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The Howl of the Earth: On “The Geology of Morals,” Nihilism, and the Anthropocene

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Abstract: This paper offers a close reading of “The Geology of Morals,” the third and possibly most important chapter, or plateau, of Deleuze and Guattari’s magnum opus *A Thousand Plateaus*. I analyse some of the many philosophical and scientific sources informing Deleuze and Guattari’s densely argued text. The authors’ shift of emphasis from the critique of psychoanalysis to a geological or stratigraphic register is emphasised and explained by situating their project in relation both to contemporary debates surrounding the Anthropocene and to the problem of nihilism as this was articulated by Nietzsche and Heidegger. I argue that Deleuze and Guattari’s stratigraphy, a topic that has received comparatively little attention in the secondary literature, helps us to understand the history of nihilism in terms of humanity’s planetary impact.

Geopsychanalysis

The third chapter or “plateau” of Deleuze and Guattari’s vast opus *A Thousand Plateaus* is perhaps the most important and puzzling in the book. Its title, “The Geology of Morals (Who Does the Earth Think It Is?),” echoing Nietzsche’s *On The Genealogy of Morals*, suggests the Nietzschean critique of psychoanalysis for which the authors had become famous in their explosive prior collaboration *Anti-Oedipus*. But this is not at all what we get. The Freudian domestication of desire’s emancipatory potential is excoriated in the second plateau, where we see the Wolf Man’s dream of the outside shrunk to fit the gloomy interior of the parental bedroom. Under Freud’s gaze, the wolf loses everything that makes it wild to become a

component of the infant's guilt complex, a symbol loaded with the terrible weight of adult sexuality that the unconscious must carry, like a draft animal. What Nietzsche called "the spirit of gravity," the heaviness of shame and guilt, the whole life-denying enterprise of Western morality, is transferred by Freudian analysis to the unconscious, whose vital energy is diverted inwards to the private theatre of dreams and primal scenes. Desire, accepting this scenography as its domain, is duped out of its vocation as producer of reality—it will be defined henceforth by the reality it lacks, the *manque à être* for which fantasies are the compensation. This is only to the benefit of the repressive forces of the state and the capitalist markets that trade in image and spectacle. Freud's powerful dynamic and materialist conceptions of the unconscious as an economy of energetic flows are thus obscured by his insistence that the ultimate referents of these processes are the imaginary figures of a tawdry family drama. Identifying the politically active dynamisms of desire beneath the oedipal hermeneutic required a genealogy, a prehistory like the one Nietzsche had written for the moralism of Christian culture. For Deleuze and Guattari, oedipal desire was just the latest episode in life's struggle to annul itself, to will itself out of existence, to free itself from the burden of being alive. Nietzsche had a name for this: nihilism.

"The Geology of Morals" seems far removed from the atmosphere of these ideas. Explicit questions of subjectivity and even the political per se are absent. Nor is there any mention of desire. All of this is replaced, for reasons not immediately apparent, by questions of *stratification*, a crucial topic that has received relatively little attention in the copious secondary literature on Deleuze and Guattari. The problem of the unconscious is no longer that of the organism, the subject, or even society, but of "peopling, population. It is an affair of worldwide population on the full body of the earth, not organic familial generation" (Deleuze and Guattari, *Plateaus* 30). That is to say, the problem of the unconscious is not dismissed but posed in new geological and planetary terms. While *A Thousand Plateaus*

returns to the more familiar critique of psychoanalysis in subsequent chapters, it is necessary to account for what happens in this shift to a geological register. The concept of the Earth played a role in *Anti-Oedipus*, albeit elliptically and enigmatically; schizophrenic desire was there said to promise a “New Earth” (Deleuze and Guattari, *Anti-Oedipus* 131). In their final collaboration, Deleuze and Guattari renamed their enterprise “geophilosophy” (*What is Philosophy?* 85). But geophilosophy can only be understood as a kind of geopschoanalysis.

