; situating itself, instead, among the events of communicative, material dispersion that define embodied subjection to time.

In fact, the *Morphology* project begins by characterizing itself as the serial issue of obsolescent life-pieces, “papers [leaves?]...on which we were earlier moved to set down a piece of our being.” Like many of the most dramatic *Verstäubungsakte* [acts of going-to-dust], of the plants and animals in the essay, this untimely release was instigated by circumstances of duress. Goethe would never have cast his views “into the ocean of opinions,” he writes in the *Morphology* journal’s opening “apology,”

if we had not, in the hours of danger just passed, so vividly felt the value to us of those papers on which we were earlier moved to set down a piece of our being.

So let that which, in a youthful mood, I often dreamt of as one work, come forward as a draft, even a fragmentary collection, and work and be of use as it is

...

Jena, 1807. (“Das Unternehmen wird Entschuldigt,” *MA* 12, 12)

The date affixed below – “Jena, 1807” – has a peculiar effect. This prefatory text appears for the first time in 1817, in *On Morphology*’s first issue, and so the date suddenly antiquates by a decade the passage the reader has just absorbed. “1807” also specifies what Goethe meant by “hours of danger,” dating the project’s inception to the unexpectedly swift and embarrassing defeat by Napoleon’s forces of the Prussian wing of the Fourth Coalition at Jena-Auerstädt. Weimar was plundered afterwards, and the battles both laid bare German civic and military belatedness relative to French modernity and augured the beginning of the end for the local *ancien régime*.⁹⁶ Thus at a moment when natural scientific journals were proliferating as punctual means of establishing priority of discovery, the *On Morphology* journal instead foregrounds the place of obsolescence and lapsed time in the “fates” of biological texts and the living specimens and living observers they represent.⁹⁷ For Goethe, these “hours of danger” seem to have occasioned a newly provisional and dispersive approach to the science and writing of “life,” one keen to keep mortality and senescence at its center, and sensitive to the way a punctual address to the historical present might be shot through with old and distant things.⁹⁸

Notes

⁴⁰ The quote concerning death comes from Lamarck's *Philosophie zoologique* I, 106.

⁴¹ See Georges Canguilhem, "Du singulier et de la singularité en épistémologie biologique," in *Études d'histoire et de philosophie des sciences* (1962), esp. 224; and Michel Foucault, *The Order of Things*: "Up to the end of the eighteenth century, in fact, life does not exist: only living beings...one class...in the series of all the things in the world" (160). More recent histories of life (for instance, Shirley Roe "The Life Sciences" in the *Cambridge History of Science, Vol. IV: Eighteenth-Century Science*, and Duchesneau, *La physiologie des lumières: Empirisme, modèles et théories*,) moderate the rhetoric slightly but generally affirm an epochal turn towards "life" as a discrete object of knowledge between the two centuries. Much work, I think, remains to be done on whether and how the epistemic rupture narrative fits the case, and on the continued viability of prior and dissenting opinions. Charles T. Wolfe's forthcoming articles on how to periodize the moment when "life" became an explanatory scandal – and on the idea of vitalism as "attitude" or "demand" – will be welcome contributions to the philosophy and historiography of the issue, as will Joan Steigerwald's work to nuance the frequent caricature of the biologies associated with German idealist *Naturphilosophie*. Joseph A. Caron convincingly dates the science of 'biology' as we now know it – as a general, elementary, institutionalized platform of principles from which life scientists pursue research programmes in more specialized, often pre-existing disciplines – to Britain in the 1860s. But Caron does not contest that the very early 19th Century in France and Germany evinced "a marked interest for some general and synthetic science concerning life" – he merely points out that though the word *Biologie* appeared (in Treviranus, Lamarck, Burdach, Dutrochet and Geoffroy, among others), it competed with "physiology," "comparative anatomy," "zoology," "zoonomie," as the name for that synthetic science, whose aims and platforms were emergent, rather than consolidated.

⁴² Translations from Goethe and his eighteenth and nineteenth century naturalist interlocutors are my own for reasons of precision (or stubborn literal-mindedness). Many of Goethe's *On Morphology* writings are also available to English readers in *Goethe's Botanical Writings*, translated by Bertha Mueller, and *Goethe: Scientific Studies* edited and translated by Douglas Miller. For an example of the kind of substantive difference from Mueller that prompted my own translations, see n. 45 below.

⁴³ In this way this project joins Peter Hanns Reill's *Vitalizing Nature in Enlightenment* in recovering anti-systematic late-Enlightenment revisions of mechanist natural philosophy that should not be read as mere preface to "the totalizing solutions of nineteenth-century scientism, positivism, and romantic *Naturphilosophie*" (182). Reill argues that these absolutist solutions should be understood as the deliberate rejection and "destruction" of late-Enlightenment, mediating vitalisms, and not their culmination (4, 14, 199-201). His research on the blurring and lost boundary between life and death in the late eighteenth-century has special resonance here (171-82). Goethe's texts sit uneasily even within this revised periodization, and part of the aim of this chapter is to recognize the continued availability and strategic recovery the less absolute approaches into the first decades of the nineteenth century (174).

⁴⁴ Weimarer Ausgabe (*WA*) IV, 34, #121 an Knebel, 14th Feb., 1821.

⁴⁵ Lepenies, *Das Ende der Naturgeschichte*, esp. 97-114. For a rich examination of Goethe as an experimenter in multiple modes of publication, and *Zur Morphologie* as a commentary upon the emergent polarization between literary and scientific author-functions, see Dorothea von Mücke. I am less convinced than she that the journal's extreme generic heterogeneity shows that "a scientific idea," in contrast to a literary one, "is highly tolerant of paraphrasing, reformulation and experimentation with different forms" (38, 45). Rather, I think the journal's formal miscellany is emphatically mimetic of the contents of its life-scientific idea: that each body that "seems to us an individual" is in fact a fractious and serial composite of many others. This suggestion receives perhaps its finest corroboration in Andrew

Piper's *Dreaming in Books*, which argues, from the perspective of the romantic media history, that Goethe's formal and publishing practices, late in life, were concomitantly re-defining the novel "as something material, processual, and spatially dispersed," 25, 1-51. Two recent studies of Goethe's late work, Safia Azzouni's *Kunst als praktische Wissenschaft, Goethe's Wilhelm Meisters Wanderjahre und die Hefte Zur Morphologie*, on collective and objective authorship in these writings, and Stefan Blechschmidt's *Goethe's Lebendige Archiv* thicken our account of Goethe's constructivist, rather than expressivist, textual forms. In this they build on Stephen Koranyi's *Autobiographik und Wissenschaft im Denken Goethes*. See also Chad Wellmon's "Goethe's Morphology of Knowledge, or the Overgrowth of Nomenclature," which wonderfully describes Goethe's resistance to the increasing specialization of knowledge domains, arguing that the narrative form of the morphology journals is out to counter the fragmentary, modern, accumulation of knowledge, gesturing towards a "transcendental Science." This chapter departs from the latter judgment, which explains away the journals' temporally and generically disjunctive character – a formal heterogeneity that I think hazards a changed conception of the scientists and objects of metamorphosis.

⁴⁶ Crary, *Techniques of the Observer* (69-70), Daston and Galison, *Objectivity* (55-113).

⁴⁷ On the relative lateness and richness of Lucretius' reception in Germany, see Hugh Barr Nisbet's "Lucretius in Eighteenth-Century Germany" and "Herder und Lucrez." Regine Otto's "Lukrez bleibt immer in seiner Art der Einzige" documents Goethe and Knebel's correspondence about the translation, including strategies for introducing such a notorious materialist to a hostile public. In a review of Knebel's translation published in *Über Kunst und Altertum*, Goethe announced his (never realized) intention to write a thorough treatment of Lucretius as "Man, Roman, Natural Philosopher, and Poet," and Nisbet shows how Herder, Schiller, Goethe, Knebel, Steffens and Schelling all seem to have entertained the hope of writing a modern didactic-epic on the model of *De rerum Natura* around 1800. In her commentary on Goethe's relation to the genre of didactic poetry, Dorothea Kuhn (heroic editor, curator, and commentator of Goethe's scientific writings) suggests that Goethe's late poem cycle *Gott und Welt*, which included poems published in *Zur Morphologie*, might also be seen as a late offshoot of his earlier neo-Lucretian aspiration to write a "Roman über das Weltall" (see, "Natur und Kunst," *LA* II9b, s. 474-5). My Chapter 2 reads a poem from this cycle, "Dauer im Wechsel," to illuminate the Lucretian simulacrum upon which the poem hinges – a trope that, I argue, Paul de Man consequentially mistook for a "symbol" in his seminal essay, "The Rhetoric of Temporality."

⁴⁸ For the original emergence of Epicurean philosophy in a time of historical crisis for Athenians, see Howard Jones, *The Epicurean Tradition*.

⁴⁹ „Das Unternehmen wird entschuldigt [The Undertaking Is Exused],“ *Zur Morphologie (ZM)* I.1, Münchner Ausgabe (*MA*) 12, s. 12.

⁵⁰ See Jocelyn Holland's insightful comparison of Goethe's prose and elegiac versions of plant metamorphosis, *German Romanticism and Science*, 19-55.

⁵¹ From William Harvey's *De Generatione Animalium* (1651) to the works Goethe takes up in *On Morphology* (Wolff, Blumenbach, etc.), the sciences of life emergent in the very long 18th century were above all sciences of *generation*: their foundational controversies concerned the ontological status and formative powers of genital material. For a deft overview see Shirley Roe, as well as Jacob's classic study.

⁵² On this Kantian tradition of teleological thinking in German biology (Blumenbach, Treviranus, Kiehmeyer, Meckel, von Baer, Johannes Müller, Carl Bergman, Rudolph Leuckart), see Timothy Lenoir, *The Strategy of Life: Teleology and Mechanics in Nineteenth Century German Biology*. Lenoir argues persuasively for the consistency of a Kantian tradition that accepts teleology as a (merely) regulative/heuristic presumption and *not*, as in *Naturphilosophie*, the substance of a living universe that

culminates in self-consciousness, but his valuable study also makes clear the centrality of positing an utterly unique, auto-telic causality to living beings in both traditions.

⁵³ 21. Juni, 1785, an Charlotte v. Stein, *Leopoldina Ausgabe (LA)* II.9a, s.321.

⁵⁴ *Herder an Knebel. Gespräche (Herwig) I* 362, *LA* II.9a, s. 319.

⁵⁵ On the role of the rediscovery of Lucretius on early experimental philosophy, see Catherine Wilson, *Epicureanism at the Origins of Modernity*, esp. Chapter 2: “Corpuscular Effluvia: Between Imagination and Experiment,” and Richard Kroll’s *The Material Word*, which describes the late-17th Century Epicurean revival as a pan-cultural atomism crossing literary, scientific, and political domains.

⁵⁶ John Turberville Needham, “*A Summary of some late Observations upon the Generation, Composition, and Decomposition of Animal and Vegetable Substances; Communicated in a Letter to Martin Folks Esq; President of the Royal Society...*” Paris, Nov. 23, 1748, reprinted in *The Origin of Life Debate: Molecules, Cells and Generation*, Vol. 1, 645.

⁵⁷ See 23. April, #10.

⁵⁸ Blumenbach first publishes on the term in a 1780 article for the *Göttingesches Magazin Der Wissenschaften und Litteratur*, and again in the popular *Über den Bildungstrieb und Zeugungsgeschäfte* (1781). See Kant, *Critique of the Teleological Power of Judgment*, §81, 290-3, and the following section of this chapter.

⁵⁹ Goethe-Schiller-Archiv 26/LV, 10, 9. *Mémoire sur la Théorie Physiologique designee sous le nom de VITALISME*, par M. Geoffroy Saint-Hilaire.

⁶⁰ See François Duchesneau, *Genèse de la théorie cellulaire*.

⁶¹ See Lenoir, above n.13, and Müller-Severs, below n. 24.

⁶² On Wolf, see Shirley A. Roe, *Matter, Life and Generation: Eighteenth-Century Embryology and the Haller-Wolff Debate*.

⁶³ Helmut Müller-Sievers’s *Self-Generation: Biology, Philosophy, and Literature Around 1800* (1997) gave the groundbreaking critique of epigenetic, autopoietic ideology and its collusion with the Romantic literary absolute, accepting preformism as the available alternative view. Jocelyn Holland’s recent, important book, *German Romanticism and Science: The Procreative Poetics of Goethe, Novalis, and Ritter*, argues against the stark polarization between epigenetic and preformist positions literary (and other) historians attribute to the period, attending to important subtleties in the “procreative poetics” of her focal authors. True to the major trends in German Romantic thinking about life, Holland emphasizes the generative at the expense of the decadent processes to which, I argue below, Goethe’s late project attends.

⁶⁴ On vitalism’s connection to thanatopolitics, see Roberto Esposito’s *Bios: Biopolitics and Philosophy*, Trans. Timothy Campbell.

⁶⁵ For the stakes and history of this issue, see John Farley, *The Spontaneous Generation Controversy from Descartes to Oparin*, and Bruno Latour, *The Pasteurization of France and Pandora’s Hope*.

⁶⁶ Magrit Wyder’s sensitive and thorough survey of Goethean science is one of the only sources I have discovered that pays attention to his early microscopy and its sources. Wyder depicts, in general, a trajectory from an early Goethe keen, with Herder and Knebel, to point out continuities between mineral crystallization and vegetable and animal generation towards one who insists distinction between the three realms (albeit an unusually non-hierarchical one). I am inclined to think that as late as the morphological papers bodies of all kinds are built from a contingently-determined, but ontologically flexible kind of material minim (*Punkt*). See *Goethes Naturmodell*, esp. Chapters 6 and 8.

⁶⁷ The critical literature in some sense matches the idealist philosophical climate from which Goethe increasingly attempted to dissociate his work (whether Kantian-transcendental, Jena Romantic, or Schelling-style *Naturphilosophisch*) in giving disproportionate weight to the ideational pole – especially the notion of *Typus*, which decreased significantly in centrality in Goethe’s later epistemology. Robert J. Richards’s valuable study exemplifies the trend in its claim that Goethe progresses towards an “absolute ideal-realism,” *The Romantic Conception of Life*, 408.

⁶⁸ Cited in Roe (1981).

⁶⁹ *Le Rêve de d’Alembert*, éd. Colas Duflo, Introduction, p. 29.

⁷⁰ Lucretian atomisms plays a central role in Althusser’s late essay, “The Underground Current of the Materialism of the Encounter,” which adumbrates the never-realized history of a genuinely aleatory materialism different from that “of necessity and teleology, that is to say, a transformed, disguised form of idealism.” I return to Althusser’s essay in detail in the Conclusion on Marx.

⁷¹ For this chapter I have consulted two English translations of *De Rerum Natura*, the Loeb translation (W. H. D. Rouse, revised by Martin Ferguson Smith), and that of classicist and physicist Russel M. Geer. They are indicated by “Loeb” or “Geer” in the textual citations, and “Loeb/Geer” where I have drawn on both.

⁷² See Farley and Latour, (also n.26 above). In the essay “A Spatiotemporal Envelope for Propositions,” Latour takes the initial self-evidence of spontaneous generation, and its subsequent displacement by Pasteur’s bacteriological theory, as a case study in why science studies “should be able to talk calmly about [the] *relative existence*” of natural/scientific objects. “An entity gains in reality,” Latour explains, “if it is associated with many others that are viewed as collaborating with it”: working technicians, textbooks, schools, experiments, belief structures, industries, etc.: “We never say ‘it exists’ or ‘it does not exist,’ but ‘this is the collective history that is enveloped by the expression spontaneous generation, or [alternatively] germs carried by the air” (*Pandora’s Hope* 153, 156, 159). As he put it in another context: “there might exist many metaphysical shades between full causality and sheer inexistence” (*Reassembling the Social*, 72).

⁷³ This, in contradistinction to Western modernity’s daylight division of labor, which, Latour argues, entrusts the representation of (nonhuman) nature to scientists, the representation of humans to governments, and the representation of representation to epistemologists. Latour, *We Have Never Been Modern*, 6.

⁷⁴ Untangling these multi-lateral genealogies, which inflect Evelyn Fox Keller and Donna Haraway’s critiques of the discourses of organism and genetics, will have to await another iteration of this project. One would look to Michel Serres and Gaston Bachelard’s reception of ancient atomism (especially Serres’s *La naissance de la physique dans le texte de Lucrèce* and its presence in his theory of communication), as received by Michel Foucault, Bruno Latour, Isabelle Stengers, (and, more recently, Jane Bennett); to Whitehead and his reception of Bergson (who published an edition of *De Rerum Natura, Extraits de Lucrèce*, accompanied by a study of the work of Gaston Bachelard); and to Deleuze’s gesture, at the end of *The Logic of Sense*, toward the Epicurean simulacrum as a means of effecting the “reversal of Platonism.” Duncan Kennedy’s *Rethinking Reality: Lucretius and the Textualization of Nature* puts the DRN into illuminating conversation with science studies (without however, worrying over which convergences are family features). Jonathan Goldberg’s *The Seeds of Things: Theorizing Sexuality and Materiality in Renaissance Representations* includes an elegant reconstruction of the (at times indirect) Epicurean dialogue between Deleuze, Foucault, and Serres from the perspective of the theory of sexuality. See also David Webb, “Microphysics: From Bachelard and Serres to Foucault.”

⁷⁵ For a gracefully mind-opening account of this mode of natural appearance as “open secrecy” in Goethe, one among numerous forms of non-insistent disclosure that literature registers as there for the taking – or not taking – see Anne-Lise François, *Open Secrets: The Literature of Uncounted Experience*, 1-65.

⁷⁶ Goethe’s manuscript draft reads “Es spricht re/Sache sich selbst durch sich laut aus.” Goethe-Schiller Archiv (GSA) 78/134 (Reimar Bestand).

⁷⁷ Thirteen lines of Knebel’s translation of *De rerum natura* also close the section on “Intentional Colors” in Goethe’s historical treatment of the 17th Century (MA 10, 656).

⁷⁸ I am grateful to Steve Goldsmith for this elegant formulation.

⁷⁹ “Versuch einer Witterungslehre (1825),” first published in 1833 in the *Ausgabe Letzter Hand*.

⁸⁰ I am indebted to Wolf von Engelhardt’s *Goethe im Gespräch mit der Erde* for pointing out these late, unpublished essays on *Knochen-* and *Vergleichungslehre* as important documents of Goethe’s engagement with the Kantian idea of organism. But to describe Goethe’s project here as a “modification” of Kant’s idea of organic purposiveness and his hypothetical “synthetic-contemplative” understanding (following Eckart Förster’s interpretation) seems to underestimate the gravity of Goethe’s divergence from the basic premises of Kantian biological thinking. Whereas for Kant, the study of living beings permits us to think of their organization as (internally) purposive – not because this is objectively true, but because it is subjectively legitimate as a regulative maxim for our understanding – Goethe quite unequivocally enjoins researchers to discard the heuristic of “determinations and purposes” in favor of “relationships and connections.”

⁸¹ In *The Romantic Conception of Life*, Robert J. Richards convincingly redeems the scientific seriousness and influence of Goethean morphology in preparing the ground for Darwinian evolutionism: “Indeed, one might even say, without distortion, that evolutionary theory was Goethean morphology running on geological time.” Striking from our present perspective is the proto-ecological scope and tenor of this view, as though organized beings cannot be adequately thought without a global view of their interdependency and co-determination:

The whole plant kingdom, for instance, would appear to us as a tremendous sea, which is just as necessary to the conditional existence of the insects, as the world ocean and the rivers are to the conditional existence of the fish, and we would see that a tremendous number of living creatures are born and nourished in this plant-ocean; indeed, we would ultimately view the whole animal world again merely as a great element, in which one species, if it does not arise from, then certainly sustains itself, in and through the other. (*LA* 1,10 s. 122, “2. Abschnitt, Versuch einer allgemeinen Vergleichungslehre”)

⁸² In the retrospect of the *Tag- und Jahres Heft* for 1821, Goethe glosses the whole *Farbenlehre* project as the “careful development” of the idea of *Trübe*, which leaves us “illuminated about the whole visible world.”

⁸³ Serres, *The Birth of Physics*, Trans. Jack Hawkes,

⁸⁴ This subversion, a potentially “heretical [*ketzerisch*]” one that Goethe’s essay handles with great delicacy, has been neutralized for readers of English by the term *Verstäubung*’s translation as “pollination” in Meuller’s (generally good, and, to my knowledge sole) English rendering of the essay.

⁸⁵ Hans J. Becker, Gerhard H. Müller, John Neubauer, Peter Schmidt in their notes to the *Münchener Ausgabe* of the essay, Bd. 12, s.999.

⁸⁶ For an account of botanical, “mutual atmospheres” highly resonant with this one, see Robert Mitchell’s recent article on “Cryptogamia” in romantic botany. For Mitchell, following Shelley, the term connotes not only elemental influxes and effluences but also something “surelemental” that might be aesthetic – if

the aesthetic, as Kant taught it, did not require a distance (624-5). Mitchell's essay is especially pertinent since it focuses on the particular allure of *Cryptogamia*, of which mushrooms were the ready emblem. As we have seen Goethe's essay mischievously toys with relegating *all* pollination to this last, catch-all class for reproductive misfits in Linnaean botany.

⁸⁷ The work in question was Schelver's student (and son-in-law) August Henschel's *Von der Sexualität der Pflanzen*, to which Schelver had added an appendix, reviewed in *Isis*, Nr. 10 (1820). Dorothea Kuhn suggests that the journal's editor, Lorenz Oken, was probably the author of the summary review. I am indebted to Kuhn for the reference to this article and for her characteristically fine editorial introduction to Goethe's "Verstäubung" essay (*LA II*, 10A, s.825-831).

⁸⁸ Richards helpfully glosses the task of *Naturphilosophie*, as opposed to that of transcendental philosophy, as "to begin with a refined understanding of nature, a nature articulated with the help of the latest empirical theories, and to show how its various phenomena and relationships can be regressively chased back into the ego as their only possible source" (*The Romantic Conception of Life*, 33). For Schelver's specific contribution to Romantic *Naturphilosophie*, see Thomas Bach, „Für wen das hier gesagte nicht gesagt ist, der wird es nicht für überflüssig halten. Franz Joseph Schelvers Beitrag zur Naturphilosophie um 1800,“ *Naturwissenschaften um 1800*, s. 65-82.

⁸⁹ Theresa Kelley astutely perceived these contingent metamorphoses already "hover[ing]" at "the edges of the *Metamorphosis* essay" – in the *Verstäubung* essay, I think, they are permitted to occupy center stage. See Kelley, "Restless Romantic Plants," 190.

⁹⁰ This flagrantly artificial class, to continue to quote from the botanical handbook of Goethe's friend and collaborator, the Jena botanist and fungus-expert August J. G. K. Batsch, "is defined exclusively by its aberration from all prior ones," and so "cannot accommodate any general definition." In any case, Batsch is captivated by what Goethe might have called their spectacular capacity to go to dust: "Now the very strange spectacle of fleshy, leafless, most manifold fungi ensues; from which the transition to thread-shaped and dust-like growths quickly forms, so this realm preserves the greatest simplicity imaginable" (*Grundzüge*, s. 144-5).

⁹¹ Gigante emphasizes the "totipotency" of epigenetic matter in *Life: Organic Form and Romanticism*, esp. Chapters 3-4.

⁹² The topic of "indeterminacy" in romantic aesthetic and critical theory is a significant slant-echo here.

⁹³ Important work from Frederick Amrine, Thomas Pfau, Fritz Breithaupt, and Joseph Vogl on Goethe's theory of perception are taken up in Chapter 2.

⁹⁴ By "Elasticity," that cloud-producing tendency he ascribes to the fly's dead body, Goethe seems to intend the then-current "property of spontaneous expansion" (ascribed to air and gases in Toricelli and Boyle's fluid mechanics), rather than its second, now familiar, sense of springy shape-retention (*OED*). The *GDW* has no listing for this word.

⁹⁵ Bishop, "One Art," in *Geography III*.

⁹⁶ See Peter J. Schwartz, *After Jena: Goethe's "Elective Affinities" and the End of the Old Regime*.

⁹⁷ I allude to the essays "Fate of the Manuscript" and the "Fate of the Publication" that accompanied Goethe's republication of his 1790 *Metamorphosis of Plants* treatise in *On Morphology*'s first issue (1817). See von Mücke's on *On Morphology* and the emergent polarization between literary and scientific author-functions. On periodical form around 1800, see Lepenies's classic exposition (97-114), and Koranyi (115-132). The *Morphology* journal's paradoxical enactment of punctual obsolescence writes the biological/biographical corollary to what Reinhart Koselleck diagnosed as the defining characteristic of the period's sense of history: a new awareness of the "contemporaneity of the noncontemporaneous," of the local heterogeneities that exist within "chronologically uniform time" (*Futures Past*, 248-9).

2.

TENDER EMPIRICISM: Thinking Like an Object, Contra-Kant

Once more you near me, wavering apparitions
That early showed before the turbid gaze.
Will now I seek to grant you definition,
My heart essay again the former daze?
You press me! Well, I yield to your petition
As all around, you rise from mist and haze;

*Ihr naht euch wieder, schwankenden Gestalten,
Die früh sich einst dem Trüben Blick gezeigt.
Versuch ich wohl, euch diesmal festzuhalten?
Fühl ich mein Herz noch jenem Wahn geneigt?
Ihr drängt euch zu! Nun gut, so mögt ihr walten,
Wie ihr aus Dunst und Nebel um mich steigt;*

– Goethe, *Faust* (I) “Dedication [Zueignung]”⁹⁹

In a profound exploratory essay that credits but also questions the restraint-based model of ethical action that extends from Kant to Levinas, Barbara Johnson has asked whether ethics can be something other than “mere defense of the Other against the potential violence of the Subject”:

[I]f ethics is defined in relation to the potentially violent excesses of the subject’s power, then that power is in reality being presupposed and reinforced in the very attempt to undercut it. What is being denied from the outset is the subject’s *lack* of power, its vulnerability and dependence. Respect and distance are certainly better than violence and appropriation, but is ethics only a form of restraint? (*Persons and Things*, 93)¹⁰⁰

Johnson goes on to query one of the basic insights of feminist criticism, that literature idealizes women into objects, asking whether the problem with “objectification” stems more from power asymmetries than “from something inherently unhealthy about *willingly* playing the role of thing.” “What if,” she asks – beginning to test the Kantian stricture against using people as means against the idea of “transitional objects” in Winnicott’s developmental psychology – “the capacity to become a subject were something that could best be *learned* from an object?” (95). In this scheme, the durability of objects, which can withstand a certain degree of a person’s rage or misprision, instruct that person in the limits of his or her power.

I argue in this chapter that a willingness to play the object, to acknowledge and cultivate “the subject’s *lack* of power, its vulnerability and dependence” (Johnson) constitutes the empirical method of Goethe’s late life science, central to a program of “tender Empiricism [*zarte Empirie*]” that eschews impartiality in order to cultivate the observer’s susceptibility to

transformation by the objects under view. In a monumental study that writes the history of objectivity as a chapter in the larger history of scientific selfhood, Lorraine Daston and Peter Galison argue that the aspiration toward “knowledge that bears no trace of the knower” took hold in the mid-nineteenth century *in reaction* to the newly coherent, *a priori*, and potentially overweening version of subjectivity first documented in Kantian epistemology (17).

“Objectivity” in the modern sense, they argue, was a strategic negation of the “coiled spring of an active self” that succeeded loosely-organized, sensationalist, Enlightenment selfhood: freshly willful, post-Kantian selves perceived their own projections as threats to scientific observation and cultivated (equally willful) techniques of self-effacement in the domain of scientific research (247). The cultural roles of artists, increasingly exhorted to heighten their subjectivity and that of their representations, and scientists, exhorted to dampen theirs, became increasingly polarized (242, 37).

Daston and Galison’s study is a reminder that Kantian epistemology was not only a watershed in the diagnosis and formation of fresh forms of subjectivity through its aesthetics but also of objectivity through its science: their characterization of a form of sense-based observation that seeks to “bea[r] no trace of the knower” (post-Kantian scientific objectivity) emerges as the clear complement to the disinterested form of aesthetic observation that literary critics know better – that form of sense-based “taste” devoid of appetite, hunger, or desire, which shuttles the subject from auto-affection towards inter-subjectivity, but seeks to bear no trace of the object. (Aesthetic judgment, as the first paragraph of the First Moment of the First Book of the First Section of the Critique of the Aesthetic Power of Judgment informs readers, concerns “the feeling of pleasure and displeasure, *by means of which nothing at all in the object is designated*, but in which the subject feels itself as it is affected by the representation” (§1, 89)).

Against this broad backdrop, Goethe’s re-signification of the term “objectivity” in the 1820s emerges in all its subversive mischief. In Daston and Gallison’s study, Goethe, represented through his earlier works, exemplifies a pre-Kantian notion of scientific representation, one in which reason extracts the original and ideal type [*Urtypus*] beneath the myriad forms of nature. In this chapter I touch on the familiar crux of Goethe’s Kant-reception in order to show that Goethe’s late forms of poetic and scientific objectivity are not relics of pre-Kantian epistemology and natural philosophy, but subtle engagements with Kant’s premises about the desirable modes of viewing organisms and artworks. I unfold the apparently oxymoronic method Goethe calls “objectively active thinking,” arguing that it responds to a conviction, like Johnson’s, that the Kantian ethos of subjective restraint harbors covert forms of self-aggrandizement and risks foreclosing the agencies of things besides the self. Goethe’s late essays on scientific method break from the ethics of self-containment to suggest how a curious person might entangle passionately with things, and yet fruitfully fail to consume, exhaust, or appropriate them because of the defenselessness such entanglement entails.

Both Goethe’s *Faust* (above epigraph) and Dorothea Kuhn’s classic essay collection on Goethean science, *Typus und Metamorphose* (1988), open by invoking neo-Lucretian “wavering shapes” [*Schwanken Gestalten*] whose turbid perceptibility and mutable morphology, we saw in the last chapter, were central to the biological, meteorological, optical, and formal concerns of Goethe’s periodicals *On Natural Science in General, particularly on Morphology*.¹⁰¹ Chapter One took up this material equivocality in the field of Goethe’s life scientific objects, examining equivocal points in their joint capacity as the contingently generative particles of living beings and as the constituents of the medium of nonhuman representation. In the *Verstäubung* essay, the particulate turbidity that botanical bodies both produced and endured constituted a condition of

possibility for sensory observation inseparable from life's disclosure as a casting-off of skins. This chapter centers on one of Goethe's more explicitly methodological essays issued in *On Morphology*, "Meaningful Progress By Way of a Single Witty Word [*Bedeutende Förderung durch ein einziges geistreiches Wort*]" (1823) in order to take up equivocity in the relation between observer and observed, subject and object, at the scene of morphological experiment (ZMII.1, MA 306-309). From there I move to "wavering shapes" in Goethean signification and poetics, reading the neo-Lucretian poem *Dauer im Wechsel* [Durance in Change] from the perspective of objective figuration. There I focus on a decadent neo-Lucretian simulacrum that, I argue, Paul de Man consequentially mistook for a symbol, perpetuating a missed encounter with Lucretian materialism that his own writings on Kantian materialism help to disclose.

The susceptibility toward numerous morphological outcomes, and the generous overlap between development and decay that we saw in Goethe's logic of life here recur in the course of this chapter as attributes – "epistemic virtues," to borrow Daston and Gallison's luminous formulation – of the artist and morphologist. The "Ingenious Word" essay, I argue, elaborates the kind of empirical habitus, what Goethe calls his "mode of conduct in the observation of nature [*Verfahrungsart in Naturbetrachtungen*]," receptive to the improper, contingent, and relational effects of the type of equivocal particles at issue in the infusoria experiments and the *Verstäubung* essay (TJH, MA 12, 1021).¹⁰² In so doing, it provides one of the *Morphology*'s most graphic examples of an organism – here, the morphologist – as an open-textured "assemblage" shaped as much by chance imprints and incorporations as by its innate, self-authorizing logic. Here, as in *Dauer im Wechsel*, Goethe shows that the empirical subject of natural philosophy and poetry is not exempt from the problems of transience and dependency that *On Morphology* positions as central living logic of its objects: but he attempts to cultivate these qualities as epistemic virtues that open the observer to the poesis of other beings.

a) *The activity of objects*

The Goethe of the *On Morphology* periodicals gently mocks Kant's much-touted epistemological modesty, his abstention from speaking of things in themselves, as a kind of "roguish" rhetorical manipulation. Kant first "first appears concerned to constrain our capacity for knowledge to the utmost But as soon as he has sufficiently driven us into the corner, even into despair," he unleashes "the most liberal expressions," vaulting "over the bounds that he himself has drawn," and demonstrating "what use we might make of the freedom to which he has more or less entitled us" ("Anschauende Urteilskraft [*Intuitive Judgment*]," ZMI.2, MA 12, 98). This movement reveals, for Goethe, the boundless subjective "freedom" garnered in the quintessential Kantian gesture of purported restraint. Kant's concern that a man not, in Goethe's paraphrase, "presumptuously and arrogantly . . . aspire to tack a whim that runs through his brain to the objects," screens for Goethe, I think, a much more significant hubris: the presumption that a person would even be capable of producing whims independent of the objects and his sensing body; or perhaps more basically, that what is important about a subject is the way in which he is not a natural object (98). Kant's rigorous epistemological constraint, as Goethe wryly diagnoses it, always entails a payoff for "us" humans: like a sling-shot, the critical Kant draws us back, only to catapult us to special transcendence.

One of the results of Goethe's revision of empirical method is to attend to the forms of interactivity that disappear into the foundational Kantian cleft between representation-making

human consciousness and the world of other objects that runs through both parts of the third *Critique*. The morphology writings, as I will show momentarily, suggest just how much the simultaneous codification of aesthetics and the organism in Kant's critical philosophy relied upon discounting the activity of non-selves: "within us and ... outside us" (*CJ* §28, 147). Actually, in the aesthetic part of the *Critique*, this cleft is not just necessary but aspirational: what the text celebrates in the experience of both beauty and sublimity is the way such experiences, taking habitual cognition by surprise, make the inter-workings of one's own faculties of mind "palpable" as a discrete, "pure" feeling – an auto-affective "feeling of the free play of the powers of representation" (§9, 102) – distinct from the occasioning object. To carry through a single aesthetic judgment, or to cultivate aesthetic judgment in general, means to sharpen this distinction to the point where a subject is indifferent to the object, which sounds substitutable, if not disposable: "One must not be in the least biased in favor of the existence of the thing" and "what matters is what I make of [its] representation in myself" (§2, 91).

In the case of sublime experience, the aesthetics of distinction escalate to the point where they achieve a feeling "palpable" "dominion" over the nature inside and out: sublimity exists "only in our mind, in so far as we can become conscious of being superior to nature within us and thus also to nature outside us (in so far as it influences us)" (§28, 147). This gesture of superiority unleashes the rich Kantian idea of discursive, inter-subjective "humanity" articulated even more emphatically in the case of the beautiful: aesthetic experience throws a welcome wrench in the smooth operation of individual cognition-as-usual, propelling a person to speak and seek consensus with other structurally like-minded subjects. In the sublime remnant that exceeds natural determination, "we" are made to feel "the *humanity* in our person [that] remains undemeaned even though the *human being* must submit to that [nature's] dominion" (§28, 145).

The high-point of the exploration of teleological judgment in the "Critique of the Teleological Power of Judgment" echoes that of sublime experience: Kant's exploration of the idea of "organism" as "natural end" leads him to conclude that the human is unique in that "his existence contains the highest end itself, to which, as far as he is capable, he can subject the whole of nature, or... at least he need not hold himself to be subjected by any influence from nature" (§84, 5: 435-6). More basically, the second part of the critique mimics the first in aiming, above all, to uncover the distinguishing features of *human* thought and to advocate for their judicious deployment. It opens with an apparent paradox: the causal link between a natural organism's parts and its whole body (and its particular body to the whole of nature), being "natural," ought to conform with the chance-driven "blind mechanism" that regulates the rest of nature. But human researchers also seem to need to describe such "organized and self-organizing beings," as purposive products of an end-given technique, analogous to human agency. What the critique yields are two appropriate heuristics ("regulative principles") – mechanical and teleological – through which humans can legitimately view nonhuman beings; without claiming that such causalities are actually constitutive of these beings. Kant's critique nets two maxims "immanent and secure in their use and appropriate from the human point of view" (§76, 5: 403); *and*, it should be noted, help achieve an image of a natural scientist secure from "any influence from nature," so that he can disinterestedly manipulate these two lenses.¹⁰³

The very first sentence of the very first issue of Goethe's *On Morphology* describes an attitude of subjective dominion over nature strikingly familiar from Kant's sublimity and science; except that here, such an attitude represents not the height of cultivated judgment (aesthetic or biological), but a naïvely aggressive first attempt at natural observation:

When the person summoned to lively observation begins to struggle with Nature, he feels at first an immense drive to subordinate the objects. It is not long, however, before they press in on him so forcefully, that he well feels how much cause he has to recognize their power and to honor their influence.