Whatever all of this might mean today, it cannot avoid debates surrounding the Anthropocene, a term introduced in 2000 by atmospheric chemist Paul Crutzen and biologist Eugene F. Stoermer for a new geological epoch characterized by human impact—or more specifically the impact of Western capitalist humanity since the eighteenth century—on the Earth’s systems through climate change and related environmental disasters. While scientists debate whether and how the Anthropocene should become a formal unit of geochronology, scholars in the humanities and social sciences, as well as artists, activists and others, have increasingly, but by no means uncritically, deployed the concept. This has led some to speak of a “geological turn” (Bonneuil). While work exists on how Deleuze and Guattari are implicated in this,¹ the specific importance of “The Geology of Morals” is, surprisingly, often overlooked. A recent special issue of *Deleuze and Guattari Studies* on the Anthropocene (Saldanha and Stark), for example, makes almost no reference to the plateau (I am including my own contribution to the issue).

Apart from providing detailed analysis of the chapter and discussing some of its key sources, this piece claims that Deleuze and Guattari’s geology responds to the Nietzschean problem of nihilism, not only as this was identified in *Anti-Oedipus* but in the geological terms by which Nietzsche himself defined it. *Thus Spoke Zarathustra* exhorts us to “remain faithful to the earth” and proclaims the overman “the meaning of the earth” (Nietzsche, *Zarathustra* 6). The task of becoming master over or governing the Earth appears throughout

The Will to Power as inseparable from general questions of “man,” nihilism, and the awesome vista of “Great Politics” that Nietzsche saw on the horizon (Nietzsche, *Power* 500-1). Earth, here, designates the opposite of the suprasensible worlds of religion, truth, and morality. The death of God has “unchained this earth from its sun,” from the heavens that grounded terrestrial being in relation to divine transcendence and the light of ideas (Nietzsche, *The Gay Science* 120). A value in the Nietzschean sense refers to “conditions of preservation and enhancement for complex forms of relative life-duration within the flux of becoming” (*Power* 380). But nihilism arises with values that involve a denial of life itself. As Deleuze explains in his 1962 book on Nietzsche, such values, to the degree that life acquires purpose through them, bring about the annihilation or nullification of life, giving it a value of “nil” (*Nietzsche and Philosophy* 147). At the same time, Nietzsche saw the movement of nihilism in naturalistic terms as the destruction of some forms of life and the creation of new ones, so that following nihilism to its completion is necessary for overcoming it (*Power* 453). A similar ambiguity characterizes the Anthropocene: to the extent that it figures Man, the Anthropos, as a “global geophysical force” that can “rival the great forces of Nature,” it seems to suggest both the overman’s “mastery of the Earth” and that the nullification of life is so widespread it is now written indelibly into the planet’s strata (Steffen, Crutzen, and McNeill, 614).

Nietzsche’s concern with the Earth was not particularly unique. Terms such as “anthropozoic” and “psychozoic” emerged with the geological discourse of the nineteenth century to account for the telluric impact of humanity, and the trend continued into the twentieth (Rull, 1056). The Soviet geochemist Vladimir Vernadsky and the Jesuit paleontologist Pierre Teilhard de Chardin both conceived of the “noosphere” around the same time as each other in the middle of the 1920s. The noosphere proposes that the mind (*nóos*) and its products may shape the Earth just as the biosphere has. If life can be regarded

biospherically as a globe-like energetic system, could mind not be conceived in a similar way? This would entail a becoming-conscious of the Earth itself. For Teilhard, the “biosphere and noosphere proved the whole universe grows towards an ‘Omega point’ of maximum complexity and self-transparency” (Saldanha, 199). The Earth’s development points eschatologically to an “eventual erasure of the distinction between frontal cortex, higher nervous function, and geocosmic mass” (Moynihan, 37). Lovelock and Margulis’s Gaia hypothesis from the 1970s occupies a similar line of thinking.