[Wenn der zur lebhaften Beobachtung aufgeforderte Mensch mit der Natur einen Kampf zu bestehen anfängt, so fühlt er zuerst einen ungeheuren Trieb, die Gegenstände sich zu unterwerfen. Es dauert aber nicht lange, so dringen sie dergestalt gewaltig auf ihn ein, daß er wohl fühlt wie sehr er Ursache hat auch ihre Macht anzuerkennen und ihre Einwirkung zu verehren. "Das Unternehmen Wird Entschuldigt," (ZM I.1, MA 12, 11]

The observer who acknowledges this "reciprocal influence [*wechselseitigen Einfluß*]" becomes aware of the "possibility of an infinite training, in so far as he renders his receptivity [*Emfänglichkeit*], just as much as his judgment [*Urteil*], adroit at constantly new forms of accommodation and counteraction [*Formen des aufnehmens und Gegenwirkens*]."

The essay that most explicitly brings the contingency and vulnerability uncovered in his observations on living form into epistemology, "Meaningful Progress By Way of a Single Ingenious Word," has an appropriately serendipitous occasion: the anthropologist J. Ch. A. Heinroth has sent Goethe a copy of his new *Lehrbuch der Anthropologie* (1822), with a note alerting Goethe to the page where he "would find himself represented as the creator of true scientific method" (LAI.10a, 905-9). There Goethe finds his thinking described with the "ingenious word" that occasions his essay: *gegenständlich*, or objective. And part of the ingenuity, at least for Goethe, seems to stem from the way Heinroth's meaning goes against the grain of a then-crystallizing opposition between "objective" as "a relation to an external object," and "subjective" as "personal, inner, inhering in us" associated with the reception of Kantian philosophy (Daston and Galison, 31).

Quoting Heinroth virtually word for word, Goethe's essay elaborates "objectively active [*gegenständlich tätig*]" thinking as follows:

[He] means to express: that my thinking does not separate itself from the objects, that the elements of the object, the intuitions, enter into my thinking and are infused with it to the inmost, that my intuiting is itself a thinking, my thinking an intuiting ...

[[W]omit er aussprechen will: dass mein Denken sich von der Gegenständen nicht sondere, daß die Elemente der Gegenstände, die Anschauungen in dasselbe eingehen und von ihm auf das innigste durchdrungen werden, daß mein Anschauen selbst ein Denken, mein Denken ein Anschauen sei ... (ZM II.1, MA12, 307)]¹⁰⁴

This version of objectivity precisely collapses the possibility (and desirability) of disinterested observation towards which Kantian judgment, in both its aesthetic and teleological varieties aspires, and of the critical philosophy's ostentatious refusal to presume a real relation between things and their representations in human thinking. With its description of perceptions as "elements of the object" that "enter" the observer and its insistence on the indistinguishability of thought and sensuous intuition, the account mobilizes an empiricist and loosely Lucretian

epistemology instead. From this perspective, an impartial judgment, whether “aesthetic” or “teleological” is literally impossible, since the event of perception entails precisely an exchange of parts (particles, points). Knowing is irremediably “partial [*parteilich*]” in the full sense of that word’s equation of incompleteness and involvement, bias, interest. As in *De rerum natura*, the sensations that ground empirical inquiry, even the most distanced (sights), are forms of touch, and perception an intercourse that penetrates and transfigures the perceiver.¹⁰⁵

“Objectively active thinking,” a phrase fittingly not invented by, but *applied to* Goethe by another, is the disposition of mind and sense that admits, permits, solicits the activity of the objects. This disposition gladly occupies the passive object-position in methodological sentences and morphological experiment:¹⁰⁶ “Every new object, well observed, opens up a new organ in us [*Jeder neue Gegenstand, wohl beschaut, schließt ein neues Organ in uns auf*]” (MA12, 306). Goethean objective empirical method is abbreviated in this astonishing phrase: it shuttles “us,” from experimenter-subject to experimental object of morphology, for we watchers, with our opening organ, become cases of metamorphoses; and then and back again, for clearly our “new organ” is one adjusted to better perceive the “new object” that occasioned its opening. In fact, such shuttling might be the very definition of “experiment [*Versuch*],” for Goethe, who had entitled an earlier essay (to which the present one refers its readers) “Experiment as Mediator Between Subject and Object [*der Versuch als Vermittler zwischen Subjekt und Objekt*].” The larger method encompassing “objectively active thinking” is captured in the phrase “tender empiricism [*zarte Empirie*]”: an empiricism that sets out to confront, and ultimately to cultivate, the methodologically untidy likelihood that an observer is changed by the object under view; and that the scene of experiment is one of mutual metamorphosis which importantly confuses the subjects and objects of scientific knowledge.

Just as Kant’s stress on impartial viewing undergirds both the aesthetic and biological wings of the *Third Critique*, Goethe’s subversion of this principle quickly extends from scientific experiment and representation to the poetic kind, as he spreads Heinroth’s descriptor “objective” from the “method in the observation of nature” [*Verfahrungsart im Naturbetrachtungen*]¹⁰⁷ to poetic-literary method: “What has now been said of my *objective thinking* [*gegenständlichen Denken*], I may well symmetrically relate to an *objective poetry* [*gegenständliche Dichtung*]” (MA, 307). Each is re-described as processes of being *acted upon* – opened, impressed, populated, impregnated, by one’s objects. Of his poetic productions, Goethe notes that this version of objectivity helps explain his inclination towards event-contingent “occasional poetry [*Gelegenheitsgedichten*]. He also explains that certain “motifs and legends...pressed themselves so deeply into my mind that I sustained them, active and alive inside, for forty or fifty years” and the same language recurs to describe his process of arriving at a scientific theory: “all the objects that I had inspected and studied for fifty years” collaborate to “activate a representation and conviction in me, from which I cannot now desist” (307, 309). To the open-textured, rather than self-sufficiently organized living bodies we examined in the last chapter, we can add that of an equally porous artist, scientist, and historical subject harboring “seeds” of his objects – whether series’ of osteological and plant specimens, legends, or even the French revolution – which are wont to issue unexpectedly as literary and scientific “fruits” (307-9).

The likeness proposed between natural and artistic products does not work primarily, as it does for Kant, to depict natural bodies (albeit heuristically, not really) as products of self-productive end-oriented activity, but rather to stress those bodies’ real capacity, like that of a good painting, to work over an observer and alter the way he sees. The strangest and most provocative aspect of this thinking, from a twenty-first century perspective, once again, is

probably the way it credits representation and figuration by non-human and non-living agents: recall the mushroom's spore-print, or that line from Lucretius "in fact the thing itself speaks itself aloud." In a further response to Heinroth, published posthumously, Goethe insists that his role as an "objective" thinker is "pervaded by the poet, or better, by the artist and art connoisseur" who "observes a natural product, a mountain, a landscape, just as he would observe a Raphael, a Titian, and antique... *he lets it act upon him [er läßt es auf sich einwirken]*" (LAI.9, M52, 113, emphasis added).

Hence the central mischief of Goethe's re-signification of "objectively active thinking" as the key epistemic virtue in his empirical method: objectivity does not here mean the capacity to assess impartially a natural object, or to make a claim that would hold true of an object independent his looking; it means, above all, consenting to *be* one. It connotes a willingness to be the object of an object's action, entailing both Goethe's acting-like-an-object and his objects' actions upon him. The morphology writings constitute the attempt to let the ways the self is (also) an object enter, or re-enter, natural philosophy and its representation; in so doing, they diminish and put into question the salience of subject-object distinction for science.¹⁰⁸ As Frederick Amrine has written on the topic of Goethe's philosophy of science, "there is a real sense in which one *becomes what one perceives*," or as Thomas Pfau recently put it, "knowledge for Goethe is above all a sharing in the structure of appearance by way of sustained observation" (Amrine, 40; Pfau, 8). This complication is fortunate, rather than disabling, for knowledge: "For Goethe," Amrine continues, "the conventional method of isolating phenomena is tantamount to wearing blinders...having already abstracted from the phenomena, one can no longer *develop with them*" (40).¹⁰⁹ (Unlike Pfau and Amrine, Goethe remains attuned, as we saw in the last chapter, to the deflationary senses of partiality within this participatory form of knowledge: to the belated, accidental, and incomplete aspects of mutually transfigurative perception – and the heterogenous form of periodical representation such empiricism elicits – rather than its testimony to "nature's over-arching unity as a self-originating (epigenetic) and self-organizing totality of metamorphosis" (Pfau, 9)).¹¹⁰

At issue is a practice of observation that is neither concerned to defend, nor particularly well comprehended by, the distinction between aesthetic and natural scientific looking. Thus Fritz Breithaupt has legitimately discerned in Goethean epistemology a "politics of perception" aspiring precisely toward "an escape from the dominance of the aesthetic": that is, an attempt to render contingent and negotiable the established conventions of seeing within any given epoch.¹¹¹ Goethe – and, I suspect, contemporaries who unworriedly mingled scientific and poetic projects – were quite simply less interested, aesthetically, in isolating that auto-affective feeling; and unconvinced, natural-philosophically, that life should be investigated through an auto-telic conception of organism, however judiciously, critically, heuristically applied. The categorical uniqueness of "the aesthetic" as we inherit it from the *Critique of the Power of Judgment* diminishes with the rift it was supposed to bridge once representation-making is a tendency human consciousness shares with other things. Goethe's concern is, instead, to restrain the self's "tremendous drive to subordinate the objects" and to question that self's corollary tendency to define a living body in terms of its dominion over all external causes of its being. In place of this must be cultivated (for literature and science) an art of observation exquisitely susceptible to its objects and capable of registering their activity; and a life science and poetics of interaction and influence. This, I want to suggest is what Goethe, late in life, meant by "tender empiricism."¹¹²

b) *Tenderness and life writing*

Amrine has aptly described this methodology as the “controlled development of new ways of seeing as such...as many ‘modes of representation’ as possible, or better, to cultivate the mode of representation that the phenomena themselves demand.” But though initially, nominally sensitive to the plurality of “modes of representation” demanded here, Amrine, like many other critics of Goethean science, does not permit the journals’ plural form – their serial, heterogeneous, and disjunctive morphology – to unsettle his conviction that Goethean looking ultimately achieves a transcendent, organic unity between subject and object, idea and experience. Echoing Coleridge’s famous account of the “translucence” of specificity in symbolic representation, Amrine concludes that in Goethean looking “universal and particular, idea and experience...become reciprocally determinative, and, in that sense, a unified organic whole...the universal shines through the particular while inseparable from it, as in a symbol.”¹¹³

A passage imported from the preface to Nietzsche’s *Gay Science* might, in fact, provide a better gloss on Goethe’s ethos, which is easily mistaken for an anamnestic return to some pre-modern, unfallen unity of self and world. On the contrary, joining defenselessness to wry sophistication, Goethe’s late style is closer to what Nietzsche, in the “Preface” to *The Gay Science*, called the “second, dangerous innocence” that emerges after lengthy and arduous trial:

[F]rom such abysses, from such severe sickness, also from the sickness of severe suspicion, one returns *newborn*, having shed one’s skin, more ticklish and malicious [*gehäutet, kitzliger, boshafter*], with a more delicate taste for joy, with a tenderer tongue [*zarteren Zunge*] for all good things, with merrier senses, with a second dangerous innocence in joy, more child-like and yet a hundred times subtler [*raffiniertes*] than one has ever been before. (37-38 [10-11])¹¹⁴

It is interesting in our context that Nietzsche, a great admirer of what he called the “Goethean glance,” soon after commends the capacity to honor skins, surfaces, and the visible that Goethe, as we have seen, positioned as the keystone of morphology: “What is required...is to stop courageously at the surface, the fold, the skin, to adore appearance, to believe in forms, tones, words, in the whole Olympus of appearance.”

“Tenderness” is a crucially double-sided habitus and epistemic virtue: it connotes, on the one hand, an attitude towards the object that prefers to value and examine its visible, outer surfaces (and dead and discarded parts: e.g. skeletons, effluvia), rather to than break or cut it open; and, on the other, an attitude towards the self that recognizes vulnerability and impressionability as requisite to knowledge. The peculiar centrality of the word “tender” in Goethe’s oeuvre has been noticed before: in a conceptual-history essay devoted exclusively to enumerating and classifying the senses of the word “*zart*” in Goethe’s lexicon, John Hennig explains that his interest in the word stems precisely from its “objective/subjective double-meaning” that “lacks a sharp division between passive and active, substantive and functional, material and personal...psychic and physical” (79, 83). Hennig affirms that “One could hardly grasp the uniqueness of Goethe’s natural-scientific writings more concisely...than through the preeminent place that the word ‘*zart*’ takes in them,” wagers that Goethe used the term more often than any other German writer, documents that this usage increased with age, and affirms that Goethe applied the adjective to objects that, for the most part, had never before received it (78, 81, 92).¹¹⁵

Thus the way in which accounts of experimenting selves connect and contaminate accounts of experimental objects in the journals *On Natural Science* and *On Morphology* – “experience, observation, implication, *connected through Life-events*” – is not to be explained through that enduring image of romanticism as the culture and discourse of subjective interiority that takes nature as its (inert) matter and mirror. Nor is the self included in these periodicals because the object of their science is to delineate human subjective faculties, as it was for Kant. Rather, in Goethean romantic science, this contaminating inclusion is something like an improvement for empiricist experimental method: it attempts full disclosure of a complicating variable – the changing sensorium of the observer – in the service of a better description of the objects. Thus the journals emphatically foreground the fact that morphology’s living practitioner, the morphologist, is an incessantly metamorphosing “assemblage of independent beings” whose narrative is inseparable from the study at hand. This is not only because, apt to sprout new organs, the morphologist himself is a pertinent case study for morphology (“All who see,” as William Blake puts it, “become what they behold”). It is also because his differently inhabited sensorium will produce changed accounts of objects over time (“For,” to follow Blake again, “the eye altering alters all”).¹¹⁶ The story of an affected observer belongs to a description of the objects, their *Wirkungen* [effects/agency] and *Wirklichkeit* [reality/actuality].

To document this “reciprocal influence,” then, the “Meaningful Progress” essay concludes, morphology will have to be told “historically”: “I will therefore take the liberty of representing my former experiences and observations [*Erfahrungen und Bemerkungen*], and the ways of thinking that sprung from them, historically in these pages [*in diesen Blättern geschichtlich darzulegen*]” (MA 309). What “historically” connotes in this context might be illustrated through the example of a single observation collected in the *Verstäubung* essay that was the matter of the last chapter: “Turbid [*Trüb*] and gummy is the fine vapor that encases the skin of a ripened plum, since the underlying ground appears blue to our eye” (ZM I.3, MA 223). This observation is, first of all, a compressed history of the interaction between plum and eye, in which the plum produces the medium [*Trübe*] of its ocular apprehension. But at minimum, this observation implicates the following additional histories: as one of the *Verstäubung* essay’s catalogue of vaporous effluvia from plants, Goethe presents the plum-vapor’s very perceptibility as a relevant phenomenon as contingent upon his critical reappraisal of his earlier resistance to Schelver’s morbid botany. This implicates, in its turn, the *Verstäubung* essay’s critical history of botany’s subservience to the “Dogma of Sexuality” – prompting Goethe, as we saw, to historicize his earlier *Metamorphosis of Plants* essay as beholden to that dogma. As part of this “historical” presentation of his botany, Goethe re-published that early essay in *On Morphology*’s first issue, buttressing it with methodological and reception histories entitled “History of My Botanical Studies,” “Fate of the Manuscript,” and “Fate of the Print Edition” (ZM I,1, MA 20-79). This is not even to mention the way Goethe continued to add addenda to the *Verstäubung* essay in later numbers of the periodical, let alone the way the plum’s *Trübe* shuttles readers to *On Natural Science In General*, with its etymology of *Trübe* and its periodical revisions to Goethe’s monumental *Farbenlehre* (*Color Theory*, 1819) – whose “Historical Part” was already the length of its other two “Parts” combined (MA 10). As we will see in the next chapters, Shelley’s life-poetics will unfold the historical dimension of this turbid materialism on a geopolitical order of magnitude, rather than the joint-biographical and intellectual historical orders that have been operative so far.

The potentially infinite task of telling, “historically,” the intertwined biography and biology of the incessantly and mutually metamorphic human and nonhuman participants in the

scene of morphological experiment elicits an open, periodical form – and, occasionally, vertiginous problems. In the little essay “Problems,” Goethe worries this way, calling the idea of metamorphosis a “*vis centrifuga*” that risks “losing itself in endlessness”: “Metamorphosis is a most estimable but also most dangerous gift...It leads into the formless; destroys knowledge, dissolves it” ((*ZM II.1, MA 12, 295*). Fittingly, the morphologist responds to this moment of discouragement by soliciting more, not less, interactivity: with epistolary style. Next to “Problems,” Goethe publishes the essay “Rejoinder,” in which his friend, the young botanist Ernst Meyer, responds, point by point, to the distressing concerns of the prior essay (*MA 12, 296-305*).

What I have called Goethe’s “significant confusion” of subject and object in his late scientific writings is geared not only towards a more sophisticated representation of particular objects (the hazy skin of a plum). It is also geared towards a methodological and documentary attunement to the fact that natural science’s larger “objects” – generation and corruption, corporeality, force, shape-change – are conditions shared by, and between, practitioners and objects. In a way, as we saw in the introduction, late twentieth century science studies began to take into account – I think of Michel Serres and Bruno Latour on “quasi-objects,” or of Tania Munz’s wonderful upcoming “dual biography” of the physiologist Karl von Frisch and the bees he studied – the knowledge netted in experiment might be said to be conceived by humans and their nonhuman “objects” together.

In this sense Goethe also subverts the source of the “ingenious word” that so deftly captures his own method, for Heinroth could be expected to squirm at Goethe’s characterization of objective thinking and objective poetry as varieties of unpredictable pregnancy. In its chapter on “Sexual Difference in Humans,” Heinroth’s *Lehrbuch der Anthropologie* unequivocally declares that a “masculine” and “feminine” polarity “runs through the whole of nature.” Masculinity is “positive, ruling, conceiving”; the male organism is “firmer, stronger,” his skin “firmer, thicker, browner.” Femininity is “negative, serving, bearing,” and characterized, above all, by tenderness: her organism is “lower, *zarter*, weaker,” her skin “softer, *zarter*”; her mind defined by “receptivity [*Empfänglichkeit*]” in contrast to his “self-activity [*Selbstthätigkeit*].” This is why, according to Heinroth, the pinnacles of human scientific and artistic achievement “have for all time been primarily the property of men” (104-112). In Goethe’s appropriation of Heinroth’s anthropology, as in his appropriation of Schelver’s botany, a revaluation of the feminine-gendered qualities of “tenderness” and “receptivity” are central to the kind of empiricism sophisticated enough to outgrow the conjoined discourses of organism and aesthetics at the turn to the nineteenth-century. As late as 1980, Hennig’s essay on Goethean “tenderness” finds Goethe’s willingness to praise not just women but *men* (Bacon, Batsch, Herder, Schelver, Corregio, Sterne) unnerving, and is quick to assure readers – albeit without his usual abundance of quantified textual evidence – that “Goethe was fully cognizant of the danger of tenderness [*Zartheit*] slipping into sickly or frail softness...[his] orientation leads rather to inner cultivation and rigor” (101-2).

Recall Goethe’s late, counter-Kantian demand that we “get used to viewing relations and connections, *not* as ends and determinations,” in order to understand how “one species, if it does not actually arise from, at least sustains itself in the other, and through the other” (*LA I.10, 122*). Despite the fact that the professional protocols still recognizable to us as objective science – science more productive of replicable, scale-able, falsifiable, and prosaic results – were gaining ground by this time, Goethe’s late work points out that these protocols are quite incapable of registering a real set of effects concerning both the scientist’s subjection (his object-ness, as a

natural body) *and* the relational or communicative aspects of corporeality that obtain *between* beings.

In addition to its unwieldy title, the double-journal project has a genre-bending subtitle: “Experience, Observation, Consequence connected by Life-Events [*Erfahrung, Betrachtung, Folgerung durch Lebensereignisse verbunden*].” The more one reads *Zur Morphologie*, the less clear it becomes that “connected through life-events [*durch Lebensereignisse verbunden*]” indicates the individual life of the journals’ human editor at all. On the one hand, the subtitle seems to posit Goethe’s autobiographical author-function as the monumental personal life capable of encompassing *On Morphology*’s disjunctive “fragmentary collection” as a continuous whole, and critical appraisals have often affirmed this view (“The Undertaking is Excused,” *ZMI.1, MA12*, 12). But for a naturalist who was coming to insist that no being could be accurately “thought as wholly isolated” from its constitutive “infusion” or “envelope” of otherness, the connective “life-events” invoked in the subtitle might be otherwise conceived: the “life-events” that bind are experiences that disclose the lives of experimenting subjects and experimental objects as a joint life (“Attempt at a Meteorology,” *LA I.11*, 245). The “event” of this kind of joint life would be defined by a temporary loss or alternation of subject and object places; its representation would register the turbid zones of their overlap, communication, participation, trans-substantiality.

We arrive again, from a different direction, at a kind of blurring, or turbidity at the site of life’s disclosure, but this confusion is informed and topical and not a sentimental or mystifying mist. Turbidity is *material* for Goethe, “the most tender material, the first lamella of corporeality”: its multi-faceted study – as medium of perception and thought, as constituent of body, as poetry [*Dichtung*, ‘thickening’] – is avoided to the detriment of natural scientific and poetic practice (“The Expression Trüb,” *ZNW I.4, MA12*, 607). In concluding this part, I want to underscore how “Ingenious Word” essay ends with a passage that secures an explicitly cognitive dimension to the “points” that we have been tracking – as vital, textual, and material – since Goethe’s 1780s infusoria experiments.

The word “objectively,” Goethe writes, led him to find “that my entire practice rests on *deduction* [dem *Ableiten*],” from “a pregnant point [*einen prägnanten Punkt*].” But this account of deduction, which usually means deriving particulars from a general principle already known, is almost as upside-down as the essay’s version of objectivity:

I do not rest until I find a pregnant point, from which many things let themselves be deduced, or rather, one that produces many things voluntarily of itself, holding them up before me, since I go carefully to work in my activity and my receiving.

If, in experience, there occurs an appearance that I don’t know how to deduce, then I let it lie as a problem, and I have found this technique very advantageous in a long life: for if for a long while I could not unravel the derivation and connection of some phenomenon, but rather had to leave it aside, then all at once, years later, everything found itself illuminated in the most beautiful interrelation. (*MA 12*, 309)

It sounds, for a moment, as though the “pregnant point, from which many things let themselves be deduced,” precedes the derived things (like a parent), but the given examples indicate instead that the productivity of a point is established retro-actively, by a sort of consensus among products. For a few years, Goethe explains, he has futilely attempting to revise his geognostical

studies to see if he might bring his convictions into line with the prevailing doctrine of Plutonism. Heinroth's word, "objective," helped him to understand why: "all the objects, that [Goethe] had observed and studied for fifty years" were fighting him on this attempt to switch his standpoint [*Standpunkt*] – they "must have aroused the conception and conviction in me, from which I cannot now desist." By consensus among the encountered objects, Plutonism is no relation of theirs. The implicit counter-example, is, of course, Heinroth's "single ingenious word," which "all at once" placed a whole series of experiences observing and writing, scientific and literary, "in the most beautiful interrelation" (309).

The morphologist's thinking body, in these examples, is a *concilium* or *Versammlung* of impressed others – "which remain active and alive inside me" – of which he is hardly the mastermind: this is why, in the above passage, he disclaims credit for the point's productivity, which happens in parallel to his own diligent compilation of impressions (307). A "stand-point [*Standpunkt*]" here is very much like the points that equivocate between pollen and dust: its productivity is not innate but depends upon a set of encounters with surrounding elements. We now turn to the way such equivocal particles compound into an image – a "wavering shape," to return to this chapter's epigraph – in Goethe's neo-Lucretian poem *Dauer im Wechsel* [Durance in Change] in order to examine how the objective and tender activity plays out at the level of signification.

c) *Another rhetoric of temporality*

As Joseph Vogl has observed in a meditation on cloud-forms in Goethe-era science, not only do clouds present as quasi-objects, notorious "for oscillation, for formation by chance, for mutability, for a very loose position in the causal chain...as visible accumulation, as aggregate," they also "fundamentally endanger and interrupt the relations of signification" ("*Wolkenbotschaft*," 69).¹¹⁷ In concluding these first chapters' examination of the Goethean science of shapes, I want to point to such a near-interruption: to the strange missed opportunity by which a Lucretian sign *almost* enters Paul de Man's programmatic early essay on allegory and symbol, "The Rhetoric of Temporality" (1969). This initiates a project carried forward in each of the next two chapters: the delineation of the set of rhetorical tropes that correspond to what I have elaborated, through Goethean "tender empiricism," as the multiply and meaningfully *partial* epistemic virtue of Romantic "sweet" and materialist science: "partial" in the sense of interested, particular, particulate, and incomplete.

In his influential essay, de Man took prior Romantic literary criticism to task for accepting a symbolic subject-object (consciousness-nature) synthesis as the period's signal achievement in language. In what has proved a lasting characterization of symbol as the sign of "self-mystification" and allegory of its historically-responsible "unveiling," de Man argued that symbolic diction purports to identify mental sign and sensuous perception, asserting the "simultaneity" and "identity" of substance and representation as "not differ[ing] in their being but only in their extension" (206-208). In allegory, meanwhile, each sign refers to a prior sign, and this temporal and wholly linguistic structure defines the mode: Rousseau, de Man argues in his central example, "does not even pretend to be observing," as he writes Julie's garden in *La Nouvelle Héloïse*. Rather, he assembles this garden exclusively from the borrowed elements of the *Roman de la rose* (203). The tactic is exemplary, for De Man, of an allegorical romanticism that "prevents the self from an illusory identification with the non-self" by staging and

renouncing the synthetic, “symbolic” possibility in favor of exposing the self to its “authentically temporal predicament,” alone in “a natural world to which, in truth, it bears no resemblance” (206-8):

Whereas the symbol postulates the possibility of an identity or identification, allegory designates primarily a distance in relation to its own origin, and renouncing the nostalgia and the desire to coincide, it establishes its language in the void of this temporal difference. In so doing, it prevents the self from an illusory identification with the non-self, which is now fully, though painfully, recognized as non-self. It is this painful knowledge that we perceive at the moments when early romantic literature finds its true voice. (207)

In a foundational movement that becomes protocol for the rhetorical romantic criticism de Man helps to inaugurate here, the possibility of coincidence between self and non-self, or natural world, is the illusion punctured by romantic literature’s “true voice.” Romantic-allegorical rhetoric is the temporal “unveiling” of “a subject that has sought refuge against the impact of time in a natural world to which, in truth, it bears no resemblance.” De Man’s language here unequivocally upholds the Kantian cleft that Goethe, as we have seen, was keen to subvert: subjects, in truth, *bear no resemblance* to the natural world. Their unbridgeable difference is temporal in kind.

Of course, a Lucretian *simulacrum* or *figura* would thoroughly confuse de Man’s semiotic contest between symbols and allegories: quite literally a husk of its referent, the atomist sign carries out the mystifying identification of substance, perception, and representation – often, as we have seen, as literally *as mist* [*Trübe*] – that de Man ascribes to the symbolic mode. But having necessarily traversed a distance between perceiver and perceived, it also asserts a temporal discrepancy akin to the one de Man reserves for allegorical demystification. This is even more the case because figuration overlaps so generously, in *De rerum natura*, with the “temporal predicament”: with transience conceived as the gradual, particulate re-dispersion of every self (and not-self) whose instances Goethe collects under the term *Verstäubung*. Then again, this very predicament would look “symbolic” once more according to de Manian typology because of the commonality it tolerates between selves and “natural” non-selves.

Such thinking might seem so distant from de Man’s classification here that the comparison seems forced. But I want to suggest instead that this alternative rhetoric of temporality *does* intrude in de Man’s essay, and that it does so to be consequentially misrecognized as a kind of epitome of symbolic false consciousness. Tracking this unnoticed rhetoric of temporality as a “third way” available to romantic figuration (one seminally elided in the tradition of rhetorical criticism de Man helped inaugurate) is a through-line between the present chapters on Goethe’s poetic morphology and the upcoming ones on Shelley’s.¹¹⁸

Throughout “The Rhetoric of Temporality,” de Man reiterates the critique cited above: the symbolizing self borrows from nature a permanence improper to it. But this critique’s first instance in the essay attaches to Goethe, specifically, to a poem called *Dauer im Wechsel* [Durance in Change], a poem eventually integrated into the late cosmological cycle that Kuhn and others identify as the ultimate form of Goethe’s long-professed intention to write neo-Lucretian didactic epic.¹¹⁹ In his essay’s first description of the synthetic “temptation” of the symbolic view, de Man writes:

The movements of nature are ... instances of what Goethe calls *Dauer im Wechsel*, endurance within a pattern of change, the assertion of a metatemporal state beyond the apparent decay of a mutability that attacks certain outward aspects of nature but leaves the core intact. ... Such paradoxical assertions of eternity in motion can be applied to nature but not to a self caught up entirely within mutability. The temptation exists, then, for the self to borrow, so to speak, the temporal stability that it lacks from nature ... (197)

But the poem "*Dauer im Wechsel*" is remarkably unconcerned to anchor "a self caught up entirely within mutability" in nature's permanent "metatemporal...core." In fact, the speaker enjoins his "Du" to surpass even the objects in the swiftness of his or her passing: "Schneller als die Gegenstände / Selber dich vorüberfliehn!"; in David Luke's prose translation, "Let yourself speed by [or fly past] even more swiftly than these objects!"¹²⁰ The poem is especially emphatic in asserting, to invert De Man's phrase, the self's temporal *instability*. "Now you yourself! [*Du nun selbst!*]," it adds confrontationally after two stanzas of blooming and fading blossoms, as if to say, "Now, as for *you*":

Jene Hand, die gern und milde,
Sich bewegte wohlzutun,
Das gegliederte Gebilde,
Alles ist ein andres nun.
Und was sich an jener Stelle
Nun mit deinem Namen nennt,
Kamm herbei wie eine Welle,
Und so eilt zum Element.

*That hand, that gladly and gently
Stirred to do good,
The articulated shape [membered or segmented structure]
All is different [another] now.
And what, in that place,
Now calls itself by your name,
Came here like a wave
And hastens likewise to element. (25-32; please see note for full poem¹²¹)*

De Man correctly identifies a kind of "paradoxical...eternity in motion" of which both selves and non-selves partake in this poem, but seems to overlook the fact that its precise cost is any pretense at temporally consistent Selfhood. At stake in this stanza, instead, is the hard atomist consolation that indeed promises a kind of indestructibility – but not for us. It is the atoms that can neither be created anew nor destroyed to nothing. A para-text sharpens this connection: Goethe enclosed "*Dauer im Wechsel*" in a thank-you note to the psychologist J.C. Reil, describing it as an "attempt to express poetically" what Reil had written on page 58 of his recent book. Page 58 concerns the atomic undoing of the "I":

We regard the person in question from the present moment backwards to the first dark point of our existence... Still, this I, that persists so stubbornly in our

consciousness, is, in reality, a highly changeable thing. The elder believes he is still what he was eighty years ago. But he is not the same anymore. Not a single atom out of all of them that he was, eighty years ago, is still there. Time has, with every forward step, nibbled at his soul and body, and has more than once completely redone him, has developed moral and physical perfections in him and then destroyed them again.¹²²

In the stanza from “*Dauer im Wechsel*” cited above, a flurry of indexicals scaffold the beloved’s name, expelling the contents of personal selfhood in favor of a set of relational coordinates, a place from which to speak: “*what in that place / Now calls itself by your name*” (29-30). While the stanza’s *memento mori* message is powerful, the speaker, like Reil, is not (or not at first, and not only) imagining an already dead person whose elements will make up another subject, but also the conditions of normal, speaking and embodied life.

The fourth stanza, cited above, elaborates a Heraclitean idea glossed in the poem’s second stanza: “O, and in the same river / you do not swim a second time” (15-16). The third stanza had relocated the mutability problem to the addressee’s sensorium: “You see walls, you see palaces / with constantly different eyes” (19-20). English translations of the next two lines, “Weggeschwunden ist die Lippe / Die im Kusse sonst genas” – “Gone the lip which found in kisses / Healing in those former times” (Bell), “That lip has wasted away whose pain was once healed by kisses” (Luke) – tend to give a temporal sense to the adverb *sonst* [“former times,” “once”] that links kisses to healing or recovery (21-22). But sense of “otherwise” is also available here, and the line mentions no wound, “pain” (Luke), or illness apart from the lip’s disappearance itself. We might read, “Vanished is the lip/ Else restored in kissing,” and think about the way contacts temporarily replenish (as well as erode) personal shapes in a dispersive atomist temporal predicament. By the fourth stanza, cited above, subjectivity has been redefined as a tenuous association that flows off from a speaking position, transient as the Heraclitean river’s.

At stake is the alternative type of sign we have designated Lucretian: the figure for the beloved in this stanza – “what, in that place / Now calls itself by your name” (29-30) – is given as one in a series of disintegrating images that stream, wavelike, toward the speaker from the beloved’s place, images that “Came here like a wave / And hastens likewise to element” (31-32). (*Wallen*, to flow or undulate, and [*Ent*]fließen, to flow [away], are among the verbs with which Knebel translates Lucretius’ verbs for simulacra-diffusion (*fluo*-, -ere, [*dif*]fundo-, -ere). Speaking of simulacra-streaming as part of the “perpetual flow from things” – of odors from bodies, of heat from the sun, of voices dispersing in air – Lucretius also gives watery examples: such as the way the ocean’s waves cast salt and spray into the air and devour the walls that bind them (*DRN* 4.220-9)). The sign in question contributes to speaker’s present, marking “here” and “Now” in the stanza above, between actions given in the past and the future tense. But it also impresses the speaker with the belatedness of this perceived present, since the object has changed during the time of the figure’s coming: “all is different now,” or “all is another now” (28). In this way the speaker suggests not only that the beloved’s body is ageing, but also that it instantiates a present different from the speaker’s own – *another* now. The wave simile also heightens the serial aspect of this version of figuration: for Lucretius, it is simulacra in succession – each, individually, insensibly swift and light – that have sufficient impact to impress consciousness. (In a feature that we have noticed in Goethe’s account of microscopic life obtruding into the visible, and which will reappear in the next chapters as the dissertation tracks this misrecognized strain of romantic materialist rhetoric, the fleeting figure described

barely distinguishes itself from its fluid medium: wave-like (*vague*), it protrudes without separating.)

The stanza's extraordinary third line (27), about a segmented, membered, or articulated structure – *das gegliederte Gebilde* – might appositively re-describe, as jointed, the hand of the preceding lines; it might stand alone as a second item in the series of what “is an other now”; or it might describe the present poem. *Gebilde* has all the physical and figural polysemy of *Bild* [image] in German, and the strong trace of the verb (*sich*) *bilden* conveys the impression of a thing shaped or formed, a “formation” or “structure.” These run the mental-material gamut in the period from “figments” (ghostly, imagined, and dreamt shapes), to delicate cloud-shapes, to drawings, to the internally regulating “organic forms” in the new biological lexicon, to stones and crystals (*GDW*). For our purposes it is important that *Gebilde* is one of the ways Knebel translates Lucretius' *figura* and *simulacrum*, and that he modifies the noun with “tender [*zart*]”: “*wie sollte dann nicht ein zartes Gebilde der Dinge Jedes entlassen?* [why then, shouldn't each thing release a tender figure/formation?]“ and „*Die leichten Gebilde der Dinge Schnell abfliegen und sich in dem Augenblicke verbreiten* [The light figures/formations of things fly off swiftly and disperse themselves in the blink of an eye]“ (4.85,165). This theory of the image is introduced in *De rerum natura* not only as an explanation for sensation, but also as a key piece of the Epicurean campaign *against* the oppressive theological promise of spiritual immortality: “lest by chance we should think that spirits escape from Acheron or ghosts flit about amongst the living, or that anything of us [*aliquid nostri*] can be left after death, when body and mind have both taken off together and dissolved abroad, each into its own first beginnings” (4.36-41, Loeb).

The poem *does* end in a sudden recuperation of permanence, although not, I think, one that fits de Man's account of symbolic bad faith:

Danke, daß die Gunst der Musen
Unvergängliches verheißt,
Den Gehalt in deinem Busen
Und die Form in deinem Geist.

*Give thanks that the favour of the Muses
Promises an imperishable thing,
The content in your breast
And the form in your mind. (37-40)*

This imperishability does not derive, but rather abruptly departs, from the account of nature given in the poem's first 36 lines: “the Muses” swoop in to guarantee extra-temporal permanence for (suddenly Platonic) form and (suddenly sentimental) contents. I agree, albeit for different reasons, with William Stephen Davis's judgment that this assurance “does not satisfy” (465). It rings like a hollow platitude against the form of a “Du” so thoroughly evacuated in the prior stanzas. In fact, here the strangeness of the poem's second-person address reaches a new pitch, since the poem (“imperishable thing,” product of the Muses' favor) claims to eternalize not its author or speaker's form and content but *yours* (*your* heart, *your* mind). It claims this for a “you” who – being a reader – must be highly aware that s/he is interchangeable with whomever happens to be reading.

In this way, the sudden assurance of personal permanence does not transcend, so much as incomprehendingly repeat the positional and dialogic version of subjectivity given in the prior

stanza, where “you” is “what” occupies “that place.” The poem’s placement in Goethe’s final authorized edition of his works, the *Vollständige Ausgabe Letzter Hand* (literally, “Complete Edition of the Last Hand”) heightens the irony of its final assurance: for this edition, Goethe secured virtually unprecedented, exclusive and (some thought) megalomaniacal legal powers to oversee the edition and publication of his own, definitive collected works (Unsel 212-291).¹²³ With its uncannily corporeal title, Goethe’s attempt to secure his own posthumous literary monument folds the wish for “Permanence in Change” of the consolatory fifth stanza back into the hard-boiled fourth: “That hand... is another now,” mobilizing the English and German pun in the edition’s title that makes “last,” as “ultimate” or “final,” indistinguishable from “last” as “latest” or “most recent.” The edition and its pronouns pertain to whatever hand it is in. In other words, *Dauer im Wechsel* does exactly what de Man claims for romanticism’s allegorical “true voice,” “unveiling” its own pretenses at permanence and identity as a pure effect of its poetic language “of the muses”: “it establishes its language in the void of this temporal difference” or “distance” between the sign’s instantiation and “its own origin.”

Or does it? As I have tried to show, *Dauer im Wechsel*’s last movement, the one that describes endurance as a muse-driven product of poetic work on language, abandoning natural analogues or specific referents, does not so much “unveil” as daftly proclaim a kind of permanence for self and then collapse back into the prior stanza’s neo-Lucretian account of transience. The metric exception of this stanza affirms that it is the site of the poem’s peak attunement to its finitude: unlike every other stanza, in which 8 and 7-syllable lines alternate, here no line extends past the seventh. The poem’s signal relation to its temporal predicament, I want to argue, occurs not in the last stanza’s ironically hollow phrase “imperishable thing,” but here, with the “gentle [*milde*],” elliptical, prior formulation: “Das gegliederte Gebilde,” that jointed structure, in which poetic, natural, and bibliographic corporealities coincide. (For a jointed structure describes a lineated poem, a membered hand, and perhaps specifically, the *Edition of the Last Hand*). It is also relevant, in the context of such structures, that Goethe once described the chronic unfinishedness of his bio-graphical/logical periodicals this way: “Unfortunately there is no shortage of additional links to attach, since life does not cease to enjamb.”¹²⁴ In this curiously open figure, these domains coincide not in their permanence or identity but in an account of a perishing described as becoming “an other.”

In this atomist place in the poem, “permanence in change” does not mean that a self “borrow[s], so to speak, the temporal stability that it lacks from nature” (de Man, 197). If anything, the self “borrows,” or better, learns, its temporal *instability* and non-identity from nature: learning transience from its own body, and from considering the atomic revolutions within beloved lips and hands. What de Man’s rhetoric of temporality elides is the de-mystifying work that letting the materials of self and non-self (textual or natural) cross-contaminate can do in the period after their Kantian quarantine. There are figures for which this space of indistinction draws out, rather than denies, the temporal discrepancy between images and their objects and the saturation of writing by time. But provocatively, poems are not, on this account, radically distinct from other jointed structures: persons, hands, palaces, to cite a few from *Durance in Change*. They can only be said to last at the expense of their self-consistency, that is, in their susceptibility to hosting or composing “an *other* now” or “another *now*.”

Notes

⁹⁹ Trans. Walter Arndt, 1-6.

¹⁰⁰ “Using People: Kant with Winnicott,” *Persons and Things*, 94-105. Bill Bywater makes the case for the ethical, in particular the antiracist, potential of Goethean science in “Goethe: A Science Which Does Not Eat the Other.” “People with lively intellects,” he concludes, “allow nature to pry them open and pour into them as they reach out to understand it” (298).

¹⁰¹ Kuhn, *Typus Und Metamorphose*, 11.

¹⁰² This formulation comes from Goethe’s summary of his fortuitous encounter with Heinroth’s Anthropologie in the *Tag-und Jahres-Hefte zu 1822* (MA12, 1021).

¹⁰³ See Timothy Lenoir’s definitive study of this teleo-mechanical approach and its influence on subsequent German biology. Lenoir puts special emphasis on the merely heuristic/regulative or provisional status of these principles, Chapter 1, n. 22, above. On the “obviously absurd” causality of Epicurus, see Kant, *CJ* Part II §72-73.

¹⁰⁴ The translation provided is my own, although Bertha Mueller gives a rendering in *Goethe’s Botanical Writings*, p. 235-237. I have declined to reproduce her version due (as in the case of the *Verstäubung* essay) to certain divergences from the German that occasionally invert its sense. For instance, Mueller renders the following phrase, key to Goethean metamorphic reciprocity, *Jeder neue Gegenstand, wohl beschaut, schließt ein neues Organ in uns auf*, as “Each new subject, well observed, opens up within us a new vehicle of thought” (MA 12, 306, Mueller 235). Goethe in fact writes: “Each new *object*, well observed, opens up *a new organ* in us.”

¹⁰⁵ I think here of Eve Sedgwick on touch. In his historical exploration of roads not taken in the construction of modern natural science, German philosopher Gernot Böhme highlights the way that Aristotle’s chemistry classified substances based on their palpable qualities – warm, cold, rough, soft – to the touching (and touched) naturalist, making the sensuously experienced qualities of things into their objective characteristics. Such touch-centered science, Böhme shows, presumes that humans experience bodily substances in their capacity *as* bodily substance, a premise that prepares Böhme’s call for an “affected science [*Betroffenwissenschaft*],” predicated on interaction rather than distanced and disinterested observation (112-118, 20-21).

¹⁰⁶ My reading of “objectivity” in the late journals chimes with R. H. Stephenson’s work on that epistemic virtue from the perspective of Goethe’s Classicism. Stephenson reads Weimar classicism as a strategic attempt, in a philosophical climate become “shy of the real” (Goethe to Karl August, 1826), to “pass over to the side of the object” (Baudrillard). In contrast to the self-reflexive absolutes of Jena romanticism, Stephenson sees Goethe and Schiller’s aesthetics as a firmly embodied, this-worldly commitment to perceiving objects in their sensuous particularity: a *realism*, in Lukác’s sense of a respect for the *res*. Even when they speak of “totality,” argues Stephenson, what is intended is the “unique integrity of some particular”: Classicism, in a formulation he borrows from Adrian Stokes, is “a precise love” for “what is other... *as being an other being*... without the *arrière pensée* of ‘thinking makes it so’” (Stephenson, “The Cultural Theory of Weimar Classicism in the Light of Coleridge’s Doctrine of Aesthetic Knowledge,” 150, 155-8.) See also the (very similar) Introduction to the same authors’ *Friedrich Nietzsche and Weimar Classicism*.

¹⁰⁷ See above n. 4.

¹⁰⁸ Compare Fritz Breithaupt, *Jenseits der Bilder: Goethe’s Politik der Wahrnehmung*, 16.

¹⁰⁹ See Amrine, “The Metamorphosis of the Scientist,” in *Goethe’s Way of Science: A Phenomenology of Nature* and Pfau, “‘All is Leaf’: Difference, Metamorphosis, and Goethe’s Phenomenology of Knowledge,” discussed more thoroughly below. My interpretation here shares Joseph Vogl’s emphasis on

the “Ununterschiedbarkeitszone [zone of indistinguishability]” between Subject and Object celebrated in Goethean empiricism. I do not see, however, in the *Morphology* writings, evidence of the anamnestic temporality Vogl’s rhetoric suggests for that zone in Goethe’s *Color Theory*. There, Vogl argues, Goethe is concerned to chart “an empirical field before all empiricism,” where “the positions of subject and object are at best embryonic” and experiments “make available ways a perceptive apparatus functions before all unity of experience, before recognition,” following “a path that leads from the realm of the unfolded world of appearance to the unborn life of things and beings.” In the case of the later journal-project, it seems to me that what is at issue is a sophistication, not innocence, of empiricist protocol that is meaningfully “late,” even decadent, on several counts: historically, vis à vis forms of Enlightenment natural curiosity; biographically, as a practice of old-age; substantively, because it focuses on exfoliated things; stylistically because of its slyness and wit. It is also interesting that despite deftly characterizing Goethe’s empiricism as sensitive to the “ecstatic effects of the phenomenon,” Vogl nonetheless situates it within the familiar narrative of romantic-era life science as a trajectory inside. Goethe’s physiology of sensation, he argues, “inscribed itself in the autopoietic modus operandi of the new – romantic – concept of the organism, for which each affection is auto-affection, each relation, self-relation.” See Vogl’s “Bemerkung über Goethe’s Empiricismus,” in *Versuchsanordnungen 1800*, 113-123 (117, 121, 123).

¹¹⁰ Eckart Förster’s excellent and classic essay on the subject nonetheless enfolds Goethe’s scientific method within the Kantian architectonic, as a kind of real belief in the category of “Intuitive Judgment [*Anschauenden Urteilskraft*]” that Kant put forward as hypothetical – unattainable for human, discursive understanding – in the “Critique of the Teleological Power of Judgment.” Such an understanding, Kant hypothesizes, “could go from the intuition of a whole to the parts and would therefore know no contingency in the connection between parts and whole” (§77). Though Förster’s essay gives a lucid and lovely account of many aspects of Goethean looking (see, in particular, the gloss on Goethe’s attempts to construct experiments in series, connected in recollection), the Kantian lens transforms this refined empiricism into an idealism that seeks to transcend contingency and particularity towards “that generality that manifests itself in countless spatial-temporal variations and shapes, each of which empirically – that is, in a limited and imperfect way – represents the idea” (186).

¹¹¹ This threat to the categorical integrity of “the aesthetic” is why Breidbach slightly misstates (his own) complex case regarding the centrality of metaphor in Goethe’s science when he concludes that “Metamorphosis is an aesthetic concept,” (*Goethes Metamorphosenlehre*, 307). Breithaupt p. 9-20.

¹¹² The phrase appears, actually, not in the scientific periodicals but in the posthumous collection of aphorisms (pregnant points) *Maximen und Reflexionen*.

¹¹³ As its title makes plain, Henri Bortoft’s *The Wholeness of Nature: Goethe’s Way Toward a Science of Conscious Participation in Nature* sees Goethe’s science as exemplifying “the principle of organic wholeness” (ix). The same can be said of many of the phenomenological approaches in *Goethe’s Way of Science: A Phenomenology of Nature*, Ed. Seamon and Zajonc, and of the essays in the recent issue of *Janus-Head* dedicated to Goethe’s “Delicate Empiricism,” many of which are expressly indebted to Bortoft. Pfau’s nuanced and erudite reading of Goethe’s morphological writings as temporalized differentiation astutely links them to an Ovidian concept of general tropism that “presents the material and phenomenal world as a welter of profoundly and vividly related things” (13). Yet Pfau’s account tends to restrict relationality to forms of “progressive self-differentiation” in which all beings partake, positioning Goethean morphology within a general romantic “organicism” consonant with Hegelian temporality, Blumenbach’s notion of an auto-poetic *Bildungstrieb* (Goethe’s subtle critique of which we examined in Chapter 1), and Coleridgean observations on biological and textual bodies. As I argued at the close of Chapter 1, Goethe links the release of the emphatically belated and incomplete *Morphology* periodicals to a fresh consciousness of the historical impossibility “of an all-encompassing One” to which discrete things each attest (Pfau, 12). As Goethe puts it in his melancholy “*Zwischenrede*” [*Interlude* or “between speech”]: “Produced from alternating points of view, under the influence of different moods;

written down at different times, [these essays] will never again flourish as a unity [*Einheit*]” (ZM I.2, MA93). I have been arguing that this revisionary formal understanding of the biographical pieces (Goethe goes on to call them “pieces of a human life” in the *Zwischenrede*) correlates to a revisionary biology: the one that sees what “to us appears as an Individual” as “not a unity, but a plurality” (“*Die Absicht Eingeleitet*,” ZM 1.1, MA 14). See Pfau, “All is Leaf,” esp. p.11, 18, 25, 30.

¹¹⁴ This “Preface” to the *The Gay Science* (1886) was revised and republished as the Epilogue to *Nietzsche Contra Wagner* (1888), 681-3. On Nietzsche and Goethe, see Paul Bishop and R.H. Stephenson’s *Friedrich Nietzsche and Weimar Classicism*.

¹¹⁵ Listing, over six pages, the natural objects to which Goethe applied the term – they range, by the way, from “noodle-dish,” to “Galvanometer,” to “gypsum crystals,” to wave, cloud, light and shadow forms, to “leaf-fiber,” and, of course, to a “point” – Hennig wagers that “of most of them one can confidently remark that no one besides Goethe had applied the word ‘*zart*’ to them” (89).

¹¹⁶ Blake, *Jerusalem, The Emanation of the Giant Albion* (66: 36) and “The Mental Traveller,” (61, E485).

¹¹⁷ Vogl’s account of just how this disruption happens makes use, again, of the narrative, familiar from *The Order of Things*, that at this time, around 1800, only (organic) interiority and invisibility can justify reference and classification of the visible world.

¹¹⁸ See Marc Redfield’s virtuosic *The Politics of Aesthetics: Nationalism, Gender* for de Man-inspired elaborations of the “ethics” of allegory versus the ideology of symbol. My account here of Goethe’s against-the-grain science of *Bildung* may be thought of as a counter-point to Redfield’s account of the *Bildungsroman*, which sets up *Bildung* as “the narrative” of aesthetics, the ideological programme that pretends to integrate “a particular ‘I’ into...into the universal subjectivity of humanity” (*Phantom Formations* 10, 38).

¹¹⁹ See Hugh Barr Nisbet, “Lucretius in Eighteenth-Century Germany” and “Herder und Lucrez.” In a review of Knebel’s translation published in *Über Kunst und Altertum*, Goethe announced his (never realized) intention to write a thorough treatment of Lucretius as “Man, Roman, Natural Philosopher, and Poet,” and Nisbet shows how Herder, Schiller, Goethe, Knebel, Steffens and Schelling each entertained the hope of writing a modern didactic-epic on the model of *De rerum Natura* around 1800. In her commentary on Goethe’s and didactic poetry Dorothea Kuhn suggests that Goethe’s late poem cycle *Gott und Welt*, which included “Dauer im Wechsel” and multiple poems published in *Zur Morphologie*, might be a late offshoot of his earlier neo-Lucretian aspiration to write a “Roman über das Weltall.” See Kuhn, “Natur und Kunst,” LA II9b, 474-5.

¹²⁰ In Luke’s prose translation the “let” carries from line 33’s imperative *Laß*.

¹²¹ DAUER IM WECHSEL

Hielte diesen frühen Segen,
Ach, nur Eine Stunde fest!
Aber vollen Blütenregen
Schüttelt schon der laue West.
Soll ich mich des Grünen freuen,
Dem ich Schatten erst verdankt?
Bald wird Sturm auch das zerstreuen
Wenn es falb im Herbst geschwankt.

Willst du nach den Früchten greifen,
Eilig nimm dein Teil davon!

Diese fangen an zu reifen,
Und die andern Keimen schon;
Gleich mit jedem Regengusse,
Ändert sich dein holdes Tal,
Ach, und im demselben Flusse
Schwimmst du nicht zum zweitenmal.

Du nun selbst! Was felsenfeste
Sich vor dir hervorgetan,
Mauern siehst du, siehst Paläste
Stets mit andern Augen an.
Weggeschwunden ist die Lippe,
Die im Kusse sonst genas,
Jener Fuß, der an der Klippe
Sich mit Gensenfreiche maß.

Jene Hand, die gern und milde
Sich bewegte wohlzutun,
Das gegliederte Gebilde,
Alles ist ein andres nun.
Und was sich an jener Stelle
Nun mit deinem Namen nennt,
Kamm herbei wie eine Welle,
Und so eilt zum Element.

Laß den Anfang mit dem Ende
Sich in Eins zusammenziehn!
Schneller als die Gegenstände
Selber dich vorüberfliehen!
Danke, dass die Gunst der Musen
Unvergängliches verheißt,
Den Gehalt in deinem Busen
Und die Form in deinem Geist. (*SV*, 195-6).

PERMANENCE IN CHANGE

Ah, if this early bounty of blossoms could but last one hour! But the warm west wind already shakes them and they rain down abundantly. Shall I take pleasure in the green leaves in whose shade but lately I stood? Soon they will tremble sere in autumn and a storm will scatter them too.

If you wish to grasp the fruit, make haste to take your share of it! for some of it is beginning to ripen, and some is already germinating. Swiftly, with every shower of rain, your sweet valley changes: and alas, in one and the same river you cannot swim a second time.

And you yourself! At all those things that seemed to stand forth before you firm as rock, at those walls and palaces, you look with ever-changing eyes. That lip has wasted away whose pain was once healed by kisses, that foot which once boldly leapt like a mountain goat to the precipice's challenge.

That had, that articulated structure, once so gladly and generously extended to give happiness – all these things are different now. And that which in their place now calls itself by your name came hither like a wave and is hastening likewise to mingle with the elements.

Then let the beginning and the end contract into a single point, and let yourself speed by even more swiftly than these objects! Give thanks for the favour of the Muses promises an imperishable thing: the meaning in your heart, and the form in your mind. (Luke, *SV* 195-6).

¹²² J. C. Reil *Rhapsodien über die Anwendung der psychischen Kurmethode auf Geisteszerrüttungen*, p. 58, cited in William Stephen Davis, "Subjectivity and Exteriority in Goethe's 'Dauer im Wechsel,'" 454. Davis notes that the poem was in fact probably completed in 1801, before Goethe received Reill's book in August of 1803.

¹²³ On Goethe's publishing and editorial practices as changing means of self-perpetuation – from archive to network – see Piper, *Dreaming in Books*, 19-52.

¹²⁴ Cited in Stephan Koranyi, *Autobiographik und Wissenschaft im Denken Goethes*, 144.

3.

GROWING OLD TOGETHER: Composite Physiognomy in *The Triumph of Life*

Pinnocchio becomes a real boy when his body is entirely smooth. Organic form is thus, among other things, an *erasure of articulation*. This may be why Western cultures are intolerant of any lines on the body—any wrinkles or signs of experience—especially in a love object.

— Barbara Johnson, *Persons and Things*

The stone is often no less fond of life than you.
La cholique est souvent non moins vivace que vous.

— Michel de Montaigne, “Of Experience [*De l’experience*]”

Prologue: Montaigne’s face

What, in time, makes up a face? In marked contrast to much early-nineteenth century physiognomy, Montaigne’s late essay “Of physiognomy” (1585-88) passes without mention of the correspondence between a facial feature and the personal – let alone racial or national – character of the one who wears it. Fastened together instead under this very physical heading are matters we might label historical, medical, social, rhetorical and textual: local outbreaks of plague and of the ongoing religious civil wars; petty cruelties among neighbors; the virtues of Socratic “simplicity” of expression; and a series of luxuriantly self-reflexive accounts of piecing together the text at hand as a garment of borrowed flowers.

In fact it is here, describing the “treatise on physiognomy” as a “bundle of others’ flowers [*un amas de fleurs estrangers*]” that Montaigne first uses the word “physiognomy” at all (808, [266]).¹²⁵ Against the grain of later modern understandings of corporeality, the essay’s attenuated relation to its title suggests that to interpret a physical face and its features (*physio* + *gnomen*) is to disclose not personal or national type, but a local and contingent history: a complex sequence of incidents, affects and influences (political, medical, and literary) that shape a personal face over the course of a shared historical interval. Following the essayist’s ceaseless invitations to conflate the text of his book and the tissue of his body, we are induced not only to question what bundle of strangers’ words the “I” animates in this form of life writing, but also to ask whether an apparently personal, physical body is not similarly formed: as a fortuitous garment of others’ “flowers” and “troubles.”

The first and stated aim of Montaigne's essay – like that of its revivals in Rousseau, Wordsworth, and Shelley – is to extol the virtue of “unadorned,” “natural” self-expression, a virtue Montaigne attributes to Socrates.¹²⁶ But if Platonic idealism elicits an ideal of “childlike” purity of self-presentation, the problem of bodily interpretation, the problem “Of physiognomy” propels lush digressions on local minutiae instead and links them frankly with the problem of growing old. For that is what Montaigne is doing in these late essays – gently mocking, but clearly, copiously delighting in – the “folly” of “putting one's decrepitude in print” (809, [268]). The essay aligns growing old to “yielding” oneself, prolifically, to the impress of “the age” and the burden of “borrowed ornaments”: “I load myself [*je m'en charge*] with them more and more heavily every day beyond my intention and my original form, following the fancy of the age and the exhortation of others” (809, [267]). The collective political burden of the seemingly endless civil wars are described in the same way, as a “load”: “a mighty load [*charge*] of our troubles [*nos troubles*] settled down for several months with all its weight right on me” (796[252]). For Montaigne, physiognomy concerns the transfigurative burden [*charge*] of “the fancy of the age” upon the small figure of an embodied self.

Over time, the essay suggests, a highly specific accumulation of impacts, influences, and incorporations transform what is *mine* – “my intention and my original form” – into a decadent tissue of diverse borrowings. In this sense, an aging person is increasingly, as Montaigne put it, “of the age.” But this process implicates a stream of minutiae so particular in their sequence and local in their place – “a thousand different kinds of troubles assailed me in single file,” writes Montaigne – that to be molded after “the fancy of the age” is to become more, not less, irreproducible (796) [256]). In this form of late-life writing, the material (both book and body) of old age is an exquisitely particular *and* collective (social, historical) form. Senescing into an increasingly “borrowed” self, the essayist claims to write from a position of generous and non-traumatic alienation: “opulently,” and in “ignorance” (809) [267].

a) Shelley, wrinkled

This chapter is not, at least not directly, about Montaigne's late life writing, but about Percy Shelley's last “poetry of life” (*Defence* §37, *SPP* 530).¹²⁷ Still, Montaigne's weathered and composite physiognomy is my essay's emblem because that pre-Romantic face displays much of what Shelley's poem seeks in its turn away from the organicist approach to physical life and poetic form that was triumphal in his own time. A related wrinkling is at work when, at the end of Shelley's *The Triumph of Life*, “the beauty slowly wanes” from every figure, “extinguished” by the serial impacts of others' affects, impacts the poem materializes as “drops of sorrow” (514, 516, 519). The next lines show how these drops cumulatively effect a wrinkle on someone's face: “the marble brow of youth was cleft / With care” (l. 519, 523-4). As with Montaigne's “thousand troubles,” the sorrow drops accidentally amount to something like an artists' labor, a careful cleaving (the poet's enjambment of the line, a sculptor's work on marble) that tells an extraordinary, subverted Pygmalion myth in miniature. This sculpting activity produces a figure that *ages* into life: only in creasing does the youth's stony brow become skin, the mobile forehead to a feeling face (how different from Galatea's full-body blush!). As in Montaigne's essay, one does not merely lose self and life in growing old: one grows into another, or comes to harbor someone else. Aging, in this figure, coincides with the *increase* of a different form of desire, as something animal, maternal, distant and aggrieved takes over “in the [youth's] eyes”:

“Desire like a lioness bereft / Of its last cub, glared ere it died.” In *The Triumph* we eventually see by the light of this fierce maternal glare, also called “the glare / Of the tropic sun,” experiencing a vision from elsewhere that emanates from familiar eyes (484-5).¹²⁸ This senescing face fuses personal old age to proximate and distant imperial politics, renovating Shelley’s lead metaphor for the oppressed “Men of England” in *The Mask of Anarchy* – “Nurslings of one mighty Mother . . . Rise like Lions after slumber” – into one that attempts to unsteady national affiliation and to see from a place of uncompensated bereavement rather than resurrection (147,149, 151).

Though Shelley is thoroughly acknowledged as an acute theorist of the historicity of the contemporary, even as *the* paradigmatic poet of “the age of ‘the Spirit of the Age,’” this is never by way of mortal, wrinkled, earth-bound corporeality, with which Shelley might be the nineteenth century poet *least* associated.¹²⁹ But Paul de Man’s programmatic essay “Shelley Disfigured” in *Deconstruction and Criticism* (1979) made *The Triumph of Life* a privileged case for considering the *rhetorical* dimension of face-giving – the trope of *prosopopoeia* – in Romantic rhetoric and its critical reception. De Man influentially read the “mutilated” *Triumph* as allegorizing a “sheer,” “unrelated,” “violent power” at work in every act of reading and linguistic utterance: readings and writings recuperate the past and the absent by way of an “endless prosopopoeia,” he argued, a giving of face (Fr. *figure*) to the dead that cannot but *disfigure* and *efface* even as it animates and monumentalizes. In this, each act in language re-instantiates an original “madness of words,” a “random” power indiscriminately destructive of sense, relation, and causal and temporal sequence (*Rhetoric*, 93-123).

In de Man’s essay, it is here – in registering, through disfigurement, a power absolutely without relation – that the *Triumph* mimes the materiality of “actual events, called ‘Life’ in Shelley’s poem” (120). (The representative “actual event” is Shelley’s death in 1822, which left the poem unfinished, and the poet, for de Man, correspondingly “defaced” (120).) Indeed, the relation of Shelley’s poetics to history has elicited romantic criticism’s finest elaborations of a negative aesthetic formalist tradition that takes Paul de Man, along with Kant and Adorno, as its touchstones and casts “the materiality of actual history” as a paradoxical precipitate of lyric negation of contemporary life.¹³⁰ On this view, lyric registers “previously obscured aspects of the social” – the writer’s present and the reader’s – precisely in so far as it “eschews the relation of self to society as explicit theme,” severing (even “incinerating”) contacts with the age.¹³¹ This leaves behind a poetic “material” defined, rather triumphantly, by its “sheer” vacancy.

But if for de Man *The Triumph of Life* allegorized the de-facing “madness of words” and radically relation-less materialism, Shelley’s poem in fact expressly revives a very different account of prosopopoeia, this one constitutive of a poetic science that conceives matter as a tendency to touch. *The Triumph*’s last scene deposits readers in the midst of a passage from the fourth book of Lucretius’ *De rerum natura* that makes figural face-exchange a mundane transaction among *all* bodies, not just a covert violence of words, or of “two subjects involved in the process of reading.”¹³² Here each thing that exists, decaying in time, sheds slight, atomic husks from the surface of its body. Lucretius calls these delicate but real films by names that would diminish their reality in most ontologies, ancient and modern: *figurae*, *simulacra*, *species*, *imagines*. These exfoliated figures furnish the data of sensation, entwining poetry and empirical epistemology in a manner that, I will argue, was fugitive in Shelley’s time and remains so in ours.¹³³ Shelley’s *The Triumph of Life*, I argue in this chapter, turns to Lucretian poetic materialism as fit to connect the epochal, late-Enlightenment interest in living bodies to the period’s pressing sense of its own historicity.

This version of “disfigurement” – if it can indeed any longer be called *disfigurement* – concerns not sudden, violent effacement, but a kind of processual interchange between particles of self and not-self, between a face and what is “in the air” of a particular historical interval.¹³⁴ People, as Shelley depicts them in *The Triumph of Life*’s last vision, are “bending within each other’s atmosphere” – transfiguring beneath a climate of cast-off affects, images (and even animalcules) that they both generate and endure (151). In their wrinkles, *The Triumph of Life* manifests a nineteenth century possibility of thinking vital, historical, and rhetorical materialisms together. Here senescing bodies attest – in a way legible neither quite like a text, nor in the texts of monumental history or taxonomic physiognomy – to oblique, delayed, and “unapprehended relations of things” (*Defence* §3, 512).

In what follows I uncover the import of Shelley’s neo-Lucretian gesture across the several domains with which, I argue, it communicates: first, that of the young life sciences, and the philosophical vitalism that controlled *both* sides of the early-century debate in London over the cause and nature of life. Second, that of historiography, and what Kevis Goodman and James Chandler have diagnosed as the pressing problem of how to represent “contemporaneity” as heterogeneous “history in solution” (and not, as *The Triumph* makes clear, as the triumphalist history of the victors).¹³⁵ The third is that of poetry – which Shelley thought needed a “Defence” in 1820 – within a disciplinary climate that increasingly consigned figurative representation to the immaterial experience of subjects and non-poetic scientific prose to the material being of things.¹³⁶

Shelley positions *De rerum natura*’s account of material poesis as suited to contest the presently triumphant concept “of Life” as auto-telic “vital power,” to re-attach biological to historical and rhetorical materials, and to think through the way apparently individual persons collectively produce and integrate passages of historical time. A familiar strain of Romantic-era thinking links aesthetics and life science via their shared interest in the autonomous integrity of organic form: “I define life as *the principle of individuation*,” wrote Coleridge in 1816, “the power which unites a given *all* into a *whole* that is presupposed by its parts.”¹³⁷ Over and against the biological and formal values of organicism, I argue, Shelley’s poem about “Life” centers on wrinkles as the unintended work of multitudes.

b) *Life Triumphant*

Shelley’s 1822 *The Triumph of Life* opens with a scene that studiously conflates biological and imperial senses of “power,” a vision in which *Life*’s process is pictured as the triumphal procession celebrating “some great conqueror’s advance...the true similitude / Of a triumphal pageant” (112, 117-18). This vision is not, as has so often been assumed, a critique of embodied life as such. There was no such thing as life “as such” in a climate in which the Shelleys’ physician William Lawrence’s debate with John Abernethy over the nature of “vitality” had transfixed, galvanized, and scandalized respective segments of the English public, and elicited retaliation from Chancellor Lord Eldon.¹³⁸ “Life” was a topic of ideologically freighted dispute, and Shelley’s *The Triumph of Life* is a critique of a particular, presently triumphant, and rhetorically triumphalist way of researching and speaking about it: the vitalist rhetoric of life as *autotelic power*. The “Triumphal pageant” depicted in the poem’s first scene is a visual pun on the “vital” and “imperial” senses of the word *power*: a pun that invites readers to

consider how the vitalist approach to life might implicitly corroborate power's other, historical and political, forms.

In fact, in a way so obvious as to have eluded notice, the very title of Shelley's poem points to the remarkable, pan-cultural "triumph" of a newly sovereign concept – "Life" – in reconfiguring the categories of natural, aesthetic, and political philosophy in recent history. At stake is an early iteration of the observation Michel Foucault, Georges Canguilhem, and François Jacob made famous for the twentieth century, and with which Chapter One opened: "Life" had not always been a distinct and autonomous issue – "an explanatory challenge or ... scandal," as Charles Wolfe has put it more recently – that clearly merited its own scientific research programme. If for some (still disputed) period, one prolonged and strategically revived by Goethe in his morphology, living beings resided within the continuum of natural being in general, by the late-eighteenth century numerous research programmes had begun to insist that "beings [be] definitively separated from things" (Jacob, 87). The difference between organic and inorganic nature polarized, for many researchers and natural philosophers, into an ontological distinction.¹³⁹

As we saw in Chapter One, the German savant J.F. Blumenbach – whose comparative anatomy Shelley's physician, William Lawrence, translated into English – proclaimed in his influential treatise *On the Formative Drive* (1781), that "One cannot be more inwardly convinced of something than I am of the powerful gulf that nature has fixed between the organized and inorganic creatures" (*Bildungstrieb*, 89).¹⁴⁰ Dedicating his *Lectures on Physiology, Zoology, and the Natural History of Man* (1819) to Blumenbach, Lawrence was also the first to translate and import the term *biology* (defined as "science of life") into English.¹⁴¹ In his *Critique of the Power of Judgment*, Kant influentially synthesized and epistemologically justified Blumenbach's generation of researchers' sense of the necessity for an autonomous science of organic being, affirming that the causality at work in organic nature "is in no way analogous to any sort of causality that we know," being driven by a "a self-propagating formative power." The organism is a "self-organizing" being, "both cause and effect of itself" – an autonomous "causal nexus" that merits investigation under the heuristic rubric of this special, teleological insularity (§65, 246; §81, 292).¹⁴²

As L.S. Jacyna pointed out decades ago in his classic analysis of the theological and political stakes of the problem of "life" in Britain in the early nineteenth century, when the question of life came to an engrossing public debate between Lawrence and John Abernethy in London in the teens, *both* sides of this dispute – including its "materialist" left, in the person of Lawrence – shared the vitalist presumption that the question worth asking about living nature concerned the "power" or "principle" that kept it organized and distinguished it absolutely from other categories of things (311-329).¹⁴³ The intuition expressed in Shelley's poem that this rhetoric of vital power might be complicit in power of the imperial kind was not an abstract risk in the early 1820's. The illustrated physiognomy of Lawrence's controversial 1819 *Lectures on Physiology, Zoology, and the Natural History of Man* made graphically clear some of the consequences of physiological, vitalist organicism for moral and political questions. Ranking the "fixed varieties" of man according to their degree of physical "organization," Lawrence patently naturalized, as ahistorical body, the present global distribution of political power, "discovering," even in fetal physiognomy, the "National Characters" of his human specimens (86-87). Evaluating the "retreating forehead and depressed vertex of the dark varieties of man," Lawrence coolly suggested that abolitionists moderate their expectations according to the "the natural capabilities" of the "dark varieties" at hand, betrayed by their "less perfect" physiognomic

“organization.” Even the conservative *Quarterly Review* was scandalized, and wryly suggested that a guilty “slave-driver in the West Indies” might use Lawrence’s book to soothe his “qualms of conscience.”¹⁴⁴

More subtle – and more thoroughly rejected in Shelley’s *Triumph* – is Lawrence’s equation of *quantity* of life with *quantity* of organization in the *Lectures*: “Just in the same proportion as organization is reduced, life is reduced; exactly as the organic parts are diminished in number and simplified, the vital phenomena become fewer and more simple” (95). Here vitalist philosophy and medicine shows its most threatening propensity, recognizable to twenty-first century readers from its expression in fascist biopolitics. For, as the *Quarterly Review* reviewer implies, when certain people are medically affirmed to be less alive, their abuse, and their deaths are less reprehensible.¹⁴⁵ We can discern without anachronism, and within Romantic-era writing, an under-recognized pattern of dissent from the vitalist view, which Goethe, Geoffroy, and Shelley each critique for a kind of rhetorical “absolutism.”¹⁴⁶ At stake is the possibility of thinking “life” in ways less prone to cast those presently deficient in power as deficient in life. Also at stake is a way of thinking about Life that does not “disdai[n]” the corruptible, susceptible, transient body as a “Stain” upon transcendent “spirit” (*Triumph*, 205, 201). Indeed, vitalist rhetoric has a way of celebrating “Life” that unfetters it from particular, mortal embodiments, which come to seem dispensable and replaceable: it imagines “an inexorably progressing Organization, hurrying from life to life, yes, even through annihilation to life” (Goethe, satirizing Schelver),¹⁴⁷ or again, that “Reproduction strives / With vanquish’d Death ... / Life increasing peoples every clime, / And young renascent Nature conquers Time” (Erasmus Darwin).¹⁴⁸

Thus, despite the many political and personal sympathies Shelley and Lawrence shared, and despite their like tarnishing, by mutual enemies, as “materialists,” *The Triumph* differs pointedly – perhaps even polemically – from the view of life exemplified in Lawrence’s *Lectures*. Indeed, it depicts triumphal life, the vision of vitalism, as yet another damaging episode in a long history of triumphal processions. Just like the others, Life’s triumphal pageant consists of monumental faces (“The great, the unforgotten”: Kant, Voltaire, Frederic, Catherine, Leopold, Napoleon, Caesar, Constantine, popes Gregory and John, Plato and Bacon), faceless multitudes, and prisoners in chains (209). That “Life” here triumphs over these diverse and sundry prior triumphalists, whom the speaker’s guide calls “spoilers spoiled” is a hollow kind of victory: what the poem discovers instead, as Orrin Wang has decisively shown, is the uncanny persistence of triumphalist rhetoric among revolutionaries and reactionaries alike (*Triumph* 235; *Fantastic Modernity*, 63).¹⁴⁹

The poem’s speaker and his interlocutor, a complex figure who self-identifies as “what was once Rousseau,” return repeatedly to the question of whether the speaker can “forbear / To join” the “sad pageantry” (188-9). By the light of the poem’s first passages, I want to suggest, Shelley countenances the grim possibility that to represent life and historical processes at present – a post-Peterloo present in which French and British imperial monarchies appeared capable of absorbing the most promising threats – might mean a species of involuntary complicity in “The progress of the pageant” that Walter Benjamin would later call the *Triumphzug* (Triumphal Procession) of victor’s history.¹⁵⁰ Is there a less triumphal manner of viewing and representing the epochal, and Shelley suggests, interlinked problems “of Life” and of “the times that were/ And scarce have ceased to be” (233-4)?

To read *The Triumph* as contravening vitalist discourse is to begin to redress a telling asymmetry in the poem’s critical reception. On the one hand, Shelley’s poem has become *the*

paradigmatic experimental object for aesthetic formalist, deconstructive and poststructuralist readings – “synecdoche,” as Tilottama Rajan put it, “for the self-effacement of language and of romanticism as a cultural project that continues to mobilize the economy of criticism” (*Supplement*, 351). On the other, the only one of Shelley’s poems to have “life” in the title has received curiously little attention within the recent upsurge of scholarship on romanticism and the life sciences.¹⁵¹ This is because if viewed from within the frame of early century, vitalist organicism, *The Triumph of Life* quite simply has nothing to say about life. (As Denise Gigante recently observed from this perspective, “Rousseau” in the poem “may speak the word *Life*, but...he appears not to know what it means” (*Life*, 206).¹⁵²) Rather, the poem is manifestly pre-occupied with vitalism’s constitutive exclusions, which are not accidentally deconstruction’s watchwords – the inorganic, material, mechanical and dead.¹⁵³

But it is through, rather than despite, its formal and thematic interest in death and decay, and its special strain of anachronistic materialism, that Shelley’s poem should be read as participating in the epochal problem of living form. Like Goethe’s morphology in the late teens and twenties, it deploys a Lucretian materialism to ask after what was becoming unrepresentable as the study of life defined itself absolutely against the inorganic sciences, and as disciplinary expectations consigned figurative language to the immaterial experience of subjects and scientific prose to the material being of things.¹⁵⁴ Shelley’s poem next turns the vitalist and organicist focus on “unity...produced *ab intra*” (Coleridge) inside out, animating the “living air” *between* persons – and countering that discourse’s emphasis on autonomy, teleology, and *new* life with an intense interest in dependency, contingency, and senescence. In the poem’s final vision, Shelley softens the distinction between organic and inorganic being, positioning material susceptibility to influence, to decay, and indeed, to rhetorical and transfiguration – as constitutive of, rather than inimical to life. To do so, Shelley affords matter not sentience or spirit, but poetry – the tendency to trope.

c) *Bodies that figure*

The Triumph of Life is a series of nested visions, and in the last, narrated by “what was once Rousseau,” the light by which the speakers see is dimmed and anatomized into “a thousand unimagined shapes” in manifold relation (490). These “shapes” are Shelley’s final means of figuring Life in the poem, and not quite reducible to the poem’s, nor the critics’, nor the vitalists’ allegories of triumphal power. “Rousseau” describes having “plunged” into “the thickest billows of the living storm,” and from this perspective, “The earth was grey with phantoms, and the air/ Was peopled with dim forms” (482-3, 466, 465). This vision momentarily obscures the grim procession of History writ large in order to illuminate, instead, a surrounding storm of minute and non-linear relations: a non-triumphal form of liveliness at work in the interstices of imperial pageantry.

The vision’s subject is the air through which the poem’s speakers have been viewing the pageantry all along, which proves rife with spectral and (as we will see) “equivocal” being; it is a peculiarly “*living* storm,” “busy” with cast off matter and errant particles worked into “busy phantoms” by the sunlight. I cite at length here the passage that the remainder of this chapter seeks to unfold; notice how, among other things, this storm is giving people wrinkles:

—I became aware

“Of whence those forms proceeded which thus stained
The track in which we moved; after a brief space
From every form the beauty slowly waned,

“From every firmest limb and fairest face
The strength and freshness fell like dust, and left
The action and the shape without the grace

“Of life; the marble brow of youth was cleft
With care, and in the eyes where once hope shone
Desire like a lioness bereft

“Of its last cub, glared ere it died; each one
Of that great crowd sent forth incessantly
These shadows, numerous as the dead leaves blown

“In Autumn evening from a poplar tree—
Each, like himself and like each other were,
At first, but soon distorted seemed to be

“Obscure clouds moulded by the casual air,
And of this stuff the car’s creative ray
Wrought all the busy phantoms that were there

“As the sun shapes the clouds— thus, on the way
Mask after mask fell from the countenance
And form of all ... (516-537)

Here “living” is re-described as incidentally communicative particulate attrition. In an adaptation so widely acknowledged as to have become a footnote in the Norton Shelley, by describing this immersive atmosphere as a weather system of discarded faces, “Rousseau” has deposited us in the middle of *De rerum natura*’s astonishing account of the earth’s particulate atmosphere. This is an account that gives matter a decidedly figural and historical dimension, and an account in which to have a body at all means induction in an un-chosen collectivity of decay and transfiguration. My contention is that it is this Lucretian figural physics that enables Shelley to depict a non-triumphal form of liveliness mixed in with Life’s imperial show.

In Book 4 of *De Rerum Natura* – Shelley’s favorite, he once wrote a friend¹⁵⁵ – Lucretius claims that all things, as they decay in time, scatter fine atomic husks from the surfaces of their bodies: “Mask after mask,” as Shelley’s poem puts it, “fell from the countenance/ And form of all.” Like a snake’s discarded skin, writes Lucretius, these simulacra preserve the figure of body as they fly back and forth through the air. As Creech’s popular English translation put it:

A STREAM of FORMS from ev’ry SURFACE flows,
Which may be call’d the FILM or SHELL of THOSE:
Because they bear the SHAPE, they show the FRAME,
And FIGURE of the BODIES whence they came (4.47-50)

Lucretius calls these slight but real films by names that in most epistemologies, connote no physical being at all – *simulacra*, *figurae*, and *imagines*. Sentient beings perceive the world by means of these airborne husks, “numerous as the dead leaves blown” (*Triumph*, 528), which initiate sense and thought when they impinge on an appropriate organ. (Every sensation is thus a form of touch, that sense that confounds activity and passivity.) In a feature *The Mask of Anarchy* explores at length (Chapter Four), these exceedingly tenuous atomic films are amenable to dissolution and recombination as they join the clouds that form our atmosphere. As we saw in Chapter One, Goethe draws on them to designate “the most tender material, the first lamella of corporeality”: both the indispensable medium of sight (*Trübe*) in his optics, and the kind of transient envelope through life exists and appears at once. Key to the *The Triumph of Life*’s adaptation, Lucretian *simulacra* are capable of “wandering” long-distance and long-term. They texture any perceived present with shades of distant and prior happenings: “people[ing]” the earth, as Shelley writes, “with dim forms” (483).¹⁵⁶

In the passage cited at length above, then, Rousseau is indeed telling the allegory of a distinctly prosopopoetic demise. But if for de Man *The Triumph of Life* allegorizes the inevitable, face-exchanging madness of words, Shelley is intent to revive *De rerum natura*’s incessant face exchange among *bodies*, a giving and receiving of face and figure of which linguistic activity is just one instance. Lucretius’s rare thought about *simulacra* both confers a material truth to figures and makes them the data of empirical inquiry: they are fractions of the real estranged from their sources, carrying to the senses a material husk of what they represent. Loosing them, a poet participates (without special privilege, as a decaying body among others) in the general *Nature of Things*: “What if my leaves are falling like [the forest’s] own!” (“Ode to the West Wind,” 58). This goes some way to account for an observation that recurs in the most sensitive assessments of Shelleyan figuration from the early-nineteenth century to the present: that it has a peculiar pretense at substance, at being “something more” than metaphor.¹⁵⁷

It also thoroughly confuses the semiotic contest between symbols and allegories foundational for readings of Romantic rhetoric in the de Manian style: particles of their referents, atomist signs carry out the mystifying identification of substance, perception, and representation that de Man ascribed to the symbolic mode; but having necessarily traversed a distance between perceiver and perceived, they also assert a temporal discrepancy akin to the one he reserved for allegorical demystification.¹⁵⁸ This allegory-like enmeshment with our “temporal predicament” is especially the case because figuration overlaps so generously, in *De rerum natura*, with transience conceived as the gradual, particulate re-dispersion of every self (and not-self). Then again, this very predicament waxes “symbolic” again according to de Manian typology because of the commonality it tolerates between selves and “natural” non-selves.

Indeed, by the light of the poem’s last vision, beings *decay into perception*, experiencing each other by means of an incessant exchange of similitudes that is neither willed, nor linguistic, nor without physical cost. Being a body in time means shedding atoms of self – involuntarily representing oneself – and weathering others’ particulate bombardment: “Bending within each other’s atmosphere,” as Shelley puts it in the poem (151). We could say, very much with de Man, I think, that bodies are disfigured in the course of all this figuration: but gradually, gently, imperceptibly.

The famously “disfigured” figure of “Rousseau” is in fact exemplary in this regard: for in a way so obvious as to have gone unnoticed, “Rousseau” is not a figure animated and cut down, faced and effaced, all at once in Shelley’s poem. Rather, the “grim Feature” with whom *The Triumph*’s dreaming poet-speaker converses might be less “mutilated” by the hermeneutic rush

“to reconstruct, to identify, to complete,” than simply decomposed: “what was once Rousseau” speaks while becoming-landscape, subject to a prosopopoeia so slight that it leaves him mistakable for “root,” “grass” and “hill side” (204, 182, 185, 183). (“[W] hat was once Rousseau” is mistakable, that is, for “what was once Rousseau” in a more literal sense at the time of Shelley’s writing: a body more than forty years buried.)

Against the (admittedly wayward) norms of lyric apostrophe, the speaking “I” does not address, but is addressed *by* this feature of the landscape, surprised that “what I thought was an old root” begins to speak to him. This might be a ruse of lyric self-production, were it not a touch funny: taken aback, the interrupted speaker expends his own apostrophic powers in a little, parenthetical gasp of surprise – (“O Heaven have mercy (...)!”) – and begins to discern the “grim Feature” still eminently confusable with the surrounding landscape.¹⁵⁹ This figure is presented less as the work of an animating, lyric “I” upon an inert object, than as a figure capable of obtruding itself into the subject’s reverie, indeed of startling that dreaming subject into examining his surroundings. We might say that here lyric poesis is startled by another kind of poetry, a didactic kind that strangely credits the troping activities of things.

The speaker collaborates in this low-level, bilateral animation by calling his unexpected interlocutor a “grim Feature” – not a whole face – leaving its resonances with inanimate ontological orders intact: the “grim Feature” is textually a Milton citation and inorganically a mineral feature of a landscape.¹⁶⁰ Here the quintessentially historical question of “what was once Rousseau” – a question that Wang has argued might well have been synecdoche for the tumultuous recent history of Europe from radical enlightenment to Napoleon’s fall, a shorthand question “people asked in order to interrogate the era they inhabited” – here this historical question is left to resonate also as textual and mineral material, in a subtle animation that ultimately leads the interlocutors into a Lucretian didactic exposition of figuration by natural means (50). Yet what we might worry is the naturalization of historical relationships flourishes instead precisely where “natural” objects are given as social: shaped, that is, by that weather system of discarded figures to which we now return.

d) *Wrinkles : “bending within each other’s atmosphere”*

Returning to those neo-Lucretian lines about senescent simulacra-production, we see that “Rousseau’s” last vision in the poem is about giving each other wrinkles, weathering the innumerable touches of each other’s cast-offs.¹⁶¹ At one place “Rousseau” likens these simulacra-impacts to dingy, somewhat enervating snowflakes:

And others like discolored flakes of snow
On fairest bosoms and the sunniest hair
Fell, and were melted by the youthful glow

Which they extinguished; ... (511-514)

In this meeting between phantom-flake and living skin a mist is produced, a rain that seems perspiration, precipitation, and passion all at once. “For like tears they” – the phantoms – “were / A veil to those from whose faint lids they rained/ In drops of sorrow” (514-16). We are here confronted with the unfamiliar activity of material simulacra: the phantoms, at first *like* weather (snowflakes), and *like* tears, ultimately erode that distinction. “They” simply “rained/ In drops of

sorrow” from “faint lids,”¹⁶² lids whose owners might consider themselves crying, or simply rained upon. It seems important, though, that these sorrow-drops are not strictly – or not exclusively – theirs. Well-traveled simulacra wet eyes, condition seeing, and reshape faces. Nor is it all so weepy. The busy phantoms perform a remarkable variety of corrosive activities in the poem: flinging, flying, dancing, chattering, playing, nesting, thronging, laughing around those bodies that, for the moment, present in human form (487-510).

In this way the poem’s last vision in no way denies the complicity that marks the earlier modes of viewing the *The Triumph of Life*, but rather furiously multiplies it to the point where one’s personal selfhood and its drama of *choosing* comes undone: “I among the multitude / Was swept,” recalls Rousseau (460-1). The next three lines recite “Me not,” “Me not,” “Me not,” rhythmically subduing this author’s – iconic, prolific, autobiographical – subjectivity (462-4). Whereas ‘Rousseau,’ emerging in the poem’s first vision, had lamented his decay as a “Stain” upon “that *within* which still disdains to wear it,” this final vision chooses to tell the history of the stain over that of the personal Rousseau: the history of “whence those forms proceeded which thus stained / The track in which we moved” (517-18). The vision of Life that ensues depicts selves primarily as surfaces, exposed to a staining kind of atmosphere that they both generate and endure.¹⁶³

Nor would the poem’s accounts of mixed and seething air have seemed fanciful or metaphorical in 1822. Adam Walker, the popular scientific lecturer who taught Shelley natural philosophy at Syon House and later at Eton, described atmosphere as “a grand receiver, in which all the attenuated and volatilized productions of terrestrial bodies are contained, mingled, agitated, combined, and separated.” His lecture went on to list the sheer diversity of “attenuated and volatilized” particles in which the turn of the nineteenth Century body was bathed: “mineral vapours, animal and vegetable moleculeae, seeds, [and] eggs,” all “dissolved in light.” Such air, Walker taught, does not stay on the outside of a body, but is “so subtil that it pervades the pores of all bodies and enters into [their] composition.” Walker went on to publish a monograph exclusively devoted to the health effects of such all-pervasive air, as had Shelley’s friend Thomas Forster in 1817.¹⁶⁴

As mentioned above, the way the poem turns from clear seeing to deliberate consideration of the dim, crowded medium of sight itself recalls the centrality of the “turbid,” medium to Goethe’s optical and life sciences. In modern sensation, Jonathan Crary has argued (by way of Goethe), the pristinely geometric science of optics enters “the unstable physiology and temporality of the human body” (*Techniques*, 70-1).¹⁶⁵ And yet, this inward trajectory coincided, for Goethe, with a re-opening of the self-producing body of organicist biology, as well as the impartial subject of aesthetic contemplation, to the transfigurative relations between observer and observed. It also coincided, as it does in Shelley, with an effort to bring biology in touch with the inorganic knowledge of meteorology: a science of the surrounding medium that helps Goethe to think past organic autonomy (for “one thing is always steeped in, accompanied by, coated in, enveloped in, another”) – and to think past teleological causality (“for if so many beings work through one another, where in the end is the judgment... about what is appointed to lead and what required to follow?”).¹⁶⁶ The air, moreover, as Mary Favret has recently shown, was increasingly bearing “currents” from farther and farther afield, as meteorology changed from a study of local exhalations to “a global system of communication.”¹⁶⁷

Shelley’s poem challenges us, as does Goethe’s late botany, to take up the position of that laden, inter- and im- personal air. From the perspective of this atmosphere (“living storm,” “casual air,” “stain”), the triumphal pageant that has been the object of each successive Vision

looks quite different. Powerful figures are still visible in this latest version of the procession: we see “pontiffs,” kings, “lawyer, statesman, priest and theorist” – but none of them has a recognizable face.¹⁶⁸ For the busy phantoms that make up the “living air,” the bodies of monarchs are nothing more, or less, than habitat: some “played / Within the crown which girt with empire // A baby’s or an idiot’s brow, and made / Their nests in it” (497-500).

In fact, as the poem takes up a view, as through a microscope, that reveals how the cast-off particles of subjects are transformed into new “busy phantoms” that “nest” in the bodies of sensible size, Shelley takes care to provide all the requisite topoi from the ongoing debate concerning spontaneous or equivocal generation: warmth, moisture, dead matter, and new, “busy,” “unimagined shapes.” To review, the doctrine of equivocal generation (for which *De rerum natura* was the preeminent locus classicus) held that living beings could emerge, without parents, without seeds, and without intercourse, from “mere *brute matter*” (abiogenesis) or from once living, “organic particles” of a different species (heterogenesis): as Erasmus Darwin put it in *The Temple of Nature* (1803), “Hence without parent by spontaneous birth / Rise the first specks of animated earth ; / From Nature’s womb the plant or insect swims, / And buds or breathes, with microscopic limbs” (I, 247-50).¹⁶⁹ Opponents (here, Joseph Priestley refuting Erasmus Darwin) derided the doctrine as a cause-effect violation: “*nothing less than the production of an event without any adequate cause.*”¹⁷⁰

But this is exactly what captivates *The Triumph of Life* as it seeks to elude the teleological insularity of organic form: the decadent exfoliations of the living are “moulded by the *casual* air,” in marked (or fortuitous) distinction from *causal*. This possibility holds open the chance that *different life* might emerge out of the matrix of the familiar: that something might elude the proper causal couplings by which like produces like. (Recall how the shed simulacra begin in univocal likeness “Each, like himself and like each other,” “but soon distorted seem to be” (530-1).) Shelley gestures toward a liveliness “wrought” from already-circulating materials – “discoloured,” “grey,” and “stain[ing]” materials - and pointedly continuous with accident and decay. Like the atoms of Lucretian poetic science, these materials’ ontological status is not inherent, but rather depends on the assemblage into which they chance: some configurations are vital (“like small gnats”), material (“others like discoloured flakes of snow”), and textual (“numerous as the dead leaves blown,” a borrowed epic simile). They equivocate richly between familiar (those “gnats”) and strange (“vampire bats”); between dying and living (“melted by the youthful glow / which they extinguished”); between the discourses of poetry, biology, and history.

The poem stays studiously agnostic about this vital, material and figurative swarm, which, as I have said, it describes as “casual.” But undermining teleology in this way, Shelley does not discard relation: rather he recovers the poetic science which twentieth century philosopher of communication Michel Serres justly called a “science of relation,” and which James Thomson and Erasmus Darwin had already revived to articulate the “generous” – although not always benign – “Commerce” between apparent-individuals immersed in “this complex stupendous Scheme of Things.”¹⁷¹

e) *Historical material*

This equivocal atmosphere can be called historical because it brings a body into contact not only with figures shed from nearby persons and things, but also with aged particles and long-

traveled images. Filling up the interstices *between* bodies separated in space and time, the poem's atmosphere constitutes a subtle but real medium of "attenuated and volatilized" inter-influence that eludes cognitive grasp and linear causality. We are concerned here with what Kevis Goodman, following Raymond Williams, has theorized as history "'in solution'... that immanent, collective perception of any moment as a seething mix of unsettled elements," and with the retroactive fitness of Lucretian poetic physics as an ontology and lexicon for describing the medium between beings that Shelley's *Defence* called their "unapprehended relations" (*Georgic Modernity*, 3; *SPP* 512, §3).¹⁷² This is the medium of events both too big to grasp, and too small to notice: the medium in which the figure of a distant person's sorrow might strike impalpably, like a snowflake, and in which the diffused image of Napoleon in chains might subtly reshape a particular face – "I felt my cheek / Alter to see the great form pass away" (224-5).

In his attempt, in theses "On the Concept of History," to delineate a historical materialist practice that would resist the triumphalism of present progress narratives, Walter Benjamin also wondered if the belated business of the departed does not touch us in air:

Doesn't a breath of the air that pervaded earlier days caress us as well? In the voices we hear, isn't there an echo of now silent ones? Don't the women we court have sisters they no longer recognize? If so, then there is a secret agreement [*Verabredung*: date, rendezvous] between past generations and the present one. (*SW*4, Thesis II, 390)

[Streift denn nicht uns selber ein Hauch der Luft, die um die Früheren gewesen ist? ist nicht in Stimmen, denen wir unser Ohr schenken, ein Echo von nun verstummen? haben die Frauen, die wir umwerben, nicht Schwestern, die sie nicht mehr gekannt haben? Ist dem so, dann besteht eine geheime Verabredung zwischen den gewesenen Geschlechtern und unserm. (GS I.2, II, 693-4)]

It is a question, as Shelley put it, of "what stains / The track in which we mov[e]." In fact, in this thesis, Benjamin links terrestrial happiness to the *Theses*' messianic-materialist "fight for the oppressed past" by way of a *stain* or *tinge*, which share an etymology in *tingere* (Lat.): our "image of happiness [*Bild von Glück*]," he writes, "is thoroughly coloured [*tingiert*, tinged] by the time to which the course of our own existence has assigned us" (XVII, 396 [703]; II, 389[693]). The same is true, he continues, for the "idea of the past, which is the concern of history" (389-90 [693]).

At moments in these theses, the historical materialist's capacity to represent something other than "homogenous and empty time," is described in the language of vital power: not "drained by the whore called 'Once upon a time,'" for instance, "He remains in control of his powers—man enough to blast open the continuum of history" (XVII, XVI, 396 [702]). But through the second thesis's questions, above, which move from the thought of air that will have touched both past and present beings, to the citation of the past in present speech, to unacknowledged or unapprehended (familial) relations, Benjamin arrives at the notion of "weak messianic power" (II, 390 [694]). Here "power," it turns out, sounds more like a slight susceptibility, a mundane being spoken for and claimed that has less to do with the perspective of angels for which the *Theses* are famous than with the fact of having had expectant parents:

Then our coming was expected on earth. Then, like every generation that preceded us, we have been endowed with a *weak* messianic power, a power on which the past has a claim. Such a claim cannot be settled cheaply. The historical materialist is aware of this. (II, 390 [694])

[*Dann sind wir auf die Erde erwartet worden. Dann ist uns wie jedem Geschlecht, das vor uns war, eine schwache messianische Kraft mitgegeben, an welche die Vergangenheit Anspruch hat. Bilig ist dieser Anspruch nicht abzufertigen. Der historische Materialist weiß darum.* (II, 694)]

In this second thesis the overlapping time of terrestrial generations and their (missed) happiness are aligned with the historical materialist's anti-teleological, constructivist and constellating intuition, and against progressive historicism's triumphal procession of victors' history.

In an early iteration of the argument that poetry does best to negate contact with its age, J. S. Mill argued, closer to Shelley's own time, that poetry cannot be "tinged" with "lookings forth into the outward and every day," lest it "ceases to be poetry, and becomes eloquence" ("What Is Poetry?" 13). But a poetics of the weakly messianic tinge is precisely what *The Triumph* seeks as it attempts to re-think embodied life, non-triumphantly, as transience "into the outward and everyday." Indeed, life here becomes a decadently transitive expression – a touch, a tinge, a stain – *between* those who inhabit a particular present, and *between* those who are present, and those who are coming.

In a way that is often overlooked, Lucretian poetics are also, quite specifically, a poetics of the eloquent tinge and touch. Abbreviating these poetics into the topos of the "honeyed cup" – Lucretius' verse is the "sweet honey" that makes the bitter medicine of Epicurean physics palatable – we lose the fact that the poet's work, the poet's verb, is not "to honey," but *to touch together, to tinge*, the action of Benjamin's weak messianic air and Mill's un-lyrical eloquence. *Contingere*, says Lucretius of his work, from (con + tangere, to touch), at the beginning of that book, Shelley's favorite, where he introduces the notion of the natural simulacra: *Musaeo dulci contingere melle*, to touch [the doctrine] with the Muses' sweet honey (4.22). And to describe poetry in this way, as contingency, actually fortifies its reality: after all, in *De rerum natura*, reality only ever occurs because, amid the rain of first particles falling in parallel, two come into contact, initiating, "from encounter to encounter, a pile-up and the birth of a world."¹⁷³ Shelley's poem on life seeks out this touched, tinged, contingent substance as equipped to bring the discourses of history, life, and poetry into non-triumphal and timely contact.

The poem pictures "Life" as wrinkled by these serial touches, as "a Shape /...whom years deform," and who is now legible not as a negative allegory for embodied life but as a sustained experiment in the epistemology of aging, in positioning contingency and decay as constitutive of, rather than inimical to, life and its science (87-88). This figure of wrinkled life in the poem has a curious "Charioteer": a four-faced "Janus" – the Roman God of beginnings and endings – with banded eyes. Clearly, this driver is no Formative Drive [*Bildungstrieb*], teleologically guiding life's progressive development. Might this blind figure drive by touch instead, keeping Life's course contingent upon the attenuated impacts that make up the collective atmosphere?

Notes

¹²⁵ Donald M. Frame translation, slightly modified.

¹²⁶ From Wordsworth's stated aim, with the *Lyrical Ballads*, to close the gap between the artificial language of poetry and the "plainer and more emphatic language" he attributes to "low and rustic life" ("Preface," 1800, 245), to Rousseau's pedagogic programme for *Émile* that would consist primarily in the attempt to stay out of nature's way, to Shelley's sense, in *A Defence of Poetry*, that contemporary society has bitten off more than it can chew, "Of Physiognomy" is studded with sentiments familiar from that strain in romantic thought that seems to want to cleanse, simplify, and efface the decadent complexity of late social and aesthetic forms.

¹²⁷ Though we know Shelley to have read Montaigne's *Essais*, I will be concerned here less with Shelley's Montaigne reception than with their mutual interest in Lucretian corporeality. Among his copious borrowings, Lucretius is Montaigne's second most-cited poet, after Horace. See Philip Ford, "Lucretius in early modern France." Shelley's journals and Mary Shelley's reading list record reading Montaigne's *Essais* in September–November of 1816; a letter of 1818 also has him expecting them from the binder. See *The Letters*, Jones ed., I, 480 and II, 591.

¹²⁸ In his luminous chapter on Shelley in *Romanticism and Colonial Disease*, Alan Bewell positions *The Triumph* as a lead example of how Shelley "sees all climates as 'climates of power,'" arguing that the poem's "Rousseau" is (in addition to everything else) a colonial invalid. Bewell connects *The Triumph*'s death-dance imagery to the Asiatic cholera pandemic of 1817, Hastings march through India, and their nostalgic representation in Shelley's friend Thomas Medwin's *Pindarees* (209, 239).

¹²⁹ Chandler, *England in 1819*, 106; see especially "The Case of 'The Case of Shelley,'" 483–594. For the production of an "etherealized, disembodied, and virtually depoliticized" Percy Shelley through the posthumous editing of his works, in conformation with Victorian middle-class taste, see Neil Fraistat, "Shelley Left and Right: The Rhetorics of the Early Textual Editions." But see Andrew Bennet's "Shelley and Posterity" and Karen Weisman's "Shelley's Ineffable Quotidian" for nuanced approaches to the question of transience.

¹³⁰ I think above all of the fine essays in this tradition by Robert Kaufman (see n.7, below) Marc Redfield, and Forrest Pyle. Pyle memorably reads the *Triumph* as "the 'triumphal pageant'" of an incinerating "radical aestheticism," of which Shelleyan "materials" are the charred remains. The emblematic materials for Pyle are cinders and ash in Shelley's poetry: these material minima mark the sites where a remarkable array of illusions (of historical insight, ethical judgment, sensual facticity, revolutionary efficacy, and theological redemption, etc.) go up in smoke – commemorating an incinerating encounter with the "vacating radical or the aesthetic itself." In this, Pyle sensitively and unapologetically deploys what Simon Jarvis has since characterized as the (covertly idealist) materialism of "perfected disenchantment": the name for the ultimate, implacable boundary against pretenses of content and knowledge. But the atomism Shelley expressly revives in the poem, I argue, operates quite differently: its material minima – in various concrescences – are the constituents of percepts, concepts, and images, as well as of physiological bodies and poetic texts. Crucially, this materialism also works to "people" rather than vacate the scene of perception (see n.37, below). See Pyle's "Kindling and Ash: Radical Aestheticism in Keats and Shelley," (430–432, 437, 455–458), and Jarvis, *Wordsworth's Philosophic Song*, (78).

¹³¹ Kaufman, "Aura, Still," 48; Adorno, "Lyric Poetry and Society," 160; (Pyle, see above note). Kaufman's incisive defenses of auratic, lyric autonomy by way of Kantian and post-Kantian aesthetics converge with my reading in their end-point, when "the new" that their formal contentlessness discloses is defined not (as in Pyle and de Man) as radical vacancy, but as the "previously obscured aspects of the social" or "all that is emergent in the social" (48, 51). But neo-Lucretian materialism seeks frankly to visualize these liminal and emergent contents without passing through the paradoxical moment of lyric

withdrawal. As I discuss at length in Chapter 2 (on Goethe's "tender empiricism"), at stake is a touch-based account of sense and figuration by intusception which renders the epistemic virtue of impartial, or "non-partisan" (Kaufman) contemplation that undergirds Kantian aesthetics quite literally impossible: one cannot but be touched, impressed, changed by part(icle)s of the object. See also Kaufman's "Legislators of the Post-Everything World: Shelley's *Defence* of Adorno," 707-33, 724.

¹³² De Man, "Autobiography as De-Facement," *Rhetoric of Romanticism*, 70. Paul Turner first drew the connection between this passage of *The Triumph of Life* and *De Rerum Natura*, now a standard note in the Norton *Shelley*, in his 1959 article, "Shelley and Lucretius," noting that Shelley first read *De Rerum Natura* in school and then reread it in 1810, 1816, 1819, and 1820. Shelley's debts to a general Lucretian philosophy of aleatory flux have been richly acknowledged by critics, notably by Jerrold Hogle in *Shelley's Process*, and Hugh Roberts in *Shelley and the Chaos of History: A New Politics of Poetry*. The latter positions Lucretianism as a "third way" between the "skepticism" vs. "idealism" antinomy in Shelley criticism and connects this model to contemporary chaos theory. Michael Vicario's *Shelley's Intellectual System and its Epicurean Background* also purports that Shelley's Epicureanism resolves this crux, albeit by arguing that Shelley practices a consistent "Platonic atomism" in the tradition of Gassendi, Cudworth, and Wakefield's Christianizing adaptations of Epicureanism. (I am inclined to think, with Deleuze in "The Simulacrum and Ancient Philosophy," that if taken seriously, as it is by Shelley in *The Triumph of Life*, the *simulacra* theory is incompatible with Platonism (*Logic of Sense*, 253-79). This is not to say that Shelley is never Platonist – but not here.) Martin Priestman, on the other hand, investigates Romantic neo-Lucretianism under the sign of atheism in *Romantic Atheism: Poetry and Freethought 1780-1830* (Cambridge: Cambridge University Press, 1999). None of these studies however, attend carefully to the fact that what Shelley adapts in *The Triumph of Life* is Lucretius's materialist semiotics.

¹³³ See Noel Jackson's "Rhyme and Reason: Erasmus Darwin's Romanticism" for an excellent account of the aesthetic trends contributing to what he calls the "extinction of a poetic species" – neo-Lucretian scientific and philosophical poetry – of which Erasmus Darwin was the representative.

¹³⁴ Tilottama Rajan's subtle return to the poem and to de Man's essay in *The Supplement of Reading* exemplified how one might accept de Man's point that the poem's principal referents are its own processes of figuration, while fruitfully questioning *which* of the poem's figures ought to be selected as epitomes of figurative process: the poem's depictions of figuration, Rajan argued, are "too complex to be summed up in the term 'effacement,'" and the *The Triumph* "cannot simply be reduced to its most traumatic images." Among numerous alternative "figures for figuration" in the poem, Rajan, too, alights on the marble brow as "allowing form to emerge only through disfiguration." Still, Rajan constrains the figures' reference to allegories of reading (327-8).

¹³⁵ Goodman's *Georgic Modernity and British Romanticism* reads long-eighteenth century poetry for the way it registers unsettled aspects of historical "presentness" rather than finished events: "that aspect of the flux of historical process ... not yet or never quite precipitated out in the form of the 'known relationships, institutions, formations, positions'" which occasionally disturbs a poem's pleasurable norms of mediation with affective discomfort (3). Chandler's *England in 1819*, meanwhile, shows that English culture around 1819 was marked by a pressing and self-conscious pre-occupation with "contemporaneity," complexly, comparatively understood through the notion of "uneven development" and ethnographic "situation" (see especially Chapter Two). Chandler is drawing on Reinhart Koselleck's delineation of a heightened consciousness, after 1800 "of the *noncontemporaneities which exist within chronologically uniform time*," as well as of a new awareness of the complexity of apprehending one's own time in the present (*Futures Past*, 246-248). Shelley's poem figures this temporal heterogeneity as an ambient atmosphere full of "shadows" that vary in provenance.

¹³⁶ See Wolf Lepenies classic, *Das Ende der Naturgeschichte*, esp. 97-114, discussed more thoroughly in the next chapter. In the early-nineteenth century, the conflict over rhetoric in the professionalizing life

sciences was probably most palpable in the public rivalry between Georges Cuvier and Étienne Geoffroy Saint-Hilaire over the conduct of comparative anatomy. Rigorous revisionist histories by Toby Appel and Adrian Desmond have shown that in the French and British cases, despite Cuvier's retrospective "victory" – including his appearance in *The Order of Things* as a radical modern in epistemological terms – during the first few decades of the nineteenth century Geoffroy's morphology was a potent alternative to Cuvier's perceived "establishment" biology, an alternative embraced especially by radicals and reformers within the medical and literary communities. While Desmond documents the excitement generated by the perceived materialist and leveling tendencies of Geoffroy's philosophical anatomy, Appel points out that at issue was also a difference in style in which Cuvier rebuked Geoffroy for poetic flights of fancy. William Lawrence toes the Cuvierian line on this in the *Lectures*, purporting to abstain from "the poetic ground of physiology" (*Lectures*, 77-8). But his physiognomy, as I argue briefly here, lays bare the way modern anti-poetical scientific prose could inadvertently naturalize historical power arrangements as a-historical bodies – in ways the notoriously naturalizing discourse of Romantic nature poetry could sometimes manage to avoid. See Appel, *The Cuvier-Geoffroy Debate*, Desmond's *The Politics of Evolution*, as well as Corsi, *The Age of Lamarck*, and Nyhart, *Biology Takes Form*.

¹³⁷ Coleridge, from *Hints Towards the Formation of a More Comprehensive Theory of Life* (CPP, 597).

¹³⁸ Different versions "of Life" polemically corroborated radical, reformist, and conservative causes, and were voiced within different institutions and through different periodicals. Desmond, for one, characterizes the philosophical organicism Coleridge developed in the teens – influentially propagated at the College of Surgeons by Coleridge's collaborator and protégée, Joseph Henry Green – as something of a calculated counter-insurgency campaign: a philosophical counterweight against the "leveling threat" of materialistic, French, comparative morphology. That rival logic of life, Desmond shows, was wielded by a burgeoning and excluded class of non-Oxbridge educated medical practitioners, and it corroborated their demands for democratization of the Royal Colleges in particular, the profession in general, and the society at large (11-15, 262-275).

¹³⁹ See Jacob, Lenoir, and Chapter One, above.

¹⁴⁰ See Lawrence, *A Short System of Comparative Anatomy, translated from the German of J.F. Blumenbach*.

¹⁴¹ *OED*. *Biologie* had appeared among multiple authors in French and German between 1797 and 1802, including T.G.A. Roose, K.F. Burdach, Lamarck, and G.R. Treviranus (Caron, 223-268). In his *Lectures*, Lawrence cites Treviranus' as yet incomplete 8 vol. *Biologie oder Philosophie der Lebenden Natur für Naturforscher und Aertze* but himself chooses to employ the more familiar term "physiology," despite acknowledging the greater specificity and accuracy of "Biology." "Biology" vied with other possible names for the general science devoted to, as Lawrence puts it "unfold[ing] the problem of Life," including the older "physiology," "zoology," "zootomy," "organonomy," and "comparative anatomy" – and of course, Erasmus Darwin's *Zoonomia*.

¹⁴² On this Kantian tradition of teleological thinking in German biology, see Lenoir, Müller-Seivers, Gigante, and Chapter One.

¹⁴³ Lawrence and Abernethy's dispute instead concerned whether this special power should be conceived as immanent in organization, or as a divine super-addition. On the stakes of this debate for rival theories of moral and political order, see Jacyna's classic article, "Immanence or Transcendence: Theories of Life and Organization in Britain, 1790-1835." Sharon Ruston's *Shelley and Vitality* persuasively documents the Shelleys' substantial relationship to Lawrence as well as Percy's immersion in London's fractious medical community in 1813-14 (he resolved to become a surgeon after his expulsion from Oxford). Despite amassing meticulous evidence for Shelley's manifold exposure to Lawrencian life science and his political sympathy with that physiologist's reformist demands of the medical profession, Ruston stops

short – judiciously, I think – of claiming that Shelley’s poetry supports Lawrence’s view of life. For Lawrence and the Shelleys, see also Marilyn Butler’s seminal introduction to her edition of Mary Shelley’s *Frankenstein*.

¹⁴⁴ [George d’Oyley] qtd. in Butler Ed. *Frankenstein*, Appendix C, p. 249.

¹⁴⁵ See Roberto Esposito, *Bios: Biopolitics and Philosophy*, especially Chapter 4, “Thanatopolitics: (The Cycle of *Genos*) on the development of Nazi biopolitics through the paradigm of autoimmunity. Esposito emphasizes thanatopolitics’ reliance on a medicalization of life such that physicians were empowered to know “what qualifies as a valid life endowed with value, and therefore... which life can be legitimately extinguished” (114). Certain persons were described as already “inhabited and oppressed by death” by virtue of hereditary degeneracy and as thereby insinuating death into the body politic; thus Nazism understood itself to be killing only death, “fighting death to the death” (137). Also interesting in the context of the decadent poetics we have been examining via Montaigne and Shelley is Esposito’s comment on the artists persecuted as degenerates: “degeneration has the same aesthetic nervation as is presupposed in the same category as ‘decadentism’” (123).

¹⁴⁶ As discussed in Chapter One, Saint-Hilaire particularly denounces the *absolutism* of vitalist expression, which proclaims its “vital forces” with such “certainty,” “conviction,” and “positiv[ity]” that contributions from sciences of “brute bodies” are silenced by fiat. But the climate, he hopes, is changing: the Academy has just given an honorable mention to a paper that applies “physico-chemical researches to the study of animal organization.”

¹⁴⁷ Goethe, satirizing the botanist Franz Joseph Schelver (1778-1832), whom he calls an “Ultra”- when it comes to metamorphosis. See “Verstäubung, Verdunstung, Vertropfung” (*Zur Morphologie* I,3, *SW*12, 212 and Chapter One, above).

¹⁴⁸ *The Temple of Nature*, IV, 451-4. Darwin’s neo-Lucretian poetics, which model both vitalism and the means for resisting some of its more pernicious tendencies deserve a whole chapter; unfortunately, for now, Darwin returns again only briefly in Chapter Four’s discussion of atomist figuration.

¹⁴⁹ Pointing out that Napoléon’s *Arc de Triomphe*, begun in 1806, was a literal monument to the take-over of French revolutionary vocabulary (‘liberation,’ ‘state,’ ‘people’) by an imperial discourse, Wang argues that the *Triumph*’s “ever receding statuary” collapses Revolutionary and Reactionary victory marches and monuments in order to “dramatiz[e] what happens when a revolutionary discourse forgets its own rhetoricity” (*Fantastic Modernity*, 63).

¹⁵⁰ Kaufman’s “Aura, Still” (n.7, above) and “Intervention and Commitment Forever! Shelley in 1819, Shelley in Brecht, Shelley in Adorno, Shelley in Benjamin” rigorously position Shelley in a “longstanding tradition of Left German Shelleyanism,” from Marx and Engels forward. In the theses “On the Concept of History” Benjamin asks, “With whom does historicism actually sympathize? The answer is inevitable: with the victor... Whoever has emerged victorious participates to this day in the triumphal procession in which current rulers step over those who are lying prostrate” (*SW*4, 397). Benjamin, an admirer of Shelley’s *The Mask of Anarchy*, might almost be drawing his image from that poem, with its “Tyrant’s crew” “Trampling to a mire of blood/ The adoring multitude... And with glorious triumph, they/ Rode through England proud and gay” (190, 40-41, 46-7).

¹⁵¹ Two valuable recent works that take up Shelley’s relation to the new biology, Denise Gigante’s *Life: Organic Form and Romanticism* and Sharon Ruston’s *Shelley and Vitality* (above, n. 23), together devote fewer than five pages to the only of Percy’s poems named expressly for their subject. But the early century vitalist perspectives from which both Gigante and Ruston evaluate the poem justify, and indeed prescribe, this outcome: for the *The Triumph of Life*, I argue, is an experiment in refusing the vitalist epistemology these studies reconstruct. Ruston writes about the poem in terms that presuppose, first, that a poem preoccupied with death and materialism cannot have taken the vitality controversy as its subject;

and second, that, Shelley's "vital" poetry must be working against the poem's deadly preoccupation: "even in this dark and pessimistic poem, where the materialist imagery used serves only to portray the world as one of death, vitality is possible through poetry" (180). The poem's intense interest in incidental, metonymic generativity – in liveliness "wrought" from already-circulating materials and continuous with decay – is also at odds with Gigante's reading of Shelley's bio-poetics, centering on "The Witch of Atlas," as symbolic and vitalist (and not very distinct from Coleridge's) (155-207).

Paul Hamilton's "A French Connection: The Shelleys' Materialism" (*Metaromanticism*, 139-55) is an excellent exception, of *The Triumph*'s poem's final, materialist vision (via La Mettrie) as an attempt correct "the error which allows life to be felt as an intolerable imposition from without and our best self to be conceived of as a consciousness anterior to all physical circumstance" (154). Our readings of the poem's final scene differ, however, in that Hamilton takes Shelley's depiction of rapid aging there as necessarily negative, indicating another kind of error: a lapse from the "authentic creativity" of Lucretian, "outgoing self-expression" into "a depleting and repressive search for truth" (153-6). As I try to make clear below and throughout this project, I think Goethe and Shelley find in *De rerum natura*'s account of simulacra-expression a resource for thinking life's expression as non-tragically coincident with its depletion and transience. Ross Wilson's "Poetry as Reanimation in Shelley" is sensitive to the value of "evanescence" in Shelley's various "poetry of life," but the essay affirms the frequent judgment that the "life" represented in *The Triumph*, being "erosion and, ultimately ... death," is "death-in-life" and therefore "no life," which Wilson reads as a way for Shelley to represent that "no liveable life is conceivable...without liberty" (127-9).

¹⁵² True to the tendencies of the transcendentalist strain of vitalism on which her study centers (but less, I think, to Shelley's poetry on life), Gigante's chapter on "The Witch of Atlas" passes a hard judgment on the improper organization of the hermaphrodite that the Witch creates in that poem: though Shelley's poem calls the being "a fair Shape... which did far surpass [Pygmalion] / In beauty" with "no defect / Of either sex, yet all the grace of both" (324-6, 330-1), Gigante concludes that "the hermaphrodite is locked into an embodiment it cannot transcend," representing the "potential affective backfire of facing actual, repugnant material" – an affective backfire that I do not detect in Shelley's lines (194-5).

¹⁵³ Barbara Johnson's *Persons and Things* opens with a reflection on deconstruction's "gravitat[ion] to the inanimate." Paul de Man, she recalled "was happiest when proving that what we take for human nature is an illusion produced by mechanical means" (4).

¹⁵⁴ See Natania Meeker, *Voluptuous Philosophy*, which chronicles the flourishing and decline of neo-Lucretianism in eighteenth century France. Meeker argues in her introduction that over the course of the eighteenth century matter is purged of its figurative impact (and vulnerability to figuration) and becomes the inert object for a type of scientific inquiry – a development that simultaneously engenders literature as a supremely figurative domain autonomous from (but also impotent with regard to) material effects.

¹⁵⁵ Turner, 397.

¹⁵⁶ Benjamin, concerned, throughout his writing life, with the question of how more-than-personal history imbues the images of personal memory, turned to this Lucretian/Epicurean account of the historical image at a key moment in *Berliner Chronik*. His childhood images "belong" to "the second half of the nineteenth century," he writes, "not in the manner of general images, but of images that, according to the teaching of Epicurus, constantly detach themselves from things and determine our perception of them." Childhood, he continues, "having no preconceived opinions, has none about life. It is as dearly attached ... to the realm of the dead, where it juts into that of the living, as to life itself" (*Reflections*, 28-29).

¹⁵⁷ Shelley, wrote Hazlitt, paints "pictures on gauze...and then proceeds to prove their truth by describing them in detail as matters of fact," Benjamin spoke of his particular "grip [*Griff*]" on allegory. William Keach sensitively traced the disorienting effect of Shelleyan language to his penchant for "reversed or

inverted simile[s]” that use “mental” vehicles to express “physical” tones, thus “drawing together ‘external actions’ and ‘operations of the human mind’ into a perceptual continuum” (*Shelley’s Style*, 73-78, 44). Alan Bewell remarks that, when Shelley calls power an atmospheric pestilence, he is going “beyond metaphor” to claim that all climates *are* climates of power (209); and James Chandler concludes that in the case of Shelley’s figures for history, in none of them “does the figure in question stand for...that which is merely an affair of ‘consciousness,’ the immaterial internality of a material externality. Each of these figures cuts athwart the distinction we use to contain it” (*England*, 554). In fact, Paul Turner ended his 1961 tally of Lucretian-derived imagery in Shelley by asking lightly whether Shelley’s “tendency to attribute a kind of solidity to things of the mind” might not be “a stylistic habit caught from early and frequent study of a poet for whom...even thoughts and dreams are caused by material *simulacra* floating through the air?” (282).

¹⁵⁸ See, for instance, “The Rhetoric of Temporality.” In Chapter 2, I read this essay at length with Goethe’s *Dauer im Wechsel*, a key poem for de Man in establishing the mystifying identification of self and nature involved in symbolic representation.

¹⁵⁹ I allude to Jonathan Culler’s classic essay, “Apostrophe,” in *The Pursuit of Signs: Semiotics, Literature, Deconstruction*, 142-3.

¹⁶⁰ Milton calls Death a “Grim Feature” in *Paradise Lost* (X.279), *SPP* n.1, p.489.

¹⁶¹ Nearly two decades ago, Steve Goldsmith diagnosed the radical promise of negative aestheticism in Shelley and his readers as the “Demogorgon principle”: a late iteration of the tradition of apocalyptic literature whose formalist work on words necessitates a corollary “source of pure negativity, an originary worldlessness unencumbered by the determinants of place or circumstance and free from the weight of a particular body” to do the dangerous, embodied, and ethically ambiguous work of revolution (*Unbuilding Jerusalem*, 221; and Chapter 4, “Apocalypse and Politics: Percy Bysshe Shelley’s 1819”). The principle is named after the (notably un-wrinkled) Demogorgon, “Ungazed upon and shapeless—neither limb/ Nor form—nor outline,” who drags Jupiter off his throne in *Prometheus Unbound*, permitting the play’s hero to make revolution by bloodless speech act. Indeed, this gesture recurs plentifully in Shelley’s poems, and it coincides in his poetry with a literally apocalyptic (off + covering) aspiration toward “the painted veil / that those who live call life.” Shelley tends to picture this – from *Queen Mab* to *Prometheus Unbound* – as a universal face-lift: “No storms deform the beaming brow of heaven” reports *Queen Mab*’s Fairy Queen “in her triumph”; people, too, appear wrinkle-free “through the wide rent in Time’s eternal veil”: “How vigorous then the athletic form of age! / How clear its open and unwrinkled brow!” (VIII, 116, 41, 12, IX, 65-66).¹⁶¹

But *The Triumph of Life* reverses this trajectory, “plung[ing]” with Rousseau, “among / The thickest billows of the living storm /... /Of that cold light, whose airs too soon deform, (465-8).” As we have seen, the materialist vision to which the poem finally turns is capable of dispersing the (radically aesthetic) “shape all light” into “a thousand unimagined shapes” – and of *peopling*, rather than “vacating,” the scene. There it turns with sustained, microscopic attention to the production of what *Mab*’s Fairy had disdained as “The taint of earth-born atmospheres” (IV, 153) out of what *Prometheus Unbound* had called “ugly human shapes and visages” (III.4, 65). That is, the poem turns to life as kind of transitive expression – a touch, tinge, a stain – *among* “those who live” – and *between* “those who live” and those who are coming.

¹⁶² Anne-Lise François has noticed that such utterances, about “the weather (most often rain, sometimes snow)” are often given as paradigmatic examples of constative, as opposed to performative, utterance, with its “the double object and subject – the subject without agency or action without an agent” (“Unspeakable Weather,” 147-8).

¹⁶³ As Paul Hamilton (above n.27) put it in a reading sympathetic to this one that connects the Shelleys to La Mettrie's (differently neo-Lucretian) materialism and focuses on the *Triumphs* final scene: it is in "The *Triumph of Life* that he [Shelley] makes a *poetic* subject of the objective process to which we belong, and over which Rousseau imagines retaining individual proprietorial rights" (*Metaromanticism* 146).

¹⁶⁴ Adam Walker (1731-1821), *A System of Familiar Philosophy in Twelve Lectures, Being the Course Usually Read by Mr. A Walker...* (London, Printed for Author, 1799) and *Analysis of A Course of Lectures in Natural and Experimental Philosophy*; see also Forster, *Observations on the Casual and Periodical Influence of Particular States of the Atmosphere on Human Health and Diseases*. On Walker and Shelley's relationship, see Kenneth Neill Cameron, *The Young Shelley*, 8, 80, 294 and Raston, 33.

¹⁶⁵ Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, 70-71. Though Crary's account of the science of sensation from Goethe forward is excellent, the eighteenth century optics against which it is juxtaposed appears mostly in caricature. For much more than a corrective regarding the fact and fantasy of microscopic vision in the eighteenth century and its relation to poetic (and other) technologies for mediating between exteriority and interiority, sense and ideation, see Goodman, *Georgic Modernity*, especially 17-66.

¹⁶⁶ See above, Chapter One, Part IIa, "The skins of things."

¹⁶⁷ Mary Favret, *War at a Distance: Romanticism and the Making of Modern Wartime*, especially Chapter 3, "War in the Air," 199-144.

¹⁶⁸ Here the poem suggestively touches Jacques Khalip's recent revision of Romantic subjectivity to include a kind of will-to-anonymity at odds with the movement's reputed investment in autonomous Selfhood, reading in Shelley a "reformulation of political agency as something impersonal, asystematic, and nonintentional." Yet while *Anonymous Life*, critical of the New Historicist hunger for referents, turns to the post-WWII writings of Levinas and Blanchot to elaborate the ethical possibilities of literary anonymity as a "a being-with-out that is conceptually estranged from tangible contexts," I think it is possible to keep tangible bodies closer at hand even as we investigate romantic anonymity and heteronomy. As we have seen, the late-eighteenth and early-nineteenth century study of living things in fact furnished numerous challenges to the metaphysics of autonomous selfhood: versions of *embodied* life that resonate profoundly with Khalip's interest in relational, romantic subjectivity as one of "anonymous saturation in the world" (11, 23, 14.)

¹⁶⁹ I am not sure it has been noticed that Shelley's *The Triumph of Life* reprises Darwin's "triumph of despotic LOVE" later in this same poem, which stages the "SEXUAL LOVE[‘S]" dominion over even the most ferocious beasts: it "Bends their proud necks, and joins them to his car," which, as in this part of Shelley's poem, is surrounded by "playful swarms" of creatures (II. 361-2, 381). But though Darwin's oeuvre is elsewhere full of exuberant polymorphous perversity, this "triumph" in *The Temple of Nature* is a paean to heterosexual reproduction in which creatures reproduce "pair after pair," and whose "despotism" Shelley perhaps significantly eludes by transforming the pageant into one of equivocal generation.

¹⁷⁰ J. Priestley, "Observations and Experiments relating to equivocal, or spontaneous Generation, read Nov. 18th, 1803," 119-129; see also E. Darwin, *Temple of Nature*, Additional Note 4.

¹⁷¹ James Thomson, *The Seasons*, "Summer," (138), "Spring," (858). I discuss Thomson and Darwin's poems in the next chapter. For a reading of Shelley via Serres and chaos theory, see Hugh Roberts, n. 8, above.

¹⁷² Williams, Goodman notes, almost always talks of "structures of feeling" in chemical tropes (145n10), which appear, in our context, as tropes from the atomist science of the sub- and barely-sensible. It seems

that Romantic era authors were appropriating Lucretius as a similar resource for historical thinking: to articulate the intersitial and attenuated relations among beings immersed in more or less the same air.

¹⁷³ Louis Althusser, “The Underground Current of the Materialism of the Encounter” *Philosophy of the Encounter* (168-9). Althusser’s essay, discussed at greater length in the dissertation’s Coda, opens with an appreciation of Lucretius’s audacity in setting contingency *before* necessity and causality (which are its products and remain vulnerable to its interruptions). See, in this context, William Keach on Shelley’s work *The Triumph*’s rhymes as “arbitrations of the arbitrary” (*Shelley’s Style*, 191).

4.

THE NATURAL HISTORY OF VIOLENCE: Atomist Pre-Histories for Shelley's *The Mask of Anarchy*

The last three chapters have delineated a series of attempts to position vulnerability – as tenderness, impressionability, and sweetness – as a resource for experimental inquiry: one that permits the observer, as in Goethe's attempts at "tender empiricism," to register the transfigurative agencies of his object, and one that enables Shelley, as in "The Triumph of Life," to recast living form polemically as a question of the interface between biological life and historical influence. Ascribing organic decay (wrinkling) to social imprinting rather than the waning of internal and individual vital power, Shelley re-articulates naturalist and historicist discourses that contemporary specialization pressures were beginning to force apart. This final chapter continues the dissertation's increasingly historical line of questioning by asking after the fate of the robust pre-nineteenth century discipline of Natural History, particularly in didactic poetry and particularly when it comes to the problem of producing figures to represent political and historical violence. Following Shelley, I wish to put the romantic revaluation of tenderness, sweetness, vulnerability, and impressionability to the test of some hard facts of historical violence, of vulnerability violated.

To do so, I turn in this chapter to what Shelley called his "wholly political" response to the 1819 "Peterloo Massacre" – *The Mask of Anarchy* – as a means of examining how political violence enters the interlinked views of nature and history that neo-Lucretian materialism helped writers to elaborate in the long-eighteenth century (To Hunt, May 1, 1820).¹⁷⁴ Surprisingly, Shelley's hard-edged verse critique of the covert forms of exploitation and violence exerted by nominal guardians of public safety also hinges on a "tender empirical" moment: a "sense awakening and yet tender" (136) attributed to the poem's exploited "multitude" in their interaction with nonhuman elements of earth and air. This moment has been taken for a tendentially lyrical one, but I will argue here that it bears reading as a didactic one as well. The gesture taps into a vanishing tradition of natural historical poetry that turns from political violence to nonhuman nature not to "naturalize" historical events but to mobilize a possibility for critiquing them: to "correct," as William Cowper put it "The Clock of History.../...unrecorded facts / Recov'ring, and mis-stated setting right" ("Yardley Oak," 46-48).

a) *Natural history after "The End of Natural History"*

I argued in the last chapter that in 1822 a poem entitled "The Triumph of Life" would have invoked the relatively new and palpable ascendancy of "life" as a pressing *explanandum*

that had reconfigured the disciplinary landscape with new sciences and new discursive norms. In the background of such a gesture, lending a provocative charge to the poem's integration of biological and social material – of natural and historical “life” – would have been what German sociologist of science Wolf Lepenies influentially named *The End of Natural History* (1976). *The Mask of Anarchy* points even more decisively to this question of the demise or transformation of a quintessentially eighteenth century discipline whose two terms, nature and history, were each in motion at the time of Shelley's writing.

In the transitional period from 1775 to 1825, Lepenies argued, a growing “empiricizing imperative [*Empirisierungszwang*]” transformed the contents of natural knowledge in English, German, and French from collated citations of classical sources to true-to-nature descriptions and illustrations verified by experience. The concomitant geometrical increase in the quantity of empirical data amounted to a new “pressure of experience [*Erfahrungsdruck*]” that exhausted the traditional taxonomic techniques of pre-modern natural history. (In 1740, Lepenies points out in a trenchant example, naturalists counted approximately 600 species of animals, whereas a century later there were four times as many known species of ichneumonid wasps alone (17).) Shelley attests to this unwieldy “accumulation of facts” in his “A Defence of Poetry,” projecting in the same movement a “poetry of life” that would help accommodate the excess of “scientific and oeconomical knowledge”: “we want the poetry of life: our calculations have outrun conception; we have eaten more than we can digest” (§37, *SPP* 530).

In response to the linked pressures to “empiricize” and to accommodate vast quantities of experience, Lepenies argues, natural history – which had been cosmological in scope and *spatial* in its techniques for classifying and memorizing items of knowledge – fragmented into specific life and earth sciences that theorized and systematized their objects through *temporalization*. New interpretations of the fossil and geological records gave the earth an ancient and dynamic history that dwarfed its biblical one and put the permanence of its creatures into question.¹⁷⁵ To recall the generation debates discussed in the prior chapters, the ascendancy of epigenetic over preformist accounts of embryogenesis also meant the triumph of a serial, rather than spatial, definition of development, such that Charles Darwin could ultimately re-signify the old preformist term “evolution” to mean the metamorphic history of a present species. Introducing a set of primary documents that participated in this epochal re-framing, John Lyon and Philip R. Sloan summarize the transformation from “natural history” to “the history of nature” this way:

“[N]ature” itself, which for seventeenth century science had functioned as an inert, divinely ordered system of bodies in mathematically describable motion, had become a vital, almost teleological entity, historically changing, and endowed with self-actuating and self-realizing powers which were presumably sufficient to explain the origin of organic beings and even the apparent miraculous order that had led seventeenth century naturalists into paeans over intelligent design. (3)

This summary makes clear just how much the principles of teleological organicism – which, as we have seen, were not uncontested in their time – succeeded in defining the terms by which the transformation in question continues to be measured.

For Lepenies, the multiple, near-simultaneous coinage (by Burdach, Treviranus, and Lamarck) of the concept named *Biologie* in 1801 and 1802 signaled that “the transition from a science of living beings to a science of life, from natural history to the history of nature was complete” (29).¹⁷⁶ Previously, Lepenies argues, the idea of a “history of nature” was “not

thinkable”: classical natural history employed the term *history* “without the thought of development [*Entwicklung*],” intending merely “the description of those bodies belonging to the kingdoms of nature” (30). Lepenies’s important and influential thesis about the demise of a certain form of “pre-modern” natural history with the advent of temporalizing life sciences illuminates our study of Shelley’s inter-, un- and anti-disciplinary “poetry of life” by sharpening the contours of the epistemological restructuring he variously contested. Equally suggestive is the pendant to Lepenies’s argument: that Natural History in the old style “secures its afterlife not in the sciences, but in literature” – above all in the vast taxonomy of Balzac’s *Comédie humaine* (115-150). But considered in light of a poet as concerned with history as Percy Shelley, Lepenies’s account gives little motive for the literary preservation of natural historical discourse, which seems to amount, despite its name, to an ignorance or innocence of history.

The Mask of Anarchy points us toward a revision of this widely held judgment, a judgment that, as James Secord has pointed out, gives too much weight to the self-definitions of a cadre of life scientific researchers eager to distinguish their work, as specialists and moderns, from that of previous natural historians: when twentieth century scholars “locate an epistemic break around 1800,” Secord argues, “they simply underwrite the definitional strategies of Cuvier and his colleagues” (“Crisis,” 449). Upon closer inspection, Lepenies’s evaluation is also propelled by a circular logic, in so far as it judges classical natural history to be a-historical by a criterion that, on his own account, had yet to be invented: the thought of history as “development,” as a dynamic and irreversible process, a “spiral” and not a “circle” – a thought that appears to mark everything “modern,” from Goethe’s first account of botanical metamorphosis to Charles Darwin’s account of the origins of species, from Hegel’s philosophy of history to Fourcroy’s attention to the temporal structure of chemical processes, and to the widespread integration of the history of a given science into the training of its nineteenth century experts. But does the absence of history conceived *as development* really amount to the total absence of historical thinking in prior forms of natural history?

Shelley’s *Mask of Anarchy* does not seem to think so: it recruits, as I hope to show, techniques of eighteenth century, neo-Lucretian, natural history poetry in order to convey its “sense awakening, and yet tender” of the period’s defining historical event, the “Peterloo Massacre.” In this, it in fact attests to the continued value and availability for historical thinking of *two* discursive modes that share the dubious distinction of having been repeatedly declared extinct: natural history, which Secord rightly notices, persists to this day under the same name and others despite the fact that “it seems to have come to an end so often” (449), and didactic poetry, which, according to the classicist historians of the genre Robert M. Schuler and John G. Fitch, has no more striking feature than “exuberant” persistence despite a millennium’s worth of critical attempts “to denigrate, formalize, or confine the genre (2).”¹⁷⁷ Shelley’s deployment of these modes in *The Mask of Anarchy* makes the case for the way the shapes of things as they are given in natural historical taxonomy and in didactic poetic figuration are by no means a-temporal for being spatial. Rather, in the atomist poetic moments I trace in this chapter, such shapes are inherently temporal because they aggregate, communicate, and allegorize the diverse past trajectories of the particles that make them up. But time is one thing and telling history another: in what follows, I hope to show in more detail than I have in the prior chapters how the Lucretian thought of figurative transience is a resource for Romantic historicism: that is, how for Shelley and a few of his predecessors in neo-Lucretian didactic, the temporal heterogeneity that a present shape or figure instantiates is not only a question of transience in general but also of particular –

even particulate – histories, of the pressure they exert on the present and of the ways they might be told.¹⁷⁸

b) *Blood and mist: Peterloo's "atmosphere of sensation"*

The subtitle of Shelley's *Mask of Anarchy* specifies that the poem was *Written on the Occasion of the Massacre at Manchester*, and the text is Shelley's satirical indictment of a widely-publicized outbreak of military violence against an organized and peaceable crowd of demonstrators.¹⁷⁹ In August of 1819, some 60,000 men, women and children had gathered on St. Peter's Field in Manchester, "for the purpose," as the handbills put it, "of taking into consideration the most effectual legal means of obtaining a Reform in the Representation of the House of Commons." As the principle orator Henry Hunt began to address the massive audience, the local Manchester militia forced its way into the crowd, the yeoman "hacking" and "hewing" their way (in the words of eyewitnesses disseminated in the newspapers) through the packed assembly in order to arrest Hunt and force participants to disperse. The militia was backed by national forces, a regiment of British hussars, including veterans of Napoleon's defeat at Waterloo, and by the time the field was empty, some twelve people had been "sabred" or "trampled" to death, and hundreds more wounded (*Prentice*, 166-7).¹⁸⁰

Writing to the Earl of Derby on behalf of the Prince Regent in a widely publicized letter, Home Secretary Sidmouth – whom Shelley's poem would depict as a crocodile-riding personification of *Hypocrisy* – commended the area militia for their "prompt, decisive, and efficient measures for the preservation of the public tranquility."¹⁸¹ The event was quickly nicknamed "Peter-loo" and as James Chandler has shown, it excited an exceptional torrent of topical representation in multiple genres and media.¹⁸² Shelley's poem, written in Italy from newspaper reports, was part of this torrent: intended, he wrote his publisher Hunt, for "a little volume of *popular songs*, wholly political, & destined to awaken & direct the imagination of the reformers" (May 1, 1820, *SL* II, 191). In fact, in the repressive post-Peterloo climate – for parliament responded with a crackdown on freedoms of press and assembly – Shelley's poem was judged unpublishable until 1832, a decade after his death and *after* the passage of the Reform Bill that realized many of the changes for which the poem agitates.

The Mask of Anarchy has been alternately criticized for its exaggerated pretenses at real-political impact for poetic speech, and praised for the way its rhetoric self-reflexively reinscribes the violence it wishes to condemn, collapsing responsibly back into the materiality of its own inscription.¹⁸³ Yet in what follows, I will be taking the poem's curious fixation on unjustly spilled blood *as it is absorbed into the landscape and atmosphere* as a cue that a problem of natural history intersects the poem's more evident concern with aesthetics, politics, and the relation between historical and allegorical violence. "Blood," as *The Mask of Anarchy* keeps repeating "is on the grass like dew." James Thomson, William Cowper, and Erasmus Darwin, I argue in the chapter's last section, each offer precedents for *The Mask's* fixation on the way blood unnaturally spilled enters meteorological, geological and biological re-uptake cycles. At an ostentatious hinge in the *The Mask* between its opening satire and its earnest "proto-Marxist" political oratory (Wolfson, 195), Shelley's poem taps into their purportedly outdated poetic tradition: a didactic one in which a poem's speaker casts himself as disclosing the history of particles that do not, in themselves, speak or remember their provenance.¹⁸⁴ In these poems, allegorical personification and prosopopeia, the trope by which poets give faces to things, are

effects of telling the divergent histories of a present body's parts. The histories these poets tell are *partial* in the senses I introduced in Chapter Two's discussion of Goethean empiricism: they eschew impartiality in favor of (necessarily incomplete, partial) participation in what they describe; they are partisan and polemical histories that run the risk of speaking *for* what they attempt to disclose; and they take a marked interest in material particles. Despite their participation in the discourse Lepenies calls "classical Natural History," none of these neo-Lucretian poems construe the face of nature as historically innocent: instead they offer precedents for *Earth's* face in *The Mask of Anarchy*, pictured with "blood upon her brow" (140).

Critical readings of Shelley's poem always need to account for the poem's rhetorically disjunctive parts. It opens with a hundred lines of biting political satire, but closes with an earnest oration addressed to the "Men of England." In the opening "ghastly masquerade" a crew of personified "Destructions" – *Murder, Fraud, Hypocrisy* and *Anarchy* – trample an assembled multitude to a "mire of blood" (27, 26, 40). This masque, Shelley's allegorical indictment of the violence at Peterloo, depicts the massacre's perpetrators as abstract Evils bodied forth as particular agents of Regency reactionary policy, domestic and foreign: "I met Murder on the way— / He had a mask like Castlereagh,"¹⁸⁵ (5-6) declares this opening satire, which proceeds to yoke *Fraud* to Chancellor Eldon, *Hypocrisy* to Home Secretary Sidmouth, and *Anarchy*, vamping on a blood-splashed horse, to the Prince Regent himself.

Afterwards in the poem, set off in quotes, but assignable to no particular speaker, an oration "arose" (137) urging working-class Englishmen, in the vocative, to:

Rise like Lions after slumber
In unvanquishable number
Shake your chains to Earth like dew
Which in sleep had fallen on you—
Ye are many—they are few. (151-5)

The voice goes on to advocate further non-violent assemblies to stand against systematic poverty and parliamentary exclusion. Critics have been skeptical of the non-violent, reformist political program advocated in these lines – for the voice seems to speak from afar, from a position of safety much like that of Shelley in Italy, and therefore with a distasteful willingness to put *other* bodies on the line. It advocates restraint, measure, and sacrifice to future assembled multitudes, even as it predicts that the authorities will continue, Peterloo-style, to "Slash, and stab, and maim, and hew" (342). But the oration is also routinely praised for its keen, "proto-Marxian" diagnosis of the economic and material constraints that working class wage-"Slavery" places on political freedom.¹⁸⁶ It is slavery, the poem teaches,

to work and have such pay
As just keeps life from day to day
In your limbs, as in a cell
For the tyrants' use to dwell

So that ye for them are made
Loom, and plough, and sword, and spade,
With or without your own will bent
To their defence and nourishment. (160-67)

It is difficult to imagine a more efficient critique of the way subsistence wage labor instrumentalizes working people by apportioning and rendering appropriable their life.

The obtrusive hinge between the opening “ghastly masquerade” and the oration that finishes the poem is an extravagantly poetic figure – “A mist, a light, an image,” it is called – that arises between the “prostrate multitude” and their marauding allegorical oppressors (103, 126). Unfurled over nearly fifty lines, this vague and misty trope dispatches the opening satire’s problems with remarkable efficacy. Shelley ultimately calls it, as he often does, simply “a Shape” (110). When this Shape has passed, or “past,” as the poem puts it, the crowd looks up to find *Anarchy* dead and his cohort “gr[ou]nd / to dust” (118, 133-4).¹⁸⁷ A “maniac maid” called *Hope*, who had previously “lay down” in front of the oncoming Destructions, expecting a grisly martyrdom, was now visible “walking with a quiet mien” (86, 129). Soon afterward, the stirring oration arises (147).

The scandalous efficacy of this vague and misty trope has justly alerted critics to the poem’s inflated claims for the real-political impact of poetic language. “Fighting tyranny with allegorical signs [and] ‘the singsong of instructive nursery-rhyme,’” comments Susan Wolfson, “is a rarefied linguistic politics.”¹⁸⁸ Marc Redfield redeems the *Mask*’s critical self-consciousness by arguing that throughout the poem, “oppression’s overthrow teasingly reiterates oppression’s terms and figures” (161), pointedly repeating the violence it purports to overthrow and responsibly deflating its pretenses at efficacy:

Offering us nothing more than the blank fact of its own material occurrence, the text collapses reflexivity into the mechanical iteration of an inscription Shelley’s poems thematize again and again the irreducible double bind of an ethico-political act that must forget the past it must remember and repeat a version of the violence it dreams of effacing (*Politics of Aesthetics* 159, 163).

But for Steven Goldsmith, this very verbal focus implicates Shelley and his deconstructive advocates in a tradition of apocalyptic rhetorical formalism confident in the emancipatory power of words alone. This confidence coincided, in early nineteenth century England, with the moderate reformist political agenda similarly constrained to the *verbal* freedom of the right to adequate representation in parliament. In Goldsmith’s view, despite its attempt to speak popularly and to a popular audience, the *Mask*, with its mistily efficient Shape, differs little in this from the “beautiful idealisms” of *Prometheus Unbound*. Both affirm “linguistic empowerment as a universal solvent,” selling short Shelley’s prescient intimations of the material and economic bases of working class disempowerment (*Unbuilding Jerusalem*, 257).¹⁸⁹

But there is one troubling substance that will not dissolve into words in *The Mask of Anarchy*, and one that points us past reading the poem as a comment on its own linguistic work, whether naively idealistic, or cannily self-reflexive. That substance is blood, which persists through each of the poem’s changes in rhetorical strategy: from the “mire of blood” that splashes Anarchy’s white horse as he tramples the multitude in the opening masquerade, to the red droplets that, as we will see, constitute what the poem calls the “grain” of that vague Shape upon which its two parts hinge (40, 112). Blood pools around Hope’s ankles – she is pictured walking “ankle-deep in blood” – even *after* the Shape’s otherwise consequential passage, and blood persists into the closing oration, which predicts “the blood that must ensue” if people continue to assemble (127, 338). *The Mask* leaves it to irritate the ear, too, coupling “blood” again and again

with unsatisfying off-rhymes that fail to confirm or contain its sound (“unwithstood” (143-145), “food” (312-13), and, twice, “multitude” (40-41, 126-7)).

The Mask is an unrelentingly gory poem, as though constantly checking its own movements against the reality test of the blood already spilled on St. Peter’s field (“Blood is on the grass like dew” (192)) and the ongoing, quotidian violence-by-deprivation that speaking will not stop (“They are dying whilst I speak” (171)). It is as though Shelley has taken Wordsworth’s fruitfully ambivalent critique of allegorical “personifications of abstract ideas” in the *Prefaces to Lyrical Ballads* to heart: rejecting personification in its capacity as a pretentious and “mechanical device of style,” Wordsworth there famously stated his intention to “keep the Reader in the presence of flesh and blood” instead (*LB*, 244).¹⁹⁰ *The Mask* has it both ways, personifying exuberantly but only, always, insistently, “in the presence of flesh and blood.” In this, the poem is uncomfortably frank about an ethically questionable outcome of the massacre: that outrageous violence could work as inspiration, poetic and political – and about the ethics of non-violence as a strategy that uses re-presentation of victimization to embarrass the state.¹⁹¹ The poem renders the problem as the near-cannibalism of breathing and incorporating others’ blood: “And that slaughter to the Nation / Shall steam up like inspiration” (360-360). It also envisions a politics of public embarrassment, hoping that “the blood thus shed will speak / In hot blushes on their cheek” (the cheek of the perpetrators) so that “Every woman in the land / Will point at them as they stand—” (350-353).

In his study of *Allegory and Violence*, Gordon Teskey defined “allegory’s primary work,” as the attempt to “force meaning on beings who are reduced for that purpose to substance,” and to conceal the violence required to do so (25). In the case of allegories for the state – for the incorporation of what Teskey calls personal bodies, “life,” or the “organic substrate” into a body politic – what allegorical rhetoric works to conceal is citizens’ vulnerability to state violence. Political allegory conceals, or at best negatively discloses, “the experience of the body, in the clearing or *agora* of political life, living under the threat of destruction” (170).¹⁹² The fact that in our context this formulation describes the overt theme of the first part of Shelley’s poem, which pictures allegorical personifications as political figures trampling ordinary persons into a “mire of blood,” suggests a poet conscious of this problem. I want to suggest that in abandoning this first mode of allegorical masquerade and moving, with the *Shape*, to another, *The Mask of Anarchy* seeks a means of relating political experience, bodily risk, and allegorical figuration that would do something other than disclose its own complicity in rhetorical violence against “something else,” construed as “organic substrate,” mere matter and mere life. This is because the poem is not content to leave allegoresis to the usual witty compact between the poet and his readers, a compact that, at least as Teskey teaches, sacrifices embodied life for regimes of ideological (political, theological, and national) significance.

One effect of the *Shape* that has gone unnoticed concerns the status of those ordinary persons trampled to mire within the opening diegetic frame. While readers are immediately instructed in allegory’s ‘other-speaking’ and the double-reading it demands (“I met Murder on the way,” we are told, “He had a mask like Castelreagh”), and while the vamping Destructions know how to use their masks to exploit the “multitude,” the unnamed ordinary people in the poem’s first part neither stand for something else nor interpret the deadly “Pageant” allegorically. The “ghastly masquerade” contains no sign that its multitude can perceive the personifications attached to the familiar faces of contemporary political authorities, and the poem positions this disjunction between participation and allegoresis as part of their physical vulnerability. While poet and reader see Lord Chancellor Eldon’s public sentimentalism as fatal

to working class interests – “His big tears, for he wept well / Turned to mill-stones as they fell” (16-17) – children within the poem, unable to perceive the *Fraud* in Eldon’s magnanimity, are blind-sided by allegorical mill-stones that do Peterloo-style damage:

And the little children, who
Round his feet played to and fro,
Thinking every tear a gem,
Had their brains knocked out by them. (18-21)

Part of what *The Mask of Anarchy* stages through the awkward intervention of the “Shape” is a process by which the “multitude” of ordinary people *within* the poem’s diegetic frame begin to perceive – and indeed, help to produce, rather than merely fall victim to – a second, allegorical dimension to contemporary political agents and events.

Shelley represents this shift by switching ontologies at the moment that the Shape arises, signaling, through the Lucretian topos of clouds that coalesce into giant faces, the poem’s shift to a classical materialism that does not accept the metaphysical distinction between figure and substance.¹⁹³ The poem concurrently shifts to a curiously natural-historical mode of narrating the effects of Peterloo. We turn, then, to the frustratingly vague Shape that coalesces “between” this “multitude” and its “foes.” Notice how the Shape disrupts the satirical clarity that had paired abstract Destructions and contemporary politicians: this trope arises gradually, hesitantly, remaining eminently confusable with features of the weather:

A mist, a light, an image rose,
Small at first, and weak, and frail
Like the vapour of a vale:

Till as clouds grow on the blast,
Like tower-crowned giants striding fast
And glare with lightnings as they fly,
And speak in thunder to the sky,

It grew—a Shape arrayed in mail
Brighter than the Viper’s scale,
And upborne on wings whose grain
Was as the light of sunny rain. (103-113)

It is the clouds coalescing into the likenesses of giants (106-7) that signal Shelley’s borrowing from Lucretius, and we will return to the subject momentarily. But more basically, Shelley’s passage also borrows the account of image-production, of figuration, that surrounds the gigantic cloud faces of the fourth book of *De rerum natura*. Here, as we have seen in each of the preceding chapters, Lucretius explains that all things, as they decay in time, scatter fine atomic husks from the surfaces of their bodies. These airborne husks resemble the body from which they have emanated; for sensate beings, they are the “data” of perception and thought, touching the sense organs and the fine particles of mind with floating traces [*vestigia*] of near or distant objects (4.87). Again, what really sets familiar binaries spinning is that Lucretius calls these slight but real tissues by names most epistemologies reserve for rhetoric: *simulacra*, *figurae*,

imagines. Thus *De rerum natura*'s poetic science at once confers a physical weight to figures – they are fractions of the real estranged from their sources, carrying to the senses a material husk of what they represent – and confers to all bodies, not just humans or their language, the capacity to produce them.

On this account, empiricism, as sense-based investigation of nature, is as reliant upon simulacra as the rhetorical discourses we generally credit with generating figures. Conversely, there are simulacra in poetry and rhetoric that derive not from the poet's internal faculty of imagination and powers of linguistic representation but from empirical experiences that, as Goethe writes of the "wavering shapes" in the Dedication to *Faust*, "press in!" (3). Anything that has a figure, a body compounded of parts, emits figures or *simulacra* as those parts fall away. Apprehending them – "arrest[ing]," as Shelley would say, "the vanishing apparitions which haunt the interlunations of life" (*Defence* §39, 532) – is of interest to any attempt to represent things and events. In *De rerum natura*, such *vestigia* [traces, footprints] are the *material*, if wayward, analogies that knowledge follows: "a small thing may give an analogy of great things, and show the tracks of knowledge" (*DRN* 2. 123-4).

In the passage adapted by *The Mask of Anarchy*, given here in the 1805 John Mason Good translation that Shelley owned, Lucretius emphasizes that the "Images" that "emanate" from "things themselves" can conjoin [*concreescere*] "spontaneous[ly]" [*sponte*] in air, producing strange combinations that are "Borne through th'aërial realms in modes diverse, / Their forms for ever shifting" (4.136-140; II, 23). Indeed, according to Lucretius, the delicate wandering *figurae* that are fractions of weightier things can also chance into alternate formations, cohering with others in the air "when they meet / As the wove woof of spiders, or the threads / Fine-wrought of filmy gold" (4.742-4; II, 109). In this way they can accidentally coalesce into an image of anything: "Nought lives on earth [that] the phantoms never ape" (4.141; II, 25). Hence, the passage continues, giant faces and giant mountain ranges appear in the shapes of clouds:

Hence, shapes gigantic spread, protruding broad
Their interposing features ; mountains hence,
And mountain-rocks, torn from their base abrupt,
Seem oft to hover; blotting now the sun
Mark, now, how swift such phantoms form—how swift
Exhale from all things, and, when form'd, dissolve.
A steam there is that from the face of things
Pours forth perpetual... (4.144-153; II 25-29)

In its connection to this passage, the Shape that *The Mask of Anarchy* slowly construes in the atmosphere after the massacre, "like the vapour of a vale," appears neither as a purely negative cancellation of the prior, hard-nosed representation of the massacre, nor a purely lyrical abstraction that ceases to represent the historical events in question. "A steam there is that from the face of things / Pours forth perpetual," and from this perspective, the Shape is given as a fleeting, "frail," but possible effect of elements surely present at the scene: light, air, and the "red mist" or "steam of gore" kicked up by the horses at Peterloo.¹⁹⁴ In characterizing the changes to this passage across Shelley's drafts, Steven Jones gingerly suggests the possibility of a form of figuration hardly distinguishable from the weather, one that we have identified as neo-Lucretian:

Apparently, as he revised, Shelley gradually rejected similes, choosing instead to blur the visible outlines of the figure so that it is visualized only vaguely, as superimposed on the sky—or even as consisting of the sky’s chaotic and unpredictable weather, a mythopoeisis of meteorological processes. (112)¹⁹⁵

In the stanza following those cited above, the Shape “grew” into a granular composite of “*crimson dew*,” this redness underscoring an attempt to restrict the matter of the image – its “grain,” as line 112 has it – to the blood shed at St. Peter’s Field as it might evaporate into the general air (110, 117). Thus even as this figure takes on the stronger contours of a conventional and poetically fashioned figure – even as the Shape gets poetic “wings” – the poem takes care to tamp them back down to a chance weather-effect:

It grew—a Shape arrayed in mail
Brighter than the Viper’s scale,
And upborne on wings whose grain
Was as the light of sunny rain.

On its helm, seen far away,
A planet, like the Morning’s, lay;
And those plumes its light rained through
Like a shower of crimson dew. (110-117)

These are “wings / whose grain” are also given as “the light of sunny rain,” and “plumes” that might equally be an effect of mere “light” feathered through that bloodied “crimson dew.”

This new kind of figure in the poem still has attributes that invite a learned, allegorical interpretation. In contradistinction to the “mark” that had adorned Anarchy’s brow – “I AM GOD, AND KING, AND LAW!”—this Shape wears an emblem of the Lucretian muse Venus “genetrix,” she who has the power to “lull to peace” even “almighty Mars,” who is also present here in the martial emblem of the plumed war helmet (Good, I. 35, 33). Shelleyans will recognize recycled textual matter here, namely *Laon and Cythna*’s governing emblem of the struggle between an imperial eagle and a popular snake. This emblem is also given as a backlit atmospheric spectacle that confuses wings and scales: “For in the air do I behold indeed / An Eagle and a Serpent wreathed in fight / ... / Feather and scale inextricably blended” (I:192-3, 201). There the image is explained: “Such is this conflict – when mankind doth strive / With its oppressors in a strife of blood / ... / The Snake and Eagle meet – the world’s foundations tremble!” (I: 415-16, 423).

But perhaps more important than pursuing this kind of interpretation is noticing the disorientation that this frustratingly vaporous Shape inflicts upon the parties to, and in, the poem who had up to now been privy (unlike the “multitude”) to a clearly-defined allegorical level of signification. What we witness here is a disorienting softening of the clear-cut distinction between literal and allegorical levels of signification that had kept us as readers in on the poem’s wit. The Shape occurs “between” (102) those levels, tapping into the Lucretian possibility that significant figures can coalesce by chance from things and events without the supervision of rhetorically savvy poets, readers, or politicians.

This is not to say that there is no longer a poet, but that the poetics begin to shift *here*, right where they seem most lyrical, to a didactic mode that becomes unmistakable ten stanzas later when the explicit oration about material injustice begins. The Shape is the first figure in the

poem whose occurrence is *described* gradually and with marked equivocation, rather than imposed decisively by the power of poetic speech. The description of its concrescence (to return to that Lucretian word describing spontaneously conjoining simulacra in our consideration of life's beginnings in Goethe) shifts figurative authority from the maskers and the poetic voice to the natural-historical interaction between many people and the surrounding elements. Quickly, this highly tenuous Shape disappears into "empty air":

With step as soft as wind it past
O'er the heads of men—so fast
That they knew the presence there,
And looked,—but all was empty air. (118-121)

In *The Mask of Anarchy*, this swift passage initiates what I have previously called a "tender-empirical" process for the "prostrate multitude" – a perception that, in Goethe's words "opens up a new organ in us." *The Mask* calls this "A sense awakening and yet tender" (136) and it belongs to the first moment that the "multitude" can see their Prince Regent as "Anarchy."

This "sense awakening and yet tender" is described in a series of analogies that draw out the fact, first given in the stanza cited above, that one might "kn[o]w the presence" of something that "looked" like "empty air." The epistemology of the analogies is Lucretian in so far as it deduces the reality of imperceptible bodies from their manifest impacts upon perceptible ones, and in so far as analogy is at once poetic and scientific, a reliable technique of investigating the real over which poets exert a special mastery:

As flowers beneath May's footsteps waken
As stars from Night's loose hair are shaken
As waves arise when loud winds call
Thoughts sprung where'er that step did fall. (122-5)

Waves attest to wind, stars to invisible night, blossoming flowers to the action of warm air. As for the *thoughts* that spring up here, Lucretius teaches that the particles of mind are the finest and most sensitive of all moved even by the light touch of the subtlest ambient simulacra: "light, innum'rous semblances of things / ... / with ease / Pierce they the porous body, reach, recluse, / Th' attenuate mind, and stimulate the sense" (Good, II: 4.740, 746-8, 107-9).¹⁹⁶

In his 1802 *Preface to Lyrical Ballads*, Wordsworth has a formulation that helps to explain what Shelley was seeking to describe as these analogies shift attention to the spaces *between* the people who assembled at St. Peter's field. Wordsworth's phrase, *atmosphere of sensation*, comes up in a dense section of the *Preface* that projects future collaborations between the "Poet" and the "Man of Science" (252-4). The Poet, Wordsworth argues here, in a very Epicurean tone, views "man and the objects that surround him as acting and reacting upon each other so as to produce an infinite complexity of pain and pleasure" (252). He would be happy to take the "remotest discoveries of the Chemist, the Botanist, or Mineralogist" as his "proper objects," on the condition that he can find among them "an atmosphere of sensation in which to move his wings" (254, 253).

One meaning of this rich phrase turns out to hinge on the capacity of the Man of Science to make "manifestly and palpably material" what Wordsworth essentially calls the *relations of contemplation* that obtain when a scientist is looking at his objects ("the relations under which

they [“these things,” the scientist’s “objects”] are contemplated by the followers of these respective sciences” (254)). This is a key demand of the late Enlightenment or Romantic revision of empiricist experimental protocol: the attempt to come to terms with the fact that there are affective, social, and historical factors conditioning the present possibilities for sensation – contingencies that shape what an earlier generation of empiricists had taken as the unproblematic basis for knowledge.¹⁹⁷ William Blake is perhaps the most lucid advocate of the insight that each of our “senses five” is an aperture shaped by industrial and labor relations. His illuminated books deploy the vocabulary of Enlightened physiology to magnify personal bodies into social construction sights, depicting artisans and laborers hammering, smelting, and weaving away to shape our ears and nostrils. In *Milton*, for instance “The sons of Ozoth within the Optick Nerve stand fiery glowing,” numbering “eight millions & eight” (*M* 28:31-2). As Noel Jackson has argued, the “sense of history” in Blake and Wordsworth is also a “history of the senses.”¹⁹⁸

In addition to this social historicity of sensation, the phrase “atmosphere of sensation,” points us, in the context of Shelley’s “sense awakening yet tender,” to a role for scientific poetry or poetic science in heightening, in making felt – making “manifestly and palpably material” – the atmosphere that subsists between beings; that is, in sensitizing people to those slight but real relations that undergird present protocols of perception. Shelley, in his own *Defence of Poetry*, expressed this amplifying faculty as poets’ capacity to “express the influence of society or nature upon their own minds” in a way that “communicates itself to others, and gathers a sort of reduplication from that community.” In so doing, poetic language “marks the before unapprehended relation of things and perpetuates their apprehension” (*SPP*, 512, §2).

Approached from this angle, the transitional part of Shelley’s poem seems less extravagant: an attempt less to produce performatively than to simply describe the change to the atmosphere, the change in the political climate, that must have obtained after an event such as Peterloo. How might people see differently in the aftermath of such an event? The *tenderness* the poet ascribes to their awakening sense corresponds to Peterloo’s incomparable lesson in vulnerability – a citizen’s vulnerability to state violence, violence perpetrated by “*our should have been protectors*,” as the outraged author of a Manchester serial put it (*Peter-Loo Massacre* No. 1, 10). Shelley attempts to represent a Shape that would be the involuntary and collective product of this devastating and instructive loss: the atmosphere of sensation that might arise between persons recently forced to know what Teskey calls “the experience of the body, in the clearing or agora of political life, living under the threat of destruction.”

c) *Correcting the clock of history: atomist pre-histories for Shelley’s Mask*

We ought moreover to take seriously something that the poem says about the oration that follows the intervention of this Lucretian mist/light/image and the “sense awakening and yet tender” that succeeds it. Though this voice belongs rather notoriously to no one, the poem says that its “words of joy and fear arose” *as if* the “indignant Earth” of St. Peter’s Field, Manchester had “felt their blood” – the blood of those killed and wounded there – “upon her brow,” and *as if* this Earth “Had turned every drop of blood / By which her face had been bedewed / To an accent unwithstood” (138, 139, 143-5). In this way, the exhortative oratory is positioned as the conjectural history of these droplets of wrongly spilled blood as they disappear, or threaten to disappear, into the setting, into cycles of weather and water.

In the pages that follow I will return to the questions about natural history posed at the outset, drawing on Walter Benjamin's comments about a form of allegory "born of a strange combination of nature and history," in which "the events of history... become absorbed in the setting" (*Tragic Drama*, 180). Here I seek an alternative to the account of allegory that readers of Romantic rhetoric, as we saw in Chapter Two, inherit from Paul de Man. For de Man, allegories militate against the "illusory identification with the non-self"—an illusion of "presence"—that symbols instantiate, and the exemplary instance of symbolic illusion consists in the self's bad faith appropriation of natural time: "the temptation," as de Man writes in *The Rhetoric of Temporality*, "for the self to borrow... the temporal stability that it lacks from nature" (197). How does the rhetoric of temporality, which de Man taught us to seek, change when nature is viewed under Lucretian lights as transience, rather than stability, and when a tendency towards figuration links, rather than divides, the matter of human and nonhuman natures?

In order to recognize the poem's alternative understanding of figuration, we will turn in this last section to a series of moments in eighteenth century natural historical poetry – in the explicitly didactic epics of Erasmus Darwin and James Thomson, as well as to the curious entwinement of lyric and oratory in Cowper's "Yardley Oak"—as precedents for Shelley's turn to the Earth in *The Mask*. At issue is a series of poetic speakers who draw on the Lucretian notion of a re-combinatory material nature in which ancient atoms cycle through transient shapes in order to discourse on the diverse particulate trajectories that make up the present face of things. They attend to the way historical events saturate nonhuman and nonlinguistic nature, such that the elements of landscapes and atmospheres, like those stained red in *The Mask*, are not historically innocent.

Shelley expressed one possible consequence of this view graphically (albeit more anthropocentrically than he would in later works) in *Queen Mab*:

There's not one atom of yon earth
 But once was living man;
 Nor the minutest drop of of rain,
 That hangeth in its thinnest cloud,
 But flowed in human veins: (2.211-24)¹⁹⁹

Being particles, however, such atoms are hardly inclined to relate their past experiences in human language, or even, individually, to impact human sense perceptibly. Being neo-Lucretian particles, however, they *are* constitutionally inclined to come into contact with other particles,²⁰⁰ cohering into composite shapes that – "in the complexity of their own figures [*suis perplexis ipsa figuris*] (2.102)" – are the outcomes and expressions of specific histories. It is to *figuration* in this sense that *The Mask* and some poems that precede it direct us: they look to present natural shapes as complex figures of the past; such shapes are real disclosures of past happenings, albeit figural, rather than specifically verbal ones. Merely appearing, such shapes express this form of historicity, and even touch us with it in so far as sensation, as Shelley and Goethe have demonstrated in our context, is a form of contact.

In our examinations of "tenderness" in Goethean empiricism and in Shelley's *Mask*, of sweet vulnerability in Blake and Lucretius, and of Wordsworth's plan to render atmospheres palpable, we have seen how poet-empiricists attempt to cultivate an attitude (in themselves and their readers) of heightened receptivity to the figural expressions of things. In Shelley's description of the Shape that might have coalesced in the bloody atmosphere of Peterloo, the

apposition of “A mist, a light, and image” glossed the the difficult status of this kind of Shape as at once an object of touch and sight and thought, and that by which one feels and sees and thinks (“Thought sprung where’er that step did fall” (125)). In this way, shapes become the bearers of historical circumstances, of the materials that condition sense in its mental and physical aspects, making up what Goethe and Lucretius call the turbid medium of sensation (Chapter 1). As James Chandler has concluded of Shelley’s “phantasms and phantoms of history,” in none of them “does the figure in question stand for...that which is merely an affair of ‘consciousness,’ the immaterial internality of a material externality. Each of these figures cuts athwart the distinction we use to contain it” (554).

The poems that follow exemplify a second, related mode, in which poets not only try to register and transmit this kind of shape in all its vagueness and turbidity, but they also try to tease apart its perplexed figure, supplementing the shape transmitted through sense with discursive, conjectural histories of its constituent parts. This still more didactic and expository turn risks speaking *for* these unspeaking (or inhumanly speaking) trace elements and – marking this risk – proceeds with its conjecture in order to assert the continued presence and after-effects of past violence that might otherwise go unnoticed. I want to explore versions of this gesture in Darwin, Cowper, and Thomson, and then conclude by suggesting that we understand *The Mask of Anarchy*’s final oratory in similar terms: as a partial, polemical exposition of the causes that might have resulted in such a Shape, and as an example of producing what Benjamin calls the “physiognomy” of a natural-historical figure.

For experimentalist polymath (and inspiration to Shelley) Erasmus Darwin (1731-1802), the features of a landscape – “the tall mountains, that emboss the lands” – are “ARE MIGHTY MONUMENTS OF PAST DELIGHT.” They are also monuments to “wrecks of Death,” including not only the “carnage” of human war, plague, slavery, and tyranny but also the works and fates of sea-fans and manganese ore (*Temple of Nature* 4. 447, 450, 338, 430-440).²⁰¹ In Darwin’s didactic epics, more or less directly modeled on *De rerum natura*, the great theme is “the perpetual circulation of matter” between the “changeeful” forms of mineral, botanical, and animal nature as well as those of human industry. These diverse particulate histories sometimes grin uncannily in a present face:

With ceaseless change how restless atoms pass
 From life to life, a transmigrating mass;
 How the same organs, which to day compose
 The poisonous henbane, or the fragrant rose,
 May with to morrow’s sun new forms compile,
 Frown in the Hero, in the Beauty smile. (*Temple of Nature* 4. 419-424)

These compiled forms curiously substantiate stock metaphors such as the roses in Beauty’s cheeks as part of the material past of her organs.²⁰²

Darwin’s poems are known for their radical, leveling vital materialism: in one place he first equates the deaths of monarchs and mushrooms, and then celebrates the greater productivity of the former for the fact that the passing of a single relatively large being (such as a monarch) would result in a greater profusion of worms and microorganisms likely to generate spontaneously from the matter of his corpse, thus “increasing the sum total of organic happiness” (*Temple of Nature* 4. 393-402, and 410n).²⁰³ But Darwin’s epics also reveal the politics of

tracing the *past* of physical particles. “The Economy of Vegetation” (1791), for example, shifts abruptly from the formation of limestone to the following anti-slavery polemic:

Hear, Oh BRITANNIA! Potent Queen of isles
.....
Now AFRIC’s coasts thy craftier sons invade,
And Theft and Murder take the garb of Trade!
—The *Slave*, in chains, on supplicating knee,
Spreads his wide arms, and lifts his eyes to Thee;
With hunger pale, with wounds and toil oppress’d,
“*Are we not Brethren?*” sorrow choaks the rest;
—*Air!* bear to heaven upon thy azure flood
Their innocent cries !—*Earth!* Cover not their blood!
(*The Botanic Garden*, 1.2, 4, 421, 423-430)

More interesting than the stock image of the supplicating slave is the caesura – a rare interruption of Darwin’s striding heroic meter – that chokes off the poet’s projection of what a slave might have to say, suddenly deferring to the elements – *Air!* And *Earth!* – as repositories for these demands that cannot be verbalized, registered or accommodated in the English poet’s representation.²⁰⁴

Fresh from reading, Darwin’s “Economy of Vegetation,” for which he contributed a dedicatory epistle, William Cowper (1731-1800) made this potential the central conceit of the poem “Yardley Oak” (c. 1792). The poem imagines the gesture pendant to Darwin’s stashing of undocumented histories in the air and earth. Cowper hopes to “correct the Clock of History,” as he puts it, through an inquisitive interaction with the not-currently-human elements of a landscape:

Oh, could’st thou speak
As in Dodona once thy kindred trees
Oracular, I would not curious ask
The Future, best unknown, but at thy mouth
Inquisitive, the less ambiguous Past.
By thee I might correct, erroneous oft,
The Clock of History, facts and events
Timing more punctual, unrecorded facts
Recov’ring, and mis-stated setting right.
Desp’rate attempt till Trees shall speak again! (42-49)

Both the “timing more punctual” that Cowper advocates in “Yardley Oak” and the prosopopeia that gives the tree a mouth so that the speaker voice this historical corrective (“perform / Myself, the oracle” (141-2)) turn out to be punctual in the etymological sense in this poem: they concern little points, atoms. Since the oak was not felled to make the timber for a naval gun-ship, Cowper explains, it was left to decay with imperceptible, atomic punctuality:

Thus to Time
The task was left to whittle thee away
With his sly scythe, whose ever-nibbling edge

Noiseless, an atom and an atom more
Disjoining from the rest, has unobserved
Achieved a labor, which had far and wide,
(By man performd) made all the forest ring. (103-9)

It is interesting that Cowper's corrective timing here will take the side of that disjunctive, anatomizing labor, in a poem that is usually read as using an oak tree, as did Burke in his *Reflections*, to speak for the integrity of an organic, ancient and native constitution against the violent innovations of French revolution. That is, the poem is often taken to speak, with a kind of critical and elegiac nationalism, for Britannia's 'Heart of Oak.'²⁰⁵ But Cowper's poetic effort to "correct ... / The Clock of History" is in fact aligned with the nibbling edge of Time that has gutted the oak and hollowed out that heart. Against the British navy's appetite for oaks – "hewn by thousands," Cowper writes, "to supply / the bottomless demands of contests waged / for senatorial honors" – the poem slyly celebrates Time's gradual programme of disarmament: "Thine arms have left thee. Winds have rent them off" (101-3, 125).

What has given the oak mouth and throat in this poem is not a kind of heroic lyric animation that would "make all the forest ring," but rather that gradual erosion – an atom and an atom more – that has "Embowell'd" the tree (110). Of its "antient self," Cowper writes, the tree possesses "nought but the scoop'd rind that seems / An huge throat calling to the clouds for drink" (110-12). The stanza builds towards an allegory for the nation – "So stands a Kingdom whose foundations yet / Fail not ... / Though all the superstructure by the tooth / Pulverized of venality" – but one that suggests that the resemblance upon which the allegory hinges is a coincidence of natural disintegration and poetic figuration, dependent upon the very literal hollowing and scooping out that has made the oak into a simulacrum, "a shell / ... semblance only of itself" recognizable to the aged speaker (120-4). The poet stops studiously short of making the tree have a voice:

But since, although well-qualified by age
To teach, no spirit dwells in thee, nor voice
May be expected from thee, seated here
On thy distorted root, with hearers none
Or prompter save the scene, I will perform
Myself, the oracle, and will discourse
In mine own ear such matter as I may. (137-143)²⁰⁶

This impasse, the tree's inability to speak, enables a lyric turn inwards as the poem's speaker begins to contemplate his own mortality. But notice how this passage joins to lyric inwardness that seemingly opposed possibility of oratory, of playing the oracle: the possibility, as Shelley's *Mask* puts it, of a voice "eloquent, oracular" that takes the speechlessness of non-human elements as license to verbalize their historically tainted pasts (361).

We might conclude this series of vignettes with a glimpse of James Thomson's epic didactic poem about nature, science, industry, and empire *The Seasons*. First published completely in 1730, the poem was a formative example for each of the pieces cited above. Thomson's personification of *Plague* – as a "cloud of death" with a "mixed" and "angry aspect" – exemplifies a didactic poetic mode of compounding a face, where personification is the

cumulative effect of the poet's reconstruction of the provenance of "natural" elements indistinguishably "stain'd" with social injustices.

In the book "Summer," the speaker in-spires an intercontinental "general Breeze" in order to produce "a view of Summer in a torrid zone" (641). As Kevis Goodman has shown, Thomson's poem is propelled (though also repelled) by the possibility of microscopy as a poetic, as well as experimental, technology, an organ of perception that, in *The Seasons*, occasionally traffics in an "an uncomfortably charged international socio-optics"(40). The social infiltration of personal sensation extends to the other senses as well: inspiration, as an intake of breath, is likely to be full of what Thomson calls "nameless nations" and "unseen People" – personifications of the sub-visible, alien animalculae that had been shown to crowd every familiar surface or apparently vacant, transparent, or simple substance. "Nor is the stream of purest Crystal, nor the lucid Air," Thomson writes, "Tho' one transparent Vacancy it seems, / Void of their unseen people" (309-11). Yet the elements are also peopled in that airborne microorganisms bring the breathing poet into bodily contact with human people far away. This means that in "Summer," the "general Breeze" that the poet in-spires links him to a series of colonial climates, a "world of slaves," over which "The parent sun himself / Seems ... to tyrannize" (*Su.* 884-5).

Thomson's particular iteration of a neo-Lucretian way of seeing – one informed by the New Science's corpuscular imaginary and what Peter Hans Reill has acutely termed the Enlightenment "vitalization" of Nature – makes particularly vivid use of the equivocation the Latin poet nested in his atomic "first bodies," finding in what I, following Goethe, have called their "determinability" toward "matter," "seed," and "figure" an extraordinary resource for telling social history. Like Shelley in the *Triumph* nearly a century later, Thomson signals his participation in a Lucretian naturalist poetics by reprising that figural fact of dancing – and equivocally generating – dust motes in a sunbeam:

THICK in yon Stream of Light, a thousand Ways
Upward, and downward, thwarting, and convolv'd,
The quivering Nations sport (*Su.* 342-4)

The light by which an "individual" sees, the air she breaths, hears and smells, the things she eats, drinks, and touches, the weather that weathers her face in this poem – all that goes into the familiar world – vibrates with the "quivering" of strange "Nations," fragile because they are, at once, newborn, and ancient; they are alien life hatching in the matrix of the familiar, and out of a "generous Commerce" (*Su.* 138) of materials that might have traveled from far away. If this passage recalls the *Triumph's* cautiously optimistic interest in equivocal life, I want to turn next to one that relates instead to the geological circulation of violently spilled blood that we observed in *The Mask*.

As in the second form of allegory on display in Shelley's *Mask of Anarchy*, where an allegorical Shape threatening to tyrants was compounded from a "steam of gore" produced by wage-enslavement, Thomson compounds his figure for *Plague* from a "copious Steam," this one emanating from slavery in distant, tropical climates. There a "joyless sun," he writes, "draws copious Steam: from swampy Fens, / Where Putrefaction into Life ferments, / And breathes destructive Myriads." Out of these "destructive Myriads," Thomson continues, "Walks the dire Power of pestilent Disease" (*Su.* 1027-30, 1034-5). She has the power, Thomson notes, to defeat the British imperial navy.²⁰⁷ In a gesture familiar from Shelley's *The Triumph of Life*, one that

sets a powerful precedent for Alan Bewell's astute observation that Shelley "is not speaking metaphorically" when he depicts "all climates as 'climates of power,'" Thomson's *Summer* directs its poetic animating activity – its "enlivening" – to the air, taken as a repository for indirect and distant happenings that nonetheless act consequentially upon the speaker's immediate environment: "the wide enlivening air is full of fate," he writes of *Plague*.²⁰⁸

Plague's face, diffuse, heterogeneous, and compounded over many lines like that of Shelley's *Shape*, suggests that conferring an allegorical face in a certain kind of poetry means telling the history of its component parts. *Plague's* face, her "angry Aspect," is the cumulative effect of the poet's reconstruction of the provenance of the "natural" elements that make her up, elements indistinguishably "stain'd" with historical injustices and with Thomson's own prejudices:

*From *Ethiopia's* poison'd Woods,
 From stifled *Cairo's* Filth, and fetid Fields
 With Locust-Armies putrefying heap'd,
 This great Destroyer sprung.

 She draws a close incumbent Cloud of Death;
 Uninterrupted by the living Winds,
 Forbid to blow a wholesome Breeze; and stain'd
 With many a Mixture by the Sun, suffus'd,
 Of angry Aspect. (*Su.* 1055-8, 1061-4)

As Heather Keenleyside has recently observed of the personifications that Thomson copiously and indiscriminately showers on human, animal, vegetable, and mineral natures in *The Seasons*, the trope does not to work to "humanize" non-humans because "person" does not yet here mean, as it would for Kant, an individual human person: "personhood" is rather the aspect of being situated communally in "a social system of peoples," and personification, in his poem, is the effect of the poet's attention to such systematic relations ("Personification for the People," 455, 472).

It is fruitful to contrast the genesis of this figure with what Paul de Man and Marc Redfield taught romantic critics to expect from the linguistic materialism inherent in prosopopoeia and allegory, and especially in Shelley – namely, as we saw in the last chapter, violent instantiations of the sheer positing power of language that work to interrupt its pretenses at linking sensation to cognition, empirical knowledge and causal sequence. Thomson's figure, by contrast, is given as the product of a far-reaching complex of imperial, biological, and meteorological relationships. Indeed, in a way hostile to excerpting, in the poem "She" is situated within a complex that extends over a thousand lines to describe the circulation of violently spilled blood, linking the "copious steam" that emanates from a wrecked slave-ship to a thunderstorm that visits destruction upon a quaint English pastoral landscape. And instead of thwarting empirical and historical knowledge, this figure occasions a footnote: "* *These are the Causes supposed to be the first Origin of the Plague, in DOCTOR MEAD'S elegant Book on that Subject.*" Dr. Mead's elegant book, drawing lessons for the British authorities from Marseilles's 1720 outbreak, was an exposition of the still-controversial theory of contagion, by which "an *Infectious Matter* [would be] capable of conveying Mischief to a great distance from the diseased Body."²⁰⁹ At stake is a materialism that views figures as this kind of matter, matter "capable of

conveying Mischief to a great distance,” where mischief, in the cases we have just seen, includes social and political, as well as epidemiological malfeasance.

d) *Visage incompos'd*

Each of the preceding examples from Shelley, Darwin, Cowper and Thomson take advantage of the heterogeneity of present bodily shapes, whether dense as a tree stump or rare as a cloud. In *De Rerum Natura*, as we have seen, sensible, existing, present things – which for Lucretius includes animal, vegetable, and mineral things, as well as the most lightly felt things, such as ideas, images, and atmospheres – are each transient composites made up of insensible smaller ones, atoms, themselves indestructible. Milton’s description of the face of his explicitly Lucretian *Chaos* in *Paradise Lost* is perhaps the most efficient gloss on the hard natural philosophical compromise at stake, a compromise that predicates decay for composite forms, but grants permanence to their constitutive particles. *Chaos* is described as an “Anarch old / With faulting speech and visage incompos’d” (II, 998-9). The adjective *incomposed* means, on the one hand, lacking composure, “discomposed,” such that this aged face allegorically betrays the coming-undone that befalls each extant thing, each particulate arrangement in (Lucretian) nature. But *incomposed* also means *uncompounded*, simple, without components, so that in confronting this “old/...visage incompos’d,” Satan is looking a Lucretian atom, in all its ancient and featureless permanence, in the face.

What the line captures about Lucretian materialism is a view of physical being that sees present, apparently unitary objects as decadent forms that will always instantiate at least two kinds of age: the age of the object that presents itself and the diverse and interminable “punctual” (Cowper) histories of its component parts. Thus, while in the last chapter *The Triumph of Life* and Montaigne’s version of physiognomy prompted us to view the surfaces of bodies – their wrinkles and features – as imprinted registers of collective experience, this chapter’s examples point us toward a different aspect of corporeal historicity. Even absent the social weathering examined in the last chapter, each body alone is, as Goethe taught, a multiple, and therefore a compound of pasts other than its own. (Darwin’s *Temple of Nature*, for instance, moves “From Nature’s coffins to her cradles” with unnerving speed and an alliteration that makes the matter of prior lives audible in newborn things (II, 211).) But old things, as Cowper’s “Yardley Oak” staged for us in its discourse with an extraordinarily old tree, are especially exemplary for this lesson. In fraying, “faulting,” decomposing, a purported *individual* reveals its divisible status as contexture or assemblage of multiple beings. This significant, non-identical likeness between the aging faces of things and their differently aged constituents is yet another way in which nonhuman and human bodies evince their rhetorical and figurative dimension, their tendency to trope. Aging, they betray the agedness of their materials, allegorizing the interacting histories of their parts.

I want to close by looking to Walter Benjamin’s *The Origin of German Tragic Drama* in order to illuminate this aspect of Lucretian poetic science and its value for the historical dimension of natural historical thinking. Here, Benjamin – who, as Robert Kaufman has shown, particularly admired Shelley’s “grip on allegory” – writes of a species of allegorical rhetoric that entails a “strange combination of nature and history” and is focused, like each of the scenes examined in the preceding pages, on the way “history has physically merged into the setting” (179).²¹⁰ (One thinks, in our context, of the figure of Rousseau-cum-hillside in Shelley’s *Mask*,

the Monarch-cum-mulch in Darwin's *Temple of Nature*, and the slave-ship-cum-rainstorm of Thomson's *Seasons*.) Against the expectation that nature and artifice are opposites, Benjamin argues that the species of highly constructivist and artificial rhetorical artistry he designates "Baroque" takes nature – specifically nature "in the over-ripeness and decay of her creations" – as its "great teacher" (179). The decaying face of nature is the consummate emblem for the peculiar relationship Baroque, "didactic" drama (180-2) stages between nature, history and writing:

When with the *Trauerspiel* history settles into the scene, it does so as script. *On the countenance of nature stands 'History' in the characters of transience*. The allegorical physiognomy of the nature-history, which is put on stage in the *Trauerspiel*, is really present as ruin. In the ruin, history has sensuously merged into the setting. And in this shape, history manifests itself not as the process of an eternal life so much as the course of an irresistible decay. (177-8, modified, my emphasis).

Wenn mit dem Trauerspiel die Geschichte in den Schauplatz hineinwandert, so tut sie es als Schrift. Auf dem Antlitz der Natur steht 'Geschichte' in der Zeichenschrift der Vergängnis. Die allegorische Physiognomie der Natur-Geschichte, die auf der Bühne durch das Trauerspiel gestellt wird, ist wirklich gegenwärtig als Ruine. Mit ihr hat sinnlich die Geschichte in den Schauplatz sich verzogen. Und zwar prägt, so gestaltet, die Geschichte nicht als Prozeß eines ewigen Lebens, vielmehr als Vorgang unaufhaltsamen Verfalls sich aus. (353)

In natural decay, Benjamin suggests, people, their effects, and their manufactures, are caught becoming air and landscape, decomposing into the matter of the world; "in the process of decay, and in it alone, the events of history shrivel up and become absorbed in the setting" (179). From the point of view Benjamin calls "Baroque," then, as from the point of this project has been investigating as neo-Lucretian, there are no properly raw materials for the composition of natural, verbal, or manufactured bodies – every particle has its history. Thus the decaying face of nature – in the literal sense of extant things in their evident erosion and decomposition – is shaped and expressive of "absorbed" historical events. And artistry, Benjamin explains, is less about expressive creativity than the arrangement of found, historically saturated particulars. The allegorist, in Benjamin's account, is a skilled manipulator of these rich natural-historical materials rather than a creator who produces fresh truth from the depths of his interiority. On this Benjamin cites Paul Hankhamer: "'Linguistic nature, like material nature, is a repository of all secrets. [The writer] brings no power to it, creates no new truth from the spontaneous outpourings of the soul'" (179). Shelley insisted similarly, in the "Preface" to *Prometheus Unbound*, that poetry indeed "creates, but it creates by combination and representation" (*SPP*, 208). Benjamin follows the artists of the period in calling their world a "stage" [*Schauplatz*], a phrase that de-natures even the environment surrounding more obviously artificial agents and things.

The most complete recent study of Benjaminian natural history, Beatrice Hanssen's *Walter Benjamin's Other History: Of Stones, Animals, Human Beings, and Angels*, concludes that Benjamin's use of the term *Naturgeschichte* was generally pejorative, "essentially express[ing] the dehistoricization of history that baroque drama put on display" (50-53). But

Hanssen perhaps too readily perpetuates Lepenies's account of natural history as "the atemporal, ahistorical conception of nature typical of the natural sciences and common before the advent of evolution theory" (50-53). In the case of Benjamin, two reasons why a "spatial" (and "facial") approach ought not to be dismissed as de-historicizing come immediately to mind: he famously conceived of the materialist historian's technique as one of "constellation" that draws temporally dispersed elements into tense simultaneity, and the "Baroque" constructivist practice that he limns here in the *Trauerspiel* book emphatically echoes Marx's famous statement about the pressure of "dead generations" within and upon the producers of present history: "Men make their own history, but they do not make it just as they please, but under circumstances directly encountered, given, and transmitted from the past" (*Eighteenth Brumaire*, 15).

I think, rather, that when Benjamin writes of a form of allegorical artistry that "recognized history" in nature's "eternal transience" he delineates a legitimately historical point of view from which the face of nature is not ahistorical by virtue of being spatial (179 [355]). In this view, a natural history of things will always be more than timeless taxonomy because the shapes of things, their *morphology*, is saturated with diverse events that contribute to each present shape. In this way, then, "Shape" – the name of many a main character in Shelley's poetry – is a material carrier for what Marx called "circumstances directly encountered, given, and transmitted from the past" (15). Not always a projection of the poet, a figure, as Lucretius is wont to say, is often "always moving and present before our eyes [*ante oculos semper sobis versatur et instat*]"; yet such a *simulacrum et imago* can be difficult to see if it constitutes the very stuff of sight (2.112-13).²¹¹

Baroque artistry, according to the dense Benjaminian passage cited above, responds with two interlinked strategies that we have seen recur in the materialist poetics of Shelley's *Mask*. On the one hand, this form of allegory transmits such natural-historical shapes as shapes (arrangements of given, historically charged particulars), "perpetuating their apprehension," as Shelley might say, as non-transparent carriers of historical circumstance (*Defense* §3, 512). In this way Shelley, with a suddenly self-effacing touch and a sudden reference to *De rerum natura*, attempts to re-compound the chancey Shape that might have coalesced from the grim elements at Peterloo. I have tried to show here the surprising, neo-Lucretian sense in which it is by recourse to this kind of figuration – the mode poems share with all other natural-historical materials – that a poem such as Shelley's participates with least possible subjective imposition in the documentation of its historical event. But Baroque artistry, Benjamin suggests, also stages an "allegorical physiognomy of ... natural history," a phase in which shape is subjected to discursive interpretation. Among the foregoing examples, Cowper's "Yardley Oak" most emphatically sets apart the moment when a poem begins to convert the matter that asserts itself as figure into discourse, taking the Oak's mute register of "unrecorded facts" as license to "perform / Myself, the oracle" and "to discourse / ... such matter as I may" (47, 141-3). Here, what Benjamin calls the "*Zeichenschrift* of transience" manifest on the face of nature – where *Zeichen* ('sign,' 'mark,' 'drawing,' 'figure,') attaches to *Schrift* ('script') broad pictorial and plastic possibilities (oaken, human or otherwise) – is taken as a call to tell history in the partial, restrictively human alphabet that Benjamin marks off with quotation marks: " 'History' ."

This is the dual movement, I want to suggest, that Shelley's *The Mask of Anarchy* stages when it passes from the Shape to an oratory framed "As if" it is the blood-stained Earth "Had turned every drop of blood / By which her face had been bedewed / To an accent unwithstood" (139, 143-5). Marked off in quotation marks, this speaking, like that of Cowper, Darwin, and Thomson before it, insinuates a back-story of tributary causes – both perceptively proto-Marxist

and ideologically blinkered – for the palpable change in the atmosphere that it has already depicted as a Shape. This is a strange claim to make about an oration given in the future-oriented jussive subjunctive: “Let a great assembly be” (262). But it is true to the way the verses that follow repeat the event of Peterloo rather than prophesy another kind of action or outcome; they move, again, from a great assembly of disenfranchised people to charging artillery, bloodshed, and the public outrage of which the poem is a part. The poem now adds to this chronicle a wide-ranging discourse on the complex of causes that may have contributed to the event it has already told twice, once as satire, and once as atmosphere of sensation: it names institutionalized poverty, wage slavery, workhouse and prison confinement, war with France, paper money, unequal legal justice, and priestcraft, among other elements. In other words, here the “Shape” is analyzed, partially and polemically, into its component parts. Didactic natural history poetry, *The Mask of Anarchy* suggests, knows that the past obtrudes “punctually” into the present. It converts this pressure into an address that, punctual in a different sense, bears forcefully on some present purpose.

Notes

¹⁷⁴ Jones Ed. *The Letters of Percy Bysshe Shelley (SL)* Vol. II: 563, 191.

¹⁷⁵ On this transformation, see Martin Rudwick, *Georges Cuvier, Fossils, Bones and Geological Catastrophes and Bursting the Limits of Time*; and on Romantic poetry's engagements with the new geology, see especially Noah Heringman, *Romantic Rocks, Aesthetic Geology*.

¹⁷⁶ The argument recalls the Foucauldian thesis about life in *The Order of Things*, discussed in Chapter One, upon which LePenies clearly draws. For the limitations of conflating the first occurrences of the word *biology* with the coherence of the discipline, see Joseph A. Caron.

¹⁷⁷ *Romantic Science: The Literary Forms of Natural History*, ed. Heringman, collects a series of case studies in Romantic-era survivals of natural history. Heringman's illuminating introduction to the volume acknowledges the discipline's contribution to both to continuing collaboration between literature and science and to its role in precipitating their differentiation, and takes up the methodological challenges and resources natural history poses for present-day historicist criticism. *Cultures of Natural History*, ed. Jardine, Secord, and Spary presents essays on the discipline's material, social, and literary practices and functions from the sixteenth century to the present.

¹⁷⁸ At stake here, once again, is the issue of "history in solution," the problem that Kevis Goodman – following hints from Raymond Williams, Lukács, and others – developed into a full-fledged theory of historical "presentness." Her powerfully subtle study details the ways in which eighteenth century and Romantic descriptive and didactic verse registered this form of not-yet "precipitated" history, "that immanent, collective perception of any moment as a seething mix of unsettled elements" (3). Reconstructing the period's documented sense of the threat of overwhelm inherent in its increasingly "eventful and information-laden present" (105), Goodman details a late-century Georgic mode whose historicism walked the line past which fully sensing the present or recovering the past could damage life, sympathy or sense. Here, Goodman shows, poetic mediation generally works to accommodate the potentially overpowering "touch of the real" to the limits of readerly pleasure, but in so doing it cannot but provide an "aperture" for its entry. Through this aperture, "unfixed elements" of the historical present are wont to rush in; in Cowper, Thomson and Wordsworth's poetry, these elements register as sensory and affective disturbances to the poems' pleasurable norms of mediation (50, 90, 8).

My kindred examination of the way such didactic poems are sometimes registering histories precisely in the moments when they appear to be "naturalizing" them is ham-fisted in comparison: I briefly unfold moments when poets in the same tradition take up an atomist vocabulary and ontology, much as Williams did, to represent "that immanent, collective perception of any moment as a seething mix of unsettled elements" (Goodman, 3) *as*, literally, a seething mix of unsettled elements. That is, I will be less concerned with the way history disrupts the poems that work to attenuate its impact, than with places where this kind of historicity is their explicit theme, the object of their didactic – even polemical and partisan – exposition. This approach reveals another dimension to the historical acuity Goodman has taught romanticists to recognize in Thomson, Cowper and Darwin: the figural materialist mode I adumbrate here appears particularly suited to represent the way *different* pasts inhere in our sense of the historical present – the way, that is, the "mixture" of presentness comprises not only diverse elements, but also diverse times. In this way, the feeling of the present is also the touch of former happenings. In the last section of this chapter, I begin to show how a particular mode of didactic speaking puts itself in the complex position of conveying the violent histories of particles that do not, in themselves, offer up their pasts in a human language. I suggest that this can occur more passively in figuration – the mode poems share with all other material bodies in Lucretian nature – and more aggressively, with more risk of misrepresentation and more potential for topical political utterance, when the poets begin to convert "matter" into "discourse" (Cowper) and oratory.

¹⁷⁹ Compare Hunt's *Examiner*, Aug. 22, 29 and Sept. 15, 19, 26.

¹⁸⁰ From Archibald Prentice's *Historical Sketches and Personal Recollections of Manchester, 1792-1832* (1851), citing the published results of the citizen's committee that he and other residents established to "arriv[e] at an approximation to the extent of death and calamity inflicted" through "a careful and rigid inquiry...made for many successive weeks" (167). The committee also raised and distributed funds for the wounded: "They were disabled from work; not daring to apply for parish relief; not even daring to ask for surgical aid, lest, in the arbitrary spirit of the time, their acknowledgment that they had received their wounds on St. Peter's Field might send them to prison—perhaps to the scaffold" (166-7).

¹⁸¹ Cited here from its re-printing the Manchester serial *Peter-Loo Massacre* No. 2, 17.

¹⁸² *England in 1819*, especially 3-46, 79-85, 529-32.

¹⁸³ I am thinking primarily of Susan Wolfson's critique in *Formal Charges*, and Marc Redfield's defense of the poem in "Masks of Anarchy: Shelley's Political Poetics." Each of their readings are treated in greater depth below. For fine exceptions to this dichotomy, see Chandler's chapter on "History's Lyre" (*England in 1819*, 525-554) and Robert Kaufman's "Aura, Still." Kaufman traces Shelley's influence on Brecht's notion of lyric realism and on Adorno's post-Kantian aesthetics in order to argue for lyricism as committed interventionist work (see also his "Intervention and Commitment Forever," review of *Formal Charges*, and my notes to Chapter 3). Chandler agrees that the poem suggests an Adornian frame for thinking about lyric historicity, but one that would situate this possibility in *The Mask's* re-working of periodical matter and its quotidian temporality, the poem's "relation," that is, "to the public media of post-Waterloo British Culture." In an interesting aside, he also asks for a history of the form of dramatic monologue as the place where lyric and historical casuistry meet. It is possible that my notion of the posture of the didactic speaker could be rethought in terms of that genre. Chandler chooses to focus on Shelley's *Ode to the West Wind* rather than *The Mask* in order to demonstrate the historicism of lyric form. With a glance at Spinozist accounts of imagination and prophecy, he argues that with the *Ode* Shelley positioned poetry against volition and with "the spirit of the age, precisely because this alignment lifted it clear of the calculating faculty": "Shelley is led by the events of post-Revolution history to construct an account whereby he and post-Revolution history make each other," in anticipation of the Marxian insight that humans make their history, but not just as they choose (553-4).

¹⁸⁴ See Noel Jackson's excellent article, "Rhyme and Reason: Erasmus Darwin's Romanticism" on the "extinction of a poetic species" – neo-Lucretian philosophical poetry – of which Erasmus Darwin was the representative. Jackson argues that such poetry was persecuted due to the perceived threat inherent in the "instrumental aesthetic logic" that unabashedly wielded poetic pleasure as a means to radical political ends, above all the perfectibilist end of greatest happiness for the greatest number (173, 177).

¹⁸⁵ Robert Stewart, Viscount Castlereagh, was the current Foreign Secretary and leader of the Tories in the House of Commons, infamous for his bloody suppression of Irish unrest and his support for Austria and the reactionary Holy Alliance in Europe (*SPP* n.316).

¹⁸⁶ Wolfson (195). On the poem's belated reclamation by the Chartist movement, see Anne Janowitz, "'A Voice from Across the Sea': Communitarianism at the Limits of Romanticism" and Horst Höhne's "Shelley's Socialism Revisited." On the subject of Shelley's proto-Marxism, see also Hoagwood, Foot, Scrivener, Kaufman and Steven Goldsmith (discussed below).

¹⁸⁷ In our context this process, especially with the archaic spelling of *passed* that heightens its sense of temporal lapse, resonates not only in the biblical register ("dust to dust") consonant with the apocalyptic satire but also in the Lucretian one (as in Goethe's notion of *Verstäubung*).

¹⁸⁸ *Formal Charges*, 199.

¹⁸⁹ See Chapter 4: "Apocalypse and Politics: Percy Bysshe Shelley's 1819," 209-260, especially 252-3.

¹⁹⁰ On the complexity of Wordsworth's critique and deployment of personification, see Sara Guyer, *Romanticism After Auschwitz*.

¹⁹¹ Chandler argues that Peterloo was a watershed in English historical consciousness regarding not only the state of political and parliamentary representation, but also the state of media representation: the widespread, near-simultaneous perception of the event's magnitude was itself enabled by a "hyperactive public sphere"; it triggered, moreover, a cycle of government repression followed by radical journalistic representation that catalyzed fresh experiences of "national simultaneity" (*England in 1819*, 79-85).

¹⁹² Teskey's chapter "Allegory and Politics" takes up this covertly violent allegorical work in the formation of bodies politic, examining the way "bodies enter into one body" (126) through two figures: *agora*, "the political space, where bodies are gathered together," and *voice*, that which issues from the inside and as such is the guarantor of personal integrity for Teskey: "separating bodies as integral, independent beings-at-risk, the voice keeps the agora open and the individual body enclosed in itself, capable of withholding or proffering its voice" (124, 129).

In his reading of the relation between voice and agora in the famous frontispiece to Hobbes' *Leviathan*, Teskey observes that the personal bodies that compound to form the torso and arms of a gigantic monarch record the tension between agora and voice: "the gathering of bodies through mutual need into one body and the separation of bodies by the voice." But Teskey's reading unmasks the fact that the apparent separate integrity of the little bodies of the subjects is a "collective illusion." The condition of entry into the Hobbesian body politic was precisely the surrender of the voice in exchange for bodily protection – and in this surrender, "the subject loses the very body, as private interior" s/he had hoped to preserve:

The subjects inside Leviathan do not have interiors because the monarch, whose political body contains their political bodies, speaks for them all. They cannot even scream, if the scream is understood, as it is in Picasso's *Guernica*, as the final political act of the voice. (129)

As we saw in Chapter Three, Shelley's writings continually test the notion of integral corporeal individuality upon which Teskey relies, but, in the context of our discussion, Teskey's approach to this image underscores the sense in which both representations of bodies politic – Hobbes's and Shelley's at the opening of *The Mask* – rely on the multitude's incomplete knowledge of the vulnerability entailed in their incorporation as subjects. *Leviathan's* corollary to what I have suggested is the "multitude's" lack of access to the allegorical plane occupied by readers and the poet in *The Mask*, is the way the Hobbesian subjects, ranged in geometrical perspective as though on flat ground despite the contours of the monarch's torso, with their backs to the knowing reader, betray no perception of their participation in the macroscopic body.

Teskey's essay goes on to examine, as has the literature after Agamben on sovereignty and the state of exception, the sudden eruptions of state violence that prove that political subjects are not safe, and that "political speaking is always a speaking at risk" of retributive violence (132). Statements from the authorities – "our should have been protectors," as the outraged author of the Manchester serial *Peter-Loo Massacre* (No. 1, 10) put it—frankly expressed the logic of safety secured at the expense of individual citizens: recall that widely published letter Sidmouth wrote to express the "great satisfaction" of the Prince Regent, commending the Manchester area military for "prompt, decisive, and efficient measures for the preservation of the public tranquility" (No.2, 17). Shelley came close to depicting the "discharge of interiority" that comes with enclosure into a national body – and the pain inflicted upon what Teskey alternately calls the "matter," "organic substrate," or "region of life and growth" – in the Teskeyan language of a "scream" in the draft line: "And the earth where're he went / A cry Like a trampled infant sent" (Jones, 110, compare Bixby, vol.11, 40).

¹⁹³ Though it is tempting to imagine that Lucretian materialism did not yet know the philosophical distinctions between reality and appearance, substance and representation, in fact Epicurean philosophy was targeted against the Platonic theory of forms, and ancient critics recognized in Epicurus's canon the subordination or even elimination of *logic* in favor of the other two traditional branches of philosophy, ethics and physics (Asmis 30, 19). Moreover, by the time of Lucretius's *De rerum natura*, *prose* was already an established medium for philosophy and technical subjects (Schuler and Fitch, 4).

¹⁹⁴ The "steam of gore" formulation appears in a draft manuscript version of the poem (qtd. in Jones, 110).

¹⁹⁵ Chapter Five of *Shelley's Satire: Violence, Exhortation, and Authority*, "Satire of Succession in *The Mask of Anarchy*," links the vaporous Shape to the materials of popular graphic satires – "transparencies," graphic medleys, dioramas, and pantomimes—finely articulating the media-cultural dimension of Shelley's materialism in the poem (94-123).

¹⁹⁶ See also *DRN* 3.417-33.

¹⁹⁷ On the Romantic critique of Locke's notion that bodily sensation offered only "raw" impressions for the mind to process into knowledge, see Simon Jarvis, "Blake's Spiritual Body," and, more extensively, *Wordsworth's Philosophic Song*, especially Chapters 2 and 6.

¹⁹⁸ Jackson, *Science and Sensation in Romantic Poetry*, 64-99.

¹⁹⁹ In *Mab*, "every grain is sentient both in unity and part / And the minutest atom comprehends / A world of loves and hatreds" (4.143-5), and the neo-Lucretian materialism expressed, following d'Holbach, exemplifies what Althusser would diagnose as a frequent "misreading" of Epicurean aleatory materialism: a misreading that conforms it to a materialism of "necessity and teleology, that is to say, a disguised, transformed form of idealism" (*Philosophy Of the Encounter*, 168). Indeed, one climax of the poem is its paean to "Necessity!" guaranteeing that although "All seems unlinked contingency and chance: / No atom of this turbulence fulfils, / A vague and unnecessitated task" (7.171-2). But, as we have seen in *The Triumph of Life*, Shelley is also capable of sustaining the thought of contingency – recall blinded Janus at the helm of the Car of Life – and even "Necessity" in *Queen Mab* works to dehumanize the purported "sentience" of the natural universe: "Because thou hast not human sense, / Because thou art not human mind" (7.218-219).

²⁰⁰ "The bodies must incline a little [*paulum inclinare necesseset corpora*]" (Loeb, 2.243).

²⁰¹ On Shelley and Erasmus Darwin, see the eponymous article by Desmond King-Hele, as well as his *Erasmus Darwin and the Romantic Poets* and *Shelley: His Thought and Work*.

²⁰² Cf. Shelley's *The Mask of Anarchy*, "And the blood thus shed will speak / In hot blushes on their cheek" (350-1).

²⁰³ The monarch-mushroom equation reads:

HENCE when a Monarch or a mushroom dies,
Awhile extinct the organic matter lies;
But, as a few short hours or years revolve,
Alchemic powers the changing mass dissolve;
Born to new life unnumber'd insects pant (*Temple of Nature* 4, 383-7).

On the issue of recombination, consider also the following note from *The Botanic Garden*, typical of Darwin's pervasive interest in the natural "economy" as a closed system of material exchanges between vital, chemical, meteorological and geological formations within the "terraqueous globe":

In the atmosphere the inflammable air is probably perpetually uniting with vital air, and producing moisture, which descends in dews and showers; while the growth of vegetables, by the assistance of light, is perpetually again decomposing the water they imbibe from the earth, and while they retain the inflammable air for the formation of oils, wax, honey, resin &c. they give up the vital air to replenish the atmosphere. (“The Economy of Vegetation,” 3.4, n204, p.81).

²⁰⁴ Darwin next wishes for mineral vengeance, relating the tale of the general Cambyses, whose ravaging army “deluged [the country, Thebes] with blood” and were punished by famine and sandstorms.

²⁰⁵ See two illuminating articles on this subject by Tim Fulford, “Britannia’s Heart of Oak: Thomson, Garrick, and the Language of Eighteenth-Century Patriotism,” and “Cowper, Wordsworth, Clare: The Politics of Trees.”

²⁰⁶ The fragment ends in an unspoken pun that contrasts the serial attrition of atoms to the absolute singleness and simultaneity of “One man alone, the Father of us all” - *Adam* – who “learn’ed not by degrees,” who “At once, upstood intelligent survey’d / All creatures, with precision understood / Their purport, uses, properties...” (167-175).

²⁰⁷ Thomson gives the example of Admiral Edward Vernon’s defeat in a massive attempted invasion of Cartagena de Indias (modern Columbia, then a major port in the Spanish Carribean) in 1741: “Such as, of late, at Carthagen, quenched / The British fire. You, gallant Vernon, saw / ... To infant weakness sunk the warrior’s arm / ... you heard the groans / Of agonizing ships from shore to shore” (*Su.* 1041-2, 1046-7).

²⁰⁸ *Romanticism and Colonial Disease*, 207, 218.

²⁰⁹ Mead sees Plague as “bred in the Eastern or Southern Parts of the World,” and propagated by the concurrence of three causes: “the great Quantity of active Particles,” or “*contagious Atoms*,” “thrown off” the bodies of diseased persons, and then “drawn in with the Air we breath”; a “Constitution of the Air” – hot, damp, tropical – that “happens to favor *Infection*”; and “*Goods*” – especially with “soft, porous bodies,” like the animals who produced the “infectious *Effluvia*” in the first place – “*transported from infected Places*,” (*A Short Discourse Concerning Pestilential Contagion*, 12-19, 32).

²¹⁰ Kaufman, “Aura, Still.”

²¹¹ Indeed, in this instance, Lucretius is speaking of the make-up of light.

Coda:

SOME ROMANTIC ATOMS OF MARX

*History is the true natural history of man
(on which more later).*

—Karl Marx²¹²

1. *Questions for Marx*

Unmistakable features of the romantic materialist attitude sketched out over the past chapters re-appear at the start of a materialism better known to the present day: Karl Marx's "materialist conception of history." Marx wrote his doctoral dissertation on classical atomisms, a dissertation that champions Epicurean materialism (like that of *De rerum natura*) over its Democritean predecessor, thereby offering *this* dissertation an invitation for an endpoint that cannot be refused. The seven small essays that follow take up early Marxian inflections of issues that by now will be strikingly familiar and should help cast light on Marx as a neo-Lucretian in the romantic style: above all, a notion of "sensuous [*sinnlich*]" science that, like Goethe's "tender" kind, is adamantly empirical *and* anything but dispassionate or invulnerable; a concept of "living form" that re-conceives the organic body as shot through with the chance trajectories of inorganic ones; an interest (with help from Althusser) in contingency as a catalyst for living, textual, and social form; and an approach to "natural history" that makes it, as for the poets of the last chapter, indispensable rather than inimical to historical thinking. Each piece should touch differently on an underlying question: how, if at all, does the atomist and romantic materialism of nature relate to that of history? Or, as I approach this question in the last essay here, why does Marx care about equivocal generation?

But I also begin to interrogate an apparent paradox: for the romantic materialist thinkers discussed in the prior chapters, pushing past the aesthetic and biological preoccupation with organic autonomy meant courting the objective and thing-like aspects of the self. Yet, as Barbara Johnson observed in *Persons and Things*, rhetorical figures move in the direction of desire, and while there are numerous figures that confer personality to things (*apostrophe, prosopopeia, anthropomorphism, personification*), we have none for the reverse effect – only "names for an involuntary and lamented process" (21). Chief among them, of course, is Marx's term, *reification*. A Latinate translation of Marx's *Verdinglichung* [thingification] and *Versachlichung* [objectification], the term covers both becoming-thing and becoming-object, having gained in salience for Marxist criticism with Lukács's "Reification and the Consciousness of the Proletariat" (1923). Briefly, *reification* denotes commodity capitalism's success at casting the human social relatedness of workers as an attribute of the objects they produce, leaving human makers in thing-like, asocial alienation from their products and each other. "There could be something sobering and lucid," Johnson intimates, about the figure that would "locat[e] human beings in the realm of the inhuman"; but, she concludes, "it is never welcomed" (21).²¹³ So there

it is some tension worth attending to when we find Marx advocating, in precise echo of Goethe, the virtue of “objective activity,” as well as the virtue of something he calls “the rich, living, sensuous, concrete activity of self-objectification [*Selbstvergegenständlichung*]” – the fun not just of making objects but of being one (*EPM*,122). This rapprochement with nonhuman “*entities, objects,*” and “*things*” (terms Marx uses as rough synonyms here) occurs moreover in the *Economic and Philosophical Manuscripts of 1844*, texts Althusser rendered rather notorious for their “humanism.” How then does the embodied impressionability valued in “tender,” “sweet,” and “sensuous” sciences run, but also outrun, the risk Marx identified as “reification”?

2. *How ironic*

Althusser’s late essay, “The Underground Current of the Materialism of the Encounter,” is an “*a posteriori construction*” culled by François Matheron and Oliver Corpet from his manuscripts for a book on the subject.²¹⁴ It begins with Lucretius’s account of the *clinamen* in Epicurean atomism as the purest expression of a suppressed tradition of radically aleatory materialism that Althusser wishes to delineate and revive for the purpose of re-thinking Marx. He argues that this strain of materialism has occasionally surfaced, if only to be misread, in the writings of Machiavelli and Spinoza, Hobbes and Rousseau, Heidegger and Derrida, and Marx and Engels. In places, the essay shows, their writings evince a materialism that manages – like the scandalous Epicurean notion of an atomic swerve that is both causeless *and* world-producing – to sustain the hypothesis that chance precedes reality, necessity, law, and all the forms that “take hold” (169, 171). Chance chanced to originate all these, but did not mean to or need to.

This “materialism of the encounter,” Althusser contends, differs radically from the materialism “on record,” which is really a “disguised form of idealism” (168). Motivating its matter with “necessity and teleology,” such pseudo-materialism is admissible to the canon of rationalist philosophy because it does not threaten the “priority of Meaning over all reality” (168). The “materialism of the encounter” that Althusser traces – and here we can begin to hear a familiar Marx – makes meaning and philosophy epiphenomenal, makes them contingent ways that thinkers set about working, wittingly and unwittingly, among the other moving elements that happen to *gel, crystallize, “to take place”* (194, 170, 172). Epicurus’s audacious thesis and its subsequent resurfacings, Althusser argues, were too dangerous for outright neglect: instead, the materialism of the encounter “was very early on interpreted, repressed and perverted into an *idealism of freedom*” (168).

Maybe Althusser trusts that, in the context of Marx, we have an example ready at hand of this “misreading, which is not innocent” (168). Such a misreading could maintain that “declination represents the real soul of the atom, the concept of abstract individuality,” or that “the principle of Epicurean philosophy is...the absoluteness and freedom of self-consciousness” (*D* II.1, 5/12; 5, 7/13). The philosopher who wrote these lines is Karl Marx, in his surprisingly idealist dissertation on classical materialism, “The Difference Between the Democritean and Epicurean Philosophies of Nature” (1841). In it, Marx celebrates Epicurus for pioneering “the natural science of self-consciousness,” an atomism he argues is patently designed not to research natural phenomena (like Democritus’s inferior empirical and experimental programme), but to objectify the contradiction “in man” between “essence and existence, between matter and form,” and ultimately to affirm man’s power to “*cru[sh]* within himself his relative being...and mere nature” (II.5, 8/13; 1, 6/12).

Marx's interpretation of Epicurus's atoms and their motion provides an efficient example of his idealizing thesis: atoms are "bodies conceived in absolute self-sufficiency." Describing their initial motion as falling, as rain, Marx argues, Epicurus expresses their fall into "materiality" and "non-self-sufficiency" (II.1, 3/12). Just as the independent point loses its identity in a line, in falling atoms are "degraded" into "the formless substrate of the world of appearance" (II.3, 3/8). The *clinamen* supervenes to "idealise" (Marx's word) this situation: with it, the atom "frees itself from its relative existence...by abstracting from it," just as the "entire Epicurean philosophy swerves away...wherever the concept of abstract individuality, self-sufficiency, and the negation of all relation to other things must be represented in its existence" (II.1, 5/12).²¹⁵ That is, Marx is precisely not interested in seeing what we have seen repeatedly over the previous chapters: that the *clinamen* brings elements *into* relation, realizing the "contingency" of matter in the root sense of at least two beings coming into con-tact (from *contingēre*, to touch together, itself from *con-* (with) + *tangēre* to touch). The *clinamen*, I have argued, is the little turn (trope) into contingency that Epicurus and Lucretius attribute to matter; they do so because, explains Lucretius, it seems to be by way of a "variety of connexions, weights, blows, concurrences, motions [*varios conexus pondera plagas / concursus motus*]" that "all things are brought to pass [*per quae res quaeque geruntur*]" (DRN 1.633-4, Loeb).

Whereas Althusser turns to Epicurean atomism as the forerunner of Marx's materialism at its most radical, its most capable of unmasking "idealism in disguised form," Marx turns to Epicurean atomism to delight in the way Epicurus frees "abstract-individual self-consciousness ... from its material mummery" (D II.5, 6/13). When Althusser observes that "the underground materialism of the encounter" was "very early on interpreted, repressed, and perverted into an *idealism of freedom*," perhaps he also means that such materialism was also repressed in just this way "very early on" in Marx. Indeed, the editors of Althusser's essay note that at one point he acknowledged Marx's dissertation in a footnote, although this footnote was left out of later versions of the work: Althusser's footnote called Marx's theses "a splendid piece of nonsense, which the thought of his 'youth' made inevitable: an interpretation of the 'clinamen' as freedom" (*Philosophy of the Encounter* 206, n.54).

3. *Breaking or floating*

Althusser reflected influentially on the problems that the belated publication and translation of Marx's early, disconcertingly idealist writings posed for Marxism, and about how to periodize the changed oeuvre. In the essays of the early 1960s gathered in *For Marx*, he posited for Marx "an unequivocal 'epistemological break'" in 1845, separating "the 'ideological' period before and the scientific period after." As Althusser unfolds his periodization scheme, the idea of a break becomes more elastic and full, "the scientific period" comprising not just "*the Mature Works*," but first, "*the Works of the Break*," and "*the Transitional Works*."²¹⁶

This periodization of the "break" was already a conscious attempt to shield Marx's oeuvre from developmental readings that looked backward from Marx's maturity to distinguish "still idealist" and "already materialist" elements in the early works (what Althusser pointed out were crypto-Hegelian readings of Marx's gradual rejection of Hegel). Althusser also set out to free Marxists from the obligation to accommodate the very different early writings into their understanding of what makes the distinctive contribution of "Marxist philosophy."²¹⁷ Indeed, for Althusser, the *Manuscripts of 1844* – above all because they partake of an uncritical *humanism*,

because their lynchpin notion of “alienated labour” seems sanctioned by an “*essence of Man*” taken for prior, universal and permanent – represent “the Marx *furthest from Marx*.”²¹⁸

The “Materialism of the Encounter” essay is equally anti-humanist but, through its engagement with ancient atomism, more rigorously anti-teleological than those in *For Marx*. Implicitly, it troubles that earlier periodization, which though stressing Marx’s “retreat” through European *intellectual* history from Hegel to his 18th century primary sources, neither unsettled the forward trajectory of Marx’s own intellectual progress, nor ceased to put forth intelligible causes even for “the break.” But the later piece is from the Althusser who begins to write again in 1982, “after the ordeal that I do not emerge from without trembling.”²¹⁹ What concerns *this* Althusser is history, not least his own, as “haunted by a *radical instability*,” and materialism “not of a subject, but of a process, a process that has no subject, yet imposes on subjects... with no assignable end” (196, 190). Here agents and circumstances “can change without reason” and history seizes by *surprise*:

This is what strikes everyone so forcefully during the great commencements, turns, or suspensions of history, whether of individuals (for example, madness) or of the world, when ... the cards are dealt out again without warning, or the ‘elements’ are unloosed in the fit of madness that frees them up for new, surprising ways of taking-hold.... No one will balk at the idea that this is one of the basic features of the history of individuals or the world, of the revelation that makes an unknown individual an author or a madman, or both at once. (196)

In the method of this later assessment of what is most valuable in Marx, even “The Mature Works” are allowed to oscillate, like authorship and madness, to backslide into teleological and necessitarian forms of argument in which everything appears predestined to cohere.²²⁰ But in *Capital*’s “magnificent... heart,” writes Althusser, in language familiar to us from Kevis Goodman’s attention to *presentness* as not-yet-precipitated history “in solution,” modes of production are shown rather to coalesce opportunistically from elements that “exist in history *in a ‘floating’ state* prior to their ‘accumulation’ and ‘combination’” (Althusser, 199,198).²²¹ In a thought that in our context recalls E. Darwin, Cowper, and Thomson’s depictions of bodies whose diverse elements obtrude opportunities for tracing divergent histories, Althusser continues that each element “result[s] from its own specific history, in the absence of any organic, teleological relation between these diverse histories” (198).²²²

In this later context, the context of a “historico-aleatory” materialism that Althusser depicts as itself surfacing with suitable inconstancy both within the twenty centuries that separate him from Epicurus and within a single text (*Capital* itself), Althusser is no longer the stern monitor of Marxist chronology:

Chronology hardly matters in this business, because each of these bodies of thought developed for itself... and because what is in question is, above all, resonances of a tradition buried and then revived, resonances which must be registered (179-180).

This dissertation has been involved in a similar project, registering resonances of the same materialist tradition buried and revived, albeit attuned to a different set of its signal features. Above all, we have followed accounts of bodies that, decaying, cannot but produce figures that are the substance of sensation and of the mixed atmosphere of any historical present; and

examined poetic sciences and scientific poems that present themselves as outcomes of an empiricism suffused by the objects represented. Such is the mortal and materialist science of life put forth in Shelley's *Triumph* and in Goethe's turn to the botany of material dispersion that thickens the medium [*Trübe*] of the botanist's seeing. Such texts are knowledgeable because they represent effects of material interaction among all kinds of natures. Althusser too notices that in such materialism, "the 'world'" is "*experienced in its dispersion*" (179). From this perspective, in which the most sophisticated "scientific" habitus has less broken with "ideology" than cultivated an extraordinary sensibility to the ambient pressures that make it up, a "scientific" perspective could not succeed an "ideological" one. It therefore makes sense that *these* markers of aleatory materialism surface elsewhere in Marx, especially in the ostensibly embarrassing "Early Works" and the equivocal "Works of the Break."

4. '*human sensuousness is therefore embodied time*'

Notably, in Marx's dissertation on ancient atomism, the *eidola* occur in the chapter on time and only there.²²³ They establish an "interconnection between time and sensuousness" that the dissertation's idealizing conclusion can only assimilate by fiat, but that returns in the 1844 *Manuscripts* to open a historically contingent dimension in the vexed and vexing notion of "species being" [*Gattungswesen*]. In the fourth chapter of his dissertation's second part, "Time," Marx takes up the distinctive feature of Epicurus and Lucretius's approach to that subject. Time has no independent existence in their philosophies – *tempus item per se non est* – but is rather an "accident" (Luc.: *eventum*) of body:

Time also exists not of itself, but from things themselves is derived [follows] the sense of what has been done in the past, then what thing is present, further what is to follow after. Nor may we admit that anyone has a sense of time by itself separated from the movement of things and their quiet calm.

[*tempus item per se non est, sed rebus ab ipsis / consequitur sensus, transactum quid sit in aevo, / tum quae res instet, quid porro deinde sequatur ; / nec per se quemquam tempus sentire fatendumst / semotum ab rerum moto placidaque quiete.*] (DRN, 1. 459-63 Loeb, [mod.])

Marx is interested in this "sense of time," in the way that time is no sooner posited as an event of bodies than the question becomes one not of time alone but of time sensuously perceived. He emphasizes that it is in such time *sensed* that the key Epicurean insistence upon the changefulness of extant things is apprehended. The sense of time (which Marx, departing from the DRN, restricts to a specifically human and conscious sense of time (4, 2/6)) marks a difference, apprehending natural appearances in their fundamental transience, registering "change as change."

For Marx this feature of Epicurean philosophy leads to a conclusion striking despite its anthropocentric form: "*Human sensuousness is therefore embodied time, the existing reflection of the sensuous world in itself*" (II.4, 2-3/6). It seems that human sensation realizes time in two senses, producing temporal awareness *and* giving time a body: sense organs register the impact of matter's serial *eventa*, sensing time by way of an alteration that, being physical, becomes time's changing corpus. Though Marx's chapter constantly asserts the privilege of "*Human sensuousness*," the "conscious sensuousness" in which the world of appearances achieves self-

reflexivity, anthropomorphism does not quite survive such a thought intact. Once Marx equates “human sensuousness” with “embodied time,” the “human” body’s shape is time’s and not its own; in its sensuousness, “Human” morphology is made up of what Lucretius called “the movement of things and their quiet calm” (1.463, qtd. above). As soon as the 1844 *Manuscripts*, Marx will assert that “*Sense-perception* (see Feuerbach) must be the basis of all science,” and not because it stands outside time’s accidents, but because it varies with them. This is one way that “History itself is a *real* part of *natural history*,” and we will encounter others (EPM 90-91).

In the dissertation Marx recognizes that it takes *eidola* to clarify this “interconnection between time and sensuousness”:

The *eidola* are the forms of natural bodies which, as surfaces, as it were detach themselves like skins and transfer these bodies into appearance. Thus in hearing nature hears itself, in smelling it smells itself, in seeing it sees itself. Human sensuousness is therefore the medium in which natural processes are reflected as in a focus and ignite into the light of appearance. (II.4, 3/6)

Bringing in a human agent at the end of this passage certainly helps Marx to clarify these events of “hearing,” “smelling,” and “seeing”: with this move, all nature seems to culminate in human sense perception, attaining there to a form of self-recognition. But the oddly embarrassing thought of nature smelling itself through my nose (Marx discretely spares us Nature’s auto-affection in the more intimate sense organs) indicates that this idea of sensuousness requires no human subject: with the *eidola*, “smelling” is reconceived as the outcome of previously separated parts of nature coming into contact. (For instance, nose atoms and atoms of *eidola* of “Cicilian saffron,” to borrow an odor from *De rerum natura* (2.416)). In his discussion of time and the *eidola*, as with no other part of his study of ancient materialists, the atomists’ hard premise that humans *are* nature – and not all of it, not even its essence, aim or apex – troubles Marx’s overall, subjective idealist thesis.

Recall how Goethe’s *Dauer im Wechsel* [“Durance in Change”] dramatized the time lapse at work in the interval of perception: the beloved decays into an image, and is changed, “an other,” by the time the speaker apprehends this image. Goethe’s late theory of metamorphosis and Shelley’s *The Triumph of Life*, as we have seen, both mobilize Lucretian simulacra to think about appearing as passing away. Marx’s chapter next echoes this thought about perceptibility as transience:

Finally the interconnection between sensuousness and time is revealed in such a way that the temporal character of things and their appearance to the senses are posited as intrinsically one. For it is precisely because bodies appear to the senses that they pass away. (II.4 3/6)

Marx soon brings the chapter on “Time” to an abrupt conclusion by folding it back into his overall claim that Epicurus is telling the “the natural science of self-consciousness.” On this reading, atoms are allegories of the subject, and Marx asserts that his discourse on time and the *eidola* has shown that “*just as the atom is nothing but the natural form of abstract, individual self-consciousness, so sensuous nature is only the objectified, empirical, individual self-consciousness*” (3-4/6). But just prior to this conclusion, Marx’s own paragraph – the one cited at length above – trails off, as though involuntarily following the *eidola* out of this pat allegoresis:

That is, the *eidola*, by constantly separating themselves from the bodies and flowing into the senses, by having their sensuousness [*Sinnlichkeit*] outside themselves as another nature, by not returning into themselves, that is, not out of the diremption: dissolve and pass away (II.4, 3/6, mod.)

Keeping to plural and particular *eidola* (rather than the totality, Nature, into which the chapter so frequently subsumes them), the sentence manages to present their dissolution without motive or recuperation. It also registers their fundamental relationality, the way they distribute sensuousness *between* bodies separated in distance and time. Here, for a moment, Marx's text documents discrete *eidola* as natural bodies in their externalizing radiation, as natures that, if they can be said to "return" at all, do not "retur[n] into themselves," but into "another nature."²²⁴

In Lucretius's text, although not in Marx's, the faculty of accident [*eventa*]-detection gets critical and political fast: while a property cannot be disjoined from a thing without destroying it, accidents "may come and go while the nature of things remains intact" (1.456-7). Lucretius's first example of a dispensable accident is "slavery," followed by "poverty and riches, freedom, war," and "concord." In his dissertation, Marx's sensuous time operates among sentient bodies without historical specificity, abstracted from accidents and events in their collective and particular dimension. But the 1844 *Manuscripts* reformulate time's embodiment in human sensuousness as a question of the societal organization of private property, working conditions, sexual relations and exchange. In conformity with the system of private property, for instance, "organs" of "seeing, hearing, smelling, tasting, feeling, thinking, being aware, wanting acting, loving" operate as senses "of *possessing*, of *having*" and "*direct*, one-sided *gratification*" (EPM 87).

Now Marx leaves no doubt that human sensuousness embodies time in time's firmly historical dimension: "The *forming* of the five senses is a labour of the entire history of the world down to the present" (an insight arguably pioneered in Blake's depiction of "eight millions and eight" laborers at work in "within the Optick Nerve"). Nor is "man" to be thought any longer without the historical repository of his sensorium: against Hegel, for whom, he says, "man = *self-consciousness*," Marx intends to represent him as "exhaling and inhaling... a natural, corporeal, sensuous, objective being" (114-115). In any case, the issue of human sensuousness as Marx works through it with the atomists makes it difficult to attribute permanence to the conception of the human found in his early "humanism." In so far as humans are sensuous, they are permeated by time, time's bodies: their privilege (and it is unquestionable that they are privileged in these texts) is yoked to their heightened temporal sensitivity.

5. 'Species being' and 'man's inorganic body'

What does it mean for a human being to have an inorganic body? At the end of the 1844 *Manuscripts*' first discussion of "species being," Marx's disorienting depiction of human sensation as nature's self-feeling recurs as the structure not only of sensation, but of other psychosomatic processes as well. But this will take a moment to unfold. "Man," Marx begins, is a "species being" in so far as "he treats himself as the actual, living species; because he treats himself as a *universal* and therefore a free being." These grandiose claims to freedom and universality are ultimately described, as in Marx's dissertation, in terms of non-human nature's relation to itself, this time going hand in hand with a more sustained attempt to think human being, as the ancient materialists did, as just one species of nature among others. Indeed, here

the specific life of “man” concerns his capacity to “treat himself” as the conduit for other kinds of being:

The life of the species [*Gattungsleben*], both in man and in animals, consists physically in the fact that man (like the animal) lives on inorganic nature, and however much more universal man is in comparison with the animal, that much more universal is the sphere of inorganic nature on which he lives. Just as plants, animals, stones, the air, light, etc., constitute a part of human consciousness in the realm of theory, partly as objects of natural science, partly as objects of art – his spiritual inorganic nature, spiritual nourishment which he must first prepare to make it palatable and digestible – so too in the realm of practice they constitute a part of human life and human activity.... The universality of man is in practice manifested precisely in the universality which makes all nature his *inorganic body*—both inasmuch as nature is (1) his direct means of life, and (2) the material, the object, and the instrument of his life-activity. Nature is man’s *inorganic body*—nature, that is, in so far as it is not [already] itself the human body. Man *lives* on nature, which means that nature is his *body*, with which he must remain in continuous intercourse if he is not to die. That man’s physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature. (75, mod.)

Two preliminary observations: first, “universality” here is relative rather than absolute, established in comparison with that of other animals. It concerns the interactive scope of a certain category [*Gattung*] of being, that is, just how many of the universe’s items become objects in its physical or mental life. Second, the operative version of consciousness is empirical, in so far as “the realm of theory” and the “realm of practice” are populated by the same inventory of sensuously experienced objects: “plants, animals, stones, the air, light, etc.” do double duty as objects of consciousness and of physical contact here. Indeed, as we will see in the next section, the capacity to grant objects this constitutive role in consciousness without eviscerating their practical reality turns out to be key to Marx’s hope for humans as a social and natural species among others.

When representation in science and art is described as a kind of object-cooking – “nourishment which he must first prepare to make it palatable and digestible” – Marx demonstrates the way his “practical realm” in fact encompasses the “theoretical” one. The species in question nourishes itself with objects, whether eating or theorizing, incorporating them (making them its *body*) in processes conceived as metabolic because utterly necessary to its life: “Man *lives* on nature, which means nature is his *body* with which he must remain in continuous intercourse if he is not to die.” When Marx writes that through this “continuous intercourse” man “makes all nature his *inorganic body*,” he re-draws the boundaries of embodied human life in light of this dependency, imagining it as co-extensive with all the other kinds of bodies that pass into and out of the present skin-bound one, which is the only part of nature typically understood as “itself the human body.”

This expanded body is “*inorganic*,” in technical contradistinction from the word that, as the reader knows too well by now, designated the living body in its causal self-sufficiency and autonomy. Marx points out – as had Goethe, Shelley, Blake, and others – that in theory and in practice we separate a single living body, even a human one, from other bodies at the cost of its life. The “*organic*” body that attests to my powers of self-making intersects but does not exhaust

my body, whose “inorganic” extension attests to the others who make and unmake me in the course of trajectories that do not have me as for their agent or aim – “nature... linked to itself.” As a picture of the heteronomy of humans’ thinking and sensing bodies, working on and worked upon by agents and materials not subject to their volition, “species being” is legible as the logic of life complementary to Marx’s upcoming theory of historical agency, in which humans are determined and determining historical agents: “active under definite material limits, presuppositions and conditions independent of their will,” they make history but not just as they like (*GI*, 169).

It is, then, in “conducting himself [*sich verhalten*]” as a being composed, traversed, and imprinted by objects which rather trouble than affirm his self-possession and species privilege that Marx’s man attains to “species being.” This humbling form of human universality is in touch with that of *De rerum natura*, whose speakers range blithely through the sum of existing things (Lat. *universum*), but only by following an unexalted common denominator from which no species of thing (even philosophers) is exempt. In consequence the movements of this substrate take precedence over the compound bodies of things, whose boundaries diminish in importance as grammatical agency and the privilege of philosophical attention passes to the matter of transformation. Lucretius, writing about a pasture, depicts not cows grazing on grass and water but grass and water changing into cows: “Streams, leaves and pleasant pastures change themselves into cattle.” Then of course, “the cattle change themselves into our bodies, and often from our flesh the strength of wild beasts and the bodies of winged birds gain increase” (2.875-8, Geer).

No sooner does Lucretius depict grass transforming into humans than he gives those humans to the birds, brooking no illusion that humans could be the endpoint of nature’s successive in- and ex-corporations, or that these could terminate in a macrocosmic body in the shape of “man.” Though I have read it otherwise, Marx’s passage on “species being,” above, perhaps leaves the door open to such interpretations: however much the notion of “man’s *inorganic* body” disrupts his pretenses of sovereignty over self and nature, arguably such phrases keep “man” as their reference point and might terminate unapologetically in the absorption of non-men into *his* identity. To adjust Marx’s italics a little, “Nature *is man’s* inorganic body.” But in his final manuscript of 1844, “Critique of the Hegelian Dialectic and Philosophy as a Whole,” Marx begins to more firmly establish the way that the objects and others that make up human psychosomatic life activity persist in their difference outside of it as well. Marx’s human cannot subsume the universe into his person: no, the last *Manuscript* insists, the human who thought he could was called Hegel. With absolute and brilliant “*egoism*,” Marx explains, Hegelian phenomenology sought “*the return of the object into the self*,” collapsing at last out of absolute self-reflexive “*boredom—the longing for content*” (113-114,123). Working out an alternative position, it turns out, requires Marx to assume the attitude Goethe called “objectively active” and “tender empirical.”

6. Objective activity

Marx begins his “Critique of the Hegelian Dialectic and Philosophy as a Whole” by examining how it is that Hegel can characterize an object’s “incorporation into self-consciousness” as *return* and *re-appropriation*. In an ungenerous but generative reading of the *Phenomenology* and *Encyclopedia*, Marx argues that Hegel takes all “*entities, objects*,” and

“things” from the outset as estranged “creature[s]” of the self. Objects and things are, by definition, the unrecognized positings of self-consciousness; self-consciousness mistakes these “objectified” fractions of itself for other, external kinds of being. Marx emphasizes that in consequence Hegel must aspire to annul not one particularly bad variety of subject-object relations but “Thinghood” and “Objectivity as such”: any object is, by definition, illegitimate and an affront to self-consciousness – every object is self-consciousness objectified and constitutes an instance of self-consciousness’s estrangement from itself. Marx points out that in this system “man” is as unreal as anything else: legitimate “only in the shape of mind,” as “a *non-objective, spiritual being*” (110-113). Because all entities – including religion, state-power, and nature – are at bottom “*spiritual entities*” and “phases of *mind*,” Marx’s Hegel can situate “The whole *history of the alienation-process*” – including its resolution in “Absolute Knowledge” – within the purview of philosophical abstraction (110).

Marx’s rejoinder to Hegel is above all a vindication of “objectivity” – not an “objectivity” that could take “subjectivity” as its opposite but an “objectivity” extraordinarily close to that of Goethe the morphologist and Blake’s *Antamon*. Those scientific selves accentuated their material vulnerability to transformation by the non-human “objects” at hand, opening themselves to the agencies of those objects in a way that revealed just how little (in thought as in grammar) we tolerate passivity from subjects when there are objects to be had. Indeed, Goethe seemed ready to consent *to be* an object at the scene of experiment, so that on close inspection, the phrase he adopted to characterize his epistemological attitude – “objectively active” – mischievously connoted both his acting-like-an-object and his objects’ actions upon him. To criticize Hegel, Marx takes the side of the objects (including the human kind) that Hegel viewed as inessential repositories of spirit, arguing for nothing less than “*objective activity*” on the part of human persons (113).

In Marx’s usage, this phrase recovers a body for the in-, even anti-corporeal “man” he has ascribed to Hegel. Here is Marx on how humans are objects and need to understand themselves as such:

Man is directly a natural being [Naturwesen]. As a natural being and as a living natural being, he is on the one hand furnished with natural forces [natürlichen Kräften], with living forces [Lebenskräften], an active natural being; these forces exist in him as tendencies and abilities—as drives (Triebe). On the other hand, as a natural, corporeal, sensuous, objective being he is a suffering, conditioned, and limited being, like animals and plants; that is to say, the objects of his drives exist outside him, as objects independent of him, and yet these objects are objects of his need, essential objects indispensable to the expression of his life...To be objective, natural, and sensuous; as well as to have object, nature, and sense outside oneself; or to be oneself object, nature, and sense for a third [ein drittes] – this is identical. (115)

For this version of “man,” the tendency to make and take up objects (in living, working, and thinking) connotes no “fall” into self-estrangement, but rather “confirms his *objective activity*”: his participation and efficacy in a world of objects and “his activity as the activity of an objective, natural being” (115). As in Goethe’s epistemology, “objectivity” is not a quality or status that human subjects attain in their contradistinction from objects, but rather in their capacity *as* objects. “Objective activity” is therefore instantly a two-way street: Marx’s human

“creates or establishes only *objects*, because he is established by objects – because at bottom he is *nature*” (115).

The notion of “a third” that slips in at the end of the passage cited above opens yet another dimension in Marx’s “objective activity,” which at first works mainly to “ground” man firmly back in the real world by showing that only through real objects does he exercise *his* powers and satisfy *his* needs. To this Marx adds the following: “to have object, nature, and sense outside oneself; or to be oneself object, nature, and sense for a third [*ein drittes*] – this is identical” (115). Here we move past the dyadic formulation “As soon as I have an object, this object has me for an object” (116) to a formulation that acknowledges the third-person perspective of one who does not address himself to me. Here Marx registers the fact that to concede an “independent” existence to objects means conceding that they might put him into relations outside dialogical one of needer and needed, agent and object. “As soon as there are objects outside me,” Marx writes, “as soon as I am not *alone*, I am *another* [*bin ich ein andres*].” In a way difficult to express without claiming the “third” as his object, Marx acknowledges that past the circuit of things he needs and knows, he is a real item in an other’s reality, object of an object he tries not to claim as his: “For this third object... I am *its* object” (116). One important set of “third object[s]” in this section are the impersonal nouns that put Marx and the objects that objectify and displace him onto the most equal footing of all, holding them apart and in relation such that none “has” the other: “need” and “hunger” have both Marx and his food for objects; “expression” both Marx and his words; “suffering” and “passion” both Marx and that which acts upon him (e.g., Hegelian dialectics).

The adjectives “real,” “natural, corporeal, sensuous, and objective,” flow thick and fast in this section as virtual synonyms for the aspects of being Marx wishes to reclaim. Though one might wish for more rigorous distinctions among these terms, the course of the prior chapters demonstrates how the romantic materialist dissent from idealism and revision of empiricism begins in an area where these terms coincide. This was an attitude that valued the senses, “sensuousness,” as an avenue for knowledge (of *res* and their reality) *because of* – and not despite – the conviction that sensation composed and decomposed the beings involved. Thus, it presented the sensing human as a real body among bodies, who must be “corporeal” in order to touch and be liable to their touch, whose “objectivity” entails playing the patient subject or object in the action of another. As Marx puts it here: “As soon as I have an object, this object has me for an object” (116).

In this way, the passage on human “objective being” is clearer still than the passage on human “species being” (section 5, above) regarding the fact that the human cannot master or subsume the ensemble of things to which he owes his life. Taking the two together, “man” cannot coincide with his “*inorganic* body,” a body of *need* oriented towards objects “independent of him” (75, 115). In both passages, Marx makes a point of showing that the organicist emphasis on “living forces” and “drives” account for only part of “living natural being,” and he offers notions of suffering, dependency, need, and objectification (*Vergegenständlichung*, 102 [88]) as supplements.

Thus while Marx famously sees capitalist commodity fetishism as a lamentable way for persons to treat themselves as objects, the *Manuscripts* make it clear that it would be a mistake (namely, Hegel’s) to reject “Thinghood” and “Objectivity” out of hand as inherently lamentable and estranged ways to be human. On the contrary, the *Manuscripts* help reveal the way the suppression of the real and objective aspects of persons prepares them to be duped: humans trained to consider themselves as essentially distinct from nonhumans would be all the more

ready to apprehend certain objects – commodities – as radically “independent” of themselves, this despite the fact that these objects are joint-products of real persons and real materials (*Capital* 319-21). Perhaps this is why Marx’s unforgettable personification of the commodity fetish in *Capital* in fact includes two personifications of the table, one benign and one “grotesque”:

But, so soon as [the table] steps forth as a commodity, it is changed into something transcendent. It not only stands with its feet on the ground, but, in relation to all other commodities, it stands on its head, and evolves out of its wooden brain grotesque ideas, far more wonderful than “table-turning” ever was. (320).

Behind the “transcendent” person-table with its “wonderful” “ideas,” there is another that merely “stands with its feet on the ground,” just like Marx’s “real, corporeal *man*” in the 1844 *Manuscript*’s critique of Hegel. In this light, the problem with the commodity person-table is not so much that it encroaches on some sacrosanct sphere of personhood, exiling persons into the realm of things, but rather that the version of personhood it authorizes is that of man “changed into something transcendent.” This table is too much like Hegel. The commodity is a version of thinghood that flatters, exploits, and corroborates persons’ abstraction from their material constraints – like idealist philosophers, commodities have “a mystical character”: “things *quâ* commodities” admit “absolutely no connexion with their physical properties and with the material relations arising therefrom” (321). Alternatively, the more “every-day” table just “stands,” as Marxist persons might do, standing for the mutual objectivity among persons and things (captured in the German word for object, *Gegenstand* (320)) and their enmeshment in physical and material relationships.

The *Manuscripts* belabor the point that a person’s mode of making or conceiving a thing – which he will do through organs that “develop in the *form* of society,” in conformity with his society’s mode of production and property – instantiates his conception of a person (88). In this way, the *Manuscripts* insist that “mere” sensation, in addition to more overt forms of labor and practice, will always entail processes of person and thing production – personification and reification, or the con-figuration of persons and things that ensures that our tables will reliably trope us and vice versa. Such person- / re-ification couples are crucial to Marx’s distinctive form of materialist critique: with them, he depicts people as “suffering, conditioned, and limited” by im-, sub- and super-personal forces and he reminds readers (as did numerous romantic poets) that products all around them are “congelations” of far-flung human and nonhuman relationships.

But it seems crucial to remember that for Marx – and here too he is true to romantic neo-Lucretian materialism – to re-describe persons and things as personifications and reifications in-process is not to de-realize them. This con-figuration, this reciprocal re-shaping of what passes for a person and what for a thing is no less real, no less lived, and no more tractable because it is conceived as figurative: it is rather in their capacity as “real,” “corporeal,” “natural,” “objectively active” things that members of the particular category [*Gattung*] of things known as “human” are capable and susceptible of refiguration. For Marx, *both* the risk of the baleful process we know as “reification” *and* the potentially ameliorative ones he sometimes calls “realization” depend upon persons’ *reality*.

7. 'Only naturalism is capable of comprehending the act of world history,' or generatio aequivoca again

Over the course of the preceding chapters, "living, natural being," as Marx put it, has become historical in numerous ways quite different from the more familiar Romantic story of proto-evolutionary species transformation over geological time. In microscopic Goethean "Being-complexes" and Lucretian "concrecences," as well as in the decomposing bodies of monarchs and oaks in Darwin and Cowper, each "living, natural being" has been shown to be a temporary composite of parts with diverse pasts and futures. In the mixed physiognomies of Montaigne and Shelley, each "living, natural being" has been shown to be a record of myriad attenuated accidents and impacts, carried in the shared air of a historical present. In Blake's peopled sense organs and Marx's socially con-formed and confirming senses, each "living, natural being" has been shown to bear a sensorium that archives familial, property, and labor relations. In all our authors' attempts to open the closed circuit of organic form, each "living, natural being" has been shown to depend for its life and shape upon causes and collectivities that begin and continue on outside its skin. Marx's dissertation on ancient atomism, in the moment where it risks following the unmotivated outward path of the *eidola*, gestures towards all of these in the phrase "sensuousness is embodied time."

Right in the midst of the 1844 *Manuscripts'* passages where man's "objective activity" is described "as the activity of an objective, natural being," Marx asserts what he seems to take as a self-evident aside: "We see also how only naturalism is capable of comprehending the act of world history" (115). As soon as the "Theses on Feuerbach" and "The German Ideology" (1845-6), *materialism* – albeit one different from all those "hitherto existing" – supplants naturalism as the discourse adequate to a "materialist conception of history" premised on "living human individuals," "their activity and the material conditions under which they live, both those which they find already and those produced by their activity" ("Theses" 143, *GI* 149). But in the 1844 *Manuscripts'* moment, "naturalism" and "natural history" do this work, integrating what Marx calls sensuous *life-activity* with socio-economic conditions like private property, gender and family, labour and production, commodities, "the *money-system*" and other lasting elements of his distinctive mode of historical materialist ideology critique.

What the temporary priority of "naturalism" betrays are the debts and affinities of the historical materialism Marx made famous to the Romantic and atomist materialisms that had broader nature as their object, representing the human form as a cascading and bombarded body among others. (Recall Wordsworth's "Poet," who "considers man and the objects that surround him as acting and re-acting upon each other, so as to produce an infinite complexity of pain and pleasure" (1802 "Preface," 252).) In precise contradistinction to the recent critical commonplace that to "naturalize" something is to pass off a social construct as unalterable necessity, while to "historicize" it is to restore its contingent and fungible character, Marx's 1844 *Manuscripts* make clear just how pressing it seemed to re-naturalize humans and their social forms in order to reveal not only their fungible and contingent aspects and but also these aspects' tenacious incorporation at the level of the sensing and thinking personal body.

Materialisms of nature, and their survivals in natural history and philosophy, biology and medicine, gave humans and other animals impressionable, sensible, irritable, excitable, mortal and epigenetically mutable "bodies natural," bodies that were sometimes composites of bodies past. In this way, they furnished romantic and Marxian historical materialism with the object of historical passion to complement the subject of historical agency: that is, with a science for

thinking personal susceptibility to the impress and ingress of “dead generations” and present social circumstances upon the organs of sensuous life – a science for thinking the type of embodied person who would make her own history, but not just as she likes. From modes of production to atoms of other lives, the materialism of nature offered extraordinary means to represent how factors operating at non-human orders of magnitude and time compose and discompose particular persons and prompt them, collectively, to body forth a time.

The 1844 manuscript devoted to “Private Property and Communism” culminates in a vehement defense of what one could be forgiven for judging as the least relevant subject possible: “*Generatio aequivoca*.” Marx introduces the doctrine – that a living form can take shape, parentless, from materials at hand – as “the only practical refutation of the theory of creation” (91). In order to make good this claim, he launches into an imagined dialogue with a skeptical interlocutor. But “dialogue,” is the wrong word since Marx, attempting the voice of the realized “socialist man,” rejects out of hand his interlocutor’s question: “Who begot the first man, and nature as a whole?”

I can only answer you: Your question is itself a product of abstraction. Ask yourself how you arrived at that question. Ask yourself whether your question is not posed from a standpoint to which I cannot reply, because it is a perverse one. Ask yourself whether that progression as such exists for a reasonable mind. When you ask about the creation of nature and man, you are abstracting, in so doing, from man and nature. You postulate them as *non-existent*, and yet you want me to prove them to you as *existing*. Now I say to you: Give up your abstraction and you will also give up your question. (92)

Nowhere else do the *Manuscripts* evince such adamancy. Is it possible that just here, weighing in on a seemingly irrelevant crux in the life sciences, that they disclose an article of faith? Staging *equivocal generation* as literally unquestionable, the passage, I think, invites us to understand this doctrine as the axiom of the naturalism corollary to historical materialist thinking. To begin with, Marx makes clear that it is prerequisite not only for atheism but for thinking “nature and man” without recourse to exogenous first or final causes – that is, for affirming that nature (and its human subset) suffice to explain both the extant and its changefulness, so that “the question about an *alien* being, about a being above nature and man—has become impossible in practice” (92). Here Marx adumbrates, if only negatively, a mentality for which such an “abstraction” is *nonsense* because time and sense belong to sensuous things. In fact, as we have seen, for Marx sensuousness already implies, ontogenetically, the coming into and passing out of being; it implies phylogeny, too, if “[t]he *forming* of the five senses is a labour of the entire history of the world down to the present” (89). Beyond this, the fact that *equivocal generation* will ground socialism’s natural history reveals some critical aspects of the versions of nature, life and history wished for here – that is, about the version of natural life adequate to historical thinking.

Partisans of equivocal generation insist that despite the formidable old power of like to reproduce like, heterogeneous elements can also chance into viable form. “For who is there who can discern,” Lucretius writes of his material seeds of things, “that they [the *corpora*] never swerve ever so little from the straight undeviating course?” (DRN 2.249-50, Loeb, mod). *Generatio aequivoca* holds open the possibility that despite the real intractabilities of the received world, despite predictions that seem to have the force of law, what “nature” guarantees is not necessity, telos, or law, but transience, trope, and a certain liability to chance recombination. For this, matter and contingency suffice, in non-linear causal relationships

determinable only in retrospect: “instead of thinking contingency as a mode of necessity, or an exception to it” writes Althusser of the materialism of the encounter, “we must think necessity as the becoming-necessary of the encounter of contingencies” (194).

Generation aequivoca would be loudly “disproved” by Pasteur a little over a decade after Marx composed the *Manuscripts*, but the controversy is not, actually, experimentally soluble.²²⁵ Among its revivers is Bruno Latour for whom, as for Marx, the issue fruitfully blurs the “line of demarcation” between history and natural ontology: for Latour, the nineteenth-century microbes that dealt such a blow to equivocal generation were so ideologically imbricated, socially charismatic, and technologically supported that they provide Latour with an exemplary invitation to treat natural things “just like other historical events and not as a stable bedrock above which social history unfolds and which is to be explained by appealing to already present causes” (*Pandora’s Hope*, 153).

In the *Economic and Philosophical Manuscripts of 1844*, Marx offers equivocal generation as synecdoche for the materialist life science adequate to “history,” that is, to “the true natural history of man,” implicitly endorsing its model of contingent causation as indispensable to historical thought (116-17). Or more than a model: as Marx also writes here, “One basis for life and another basis for *science*, is *a priori* a lie” (90). Again and again over the course of the preceding pages, we have seen forms of scientific and poetic materialism that join an equivocal logic of life to a sensuous empirical habitus willing to play “the object of an object” at the scene of empirical observation, and increasingly, at the scene of historical process. In contingency as what touches together, in mixed forms ancient in particulars and new in composition, these texts by Blake, Goethe, Shelley, and Marx attest to an inorganic life, its historical conformity, and the topic and technique of their tender and sensuous sciences.

Notes

²¹² “Critique of the Hegelian Dialectic and Philosophy as a Whole,” *Economic and Philosophic Manuscripts of 1844* (116-117).

²¹³ She observes exceptions in Benjamin and Baudelaire, and makes her own sobering and lucid foray into this realm in “Using People,” *Persons and Things*, 94-105. On this essay, see Chapter 2 above.

²¹⁴ Louis Althusser, *Philosophy of the Encounter: Later Writings, 1978-1987*, Ed. François Matheron and Oliver Corpet, Trans. G. M. Goshagarian, 163-4.

²¹⁵ For a brief but lovely reading that revalues these passages as less a stark refusal of material nature than as “a support for and the cosmic equivalent of practices of the self” in Foucault’s sense, see Jonathan Goldberg, *The Seeds of Things*, 58-61.

²¹⁶ *For Marx*, “Introduction,” and “For My English Readers,” 9-17, 21-39.

²¹⁷ “On The Young Marx” (1960), 49-86.

²¹⁸ “The ‘1844 Manuscripts’ of Karl Marx: Political Economy and Philosophy,” 153-60; “Marxism and Humanism,” 219-48.

²¹⁹ In November of 1980, Althusser murdered his wife, H el ene Rytman, in an episode of psychosis for which he was hospitalized until the essay’s present (*Philosophy of the Encounter*, 166).

²²⁰ For example, Marx and Engels sometimes write “a very great piece of nonsense,” depicting the constitutive elements of a mode of production – industrial capitalism and an expropriated labor force – as though one produced the other for its purposes, as though the proletariat were ““a product of big industry”” (“Underground,” 198).

²²¹ Goodman adapts these terms from Raymond Williams but unfolds them to a degree he never did in the course of *Georgic Modernity and British Romanticism*’s exquisite demonstration of Romantic georgic poetry as a technology for mediating – harboring, mitigating, channeling – “that immanent, collective perception of any moment as a seething mix of unsettled elements,” often registered and transmitted in through the poems as aesthetic *displeasure* (5).

²²² On the subject of opportunistic coalescence, we might think of the composites of points that Goethe observed cohering in his infusions, sometimes to life, sometimes no.

²²³ Greek for *image, spectre, phantom*, Lucretius translates “eidola” as *simulacra, figurae, imagines* and *vestigia*. The *eidola* are, as we have seen, the media of sensation in Epicurean philosophy. Gilles Deleuze agrees with Marx that the *simulacra* are “inseparable from the theory of time”; see “The Simulacrum and Ancient Philosophy” in *The Logic of Sense*, 274.

²²⁴ In Marx’s dissertation, “time and sensuousness” keep bringing these abstract and concrete domains of “self-consciousness” into contact, albeit with a kind of violence that betrays their threat to the allegory of selfhood and its strict division between abstract essence and objectified (sensuous, empirical) appearance: “Time... is the fire of essence, eternally consuming appearance, and stamping it with dependence and non-essence. Finally, since according to Epicurus time is change as change, the reflection of appearance in itself, the nature of appearance is justly posited as objective, sensation is justly made the real criterion of concrete nature, although the atom, its foundation, is only perceived through reason” (2/6). It is true that Epicurus and Lucretius have not sensed atoms, but they are deduced from sensory evidence, as a theory that helps explain the sensible and secure the veracity of sensory impressions.

²²⁵ See John Farley, *The Spontaneous Generation Controversy from Descartes to Oparin*

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