But the Anthropocene, to the extent that it demands we grasp our own epoch in stratigraphic terms, breaks with much of this prior thought. Whereas for the nineteenth and much of the twentieth century the central issue was the deep past, for us it is increasingly the *deep future*, the idea that our present and (in geohistorical terms) very recent behaviors will have an afterlife of a hundred thousand years or more (Stager). How should we imagine this distant and potentially radically alien future that will bear our signature? The human epoch is defined by the future anteriority of its becoming-a-stratum of deep time in relation to *another stratum*, all strata being relative to one another in what Deleuze and Guattari call “double articulation” (*Plateaus* 40). To affirm the stratigraphic thought of the Anthropocene we must imagine our own time as the *substratum* of a future which, though determined by our existence, is not our own. As Colebrook observes, thinking this way opens an ethical space precisely because it exhorts us to care *less*, not more, about the survival of our present ways of life (Colebrook, 453).

Earth-body

Freud himself was wont to theorize the unconscious in terms of strata and geological layers, and even suggested a “petrology” of the neuroses (“Introductory Lectures” 390). His metapsychological paper “Overview of the Transference Neuroses” developed the idea that

“the geological fate of the Earth and ... the exigencies of the Ice Age” have left their marks on the psyche, and that anxiety, hysteria and obsessional neurosis may be understood in terms of libidinal fixations centered on life’s Pleistocene traumas (“Overview” 14). Freud’s conception of phylogeny maintains that the geological past is recapitulated in the libidinal economy of neurotic desire. Can this be reoriented instead around a deep future in which our present capitalist pathologies and fascistic fixations have been dissolved, even if they remain inscribed in the Earth’s stratigraphic memory? “The Geology of Morals” can be read as an attempt to follow through on such a proposition while discarding the reactionary elements of psychoanalysis, many of which formed around Lacan and the role of the signifier (of which more later). Freud’s question was always how the drive, the primary energetic dynamism of biopsychic life, comes to accept the organization imposed by civilization. Stratification is a stabilization or crystallization of energetic matter. Brent Adkins has argued that while Deleuze and Guattari’s first two plateaus—on the rhizome as countermodel of the tree, and on the wolf-multiplicity as countermodel of the domestic animal—focus on the lines of flight by which life evades capture, “The Geology of Morals” is concerned with stasis (Adkins, 42). The aim of Deleuze and Guattari’s geology is to understand how life takes on enough invariant form to be known, classified and named, coded and territorialized, to be subordinated to values in the Nietzschean sense or turned into the rocks, minerals and crystals of psychopathology.

For Deleuze and Guattari, questions of stasis are inescapably questions of *form*: “strata fashion forms and form matters into substances” (*Plateaus* 72). But perhaps form is unthinkable without its opposite. To understand the genesis of form is to understand how structures—crystalline structures, organic structures, linguistic structures—come into being, but these cannot explain themselves. A crystal, for example, can only be explained on the basis of the metastable solution that is its “mother-water” (Simondon, 313). One might say

the same thing about a symptom. As Raymond Ruyer insisted, there is no isomorphism of form and formation; an organic form does not resemble the process of its evolution, nor does this process resemble the functioning of the organism (Ruyer, xv).

Thinking the genesis of territorial and coded life, then, requires beginning with the Earth not as a complex of formed beings but as unformed matter in flux: “the Earth—the Deterritorialized, the Glacial, the giant Molecule—is a body without organs. This body without organs is permeated by unformed, unstable matters, by flows in all directions, by free intensities or nomadic singularities, by mad or transitory particles” (Deleuze and Guattari, *Plateaus* 40). This seems an eccentric yet curiously impoverished view of the Earth, which we tend to view as a rich diversity of “endless forms most beautiful.” The Earth here is cut off from life and form, but not from dynamism. Deleuze and Guattari are taking us back to the accretion of the Earth’s core some 4.6 billion years ago, when tellurian dynamism was a thing of gases, minerals, intense heat and gravitational force. Their intentions are indicated by the figure of Professor Challenger, a philosophical persona whose lecture—delivered to an outraged and uncomprehending audience—comprises the text of “The Geology of Morals.” Challenger was an invention of Arthur Conan Doyle and featured in a number of the latter’s stories including “When the World Screamed,” where he excavates a tract of land in the South Downs to test his hypothesis that “the world upon which we live is itself a living organism” (Doyle, 460). Challenger’s notion is not of the Gaia type, at least not in its traditional formulation, since it conceives of the Earth as an autonomous body separate from other living systems which are attached to it as “parasitic animalcule[s]” (461). In order to make the Earth aware of humanity’s presence on its surface, Challenger sinks a mine shaft eight miles deep into the ground, drilling through the crust and into the planetary body’s oozing gelatinous mass to bring forth an anguished howl:

our ears were assailed by the most horrible yell that ever yet was heard. Who is there of all the hundreds who have attempted it who has ever yet described adequately that terrible cry? It was a howl in which pain, anger, menace, and the outraged majesty of Nature all blended into one hideous shriek. (478)

Yusoff rightly observes that Doyle's text is a "misogynist tale" about conquering an Earth whose true age, as revealed by Lyell and others in the nineteenth century, had delivered a shattering blow to anthropocentric worldviews (Yusoff, 107). Challenger's egomaniacal endeavor aligns Western scientific reason with the penetrative and extractive technologies of industrial capitalism. His goal, furthermore, is to demonstrate sheer mastery over the Earth. The motile putridity of the Earth-body's substance suggests a Lovecraftian horror of the feminine. But towards the end of "The Geology of Morals" Challenger himself changes into a Janus-faced Lovecraftian creature with an arthropod's pincers and begins emitting a strange fluid from his head (*Plateaus* 72). The Anthropocene may have inscribed Man into the strata, but the Anthropos does not encounter planetary depths without becoming other in turn. The injured Earth of Doyle's story is not the Gaian, self-regulating unity of all terrestrial being, but something separate and hidden that we become aware of only as a *sheer dynamism*, a traumatic fluid or viscous body from which well-regulated life recoils. Stengers' revision of the Gaia hypothesis for an age of climate catastrophe is close to what Deleuze and Guattari have in mind. Stengers' Gaia is not, in contrast to its original formulation, an "organism in good health," but a wholeness, an entanglement of everything, which has "intruded" unilaterally into human consciousness (Stengers, 46). The paradox of how something that necessarily includes us can intrude on us is the same paradox we find at the end of Doyle's story: the howl of the Earth is an expression of planetary Nature in its unitary global form, but it is also the cry of a dark, subterranean alterity that has come too close for comfort.

The Earth-body is not really an organism but a body without organs. The latter concept, first formulated by Deleuze in *The Logic of Sense* and developed in *Anti-Oedipus*, denotes the dynamic energetic continuum of the libidinal body beneath the segmented organic body, the body as drive as opposed to the body as a functional unity of working parts. The organism is “the judgment of God,” the imposition of a determinate, finite form on this continuum. God can be understood here in the Kantian sense as “master of the disjunctive syllogism,” as He who creates by progressively dividing up and then eliminating possibilities in an “either/or” fashion within the sum total of reality (*Anti-Oedipus* 13; Kant, 556-8). In Deleuze and Guattari’s account, it is the schizophrenic who feels this disjunctive selection, this *double articulation*, more acutely than others. One need only browse Daniel Paul Schreber’s *Memoirs of My Nervous Illness* to appreciate how schizophrenics may experience the body’s normal organic functions as torments imposed by a malign Creator. As the schizophrenic writer Artaud put it in a text from which Deleuze takes the phrase “body without organs”:

Man is sick because he is badly constructed.

We must make up our minds to strip him bare in order to scrape
off that animalcule that itches him mortally,

god,

and with god

his organs. (Artaud, 570)

The body without organs “resists” the imposition of functional organic unity (*Anti-Oedipus* 9). The mode of this resistance is sometimes pathological, the most serious cases of which are

found in catatonia, where the bodies of schizophrenics can freeze up, becoming cataleptic or exhibiting automatism. The body here appears to choose a petrified form of the continuum over organic unity. Beyond these pathological cases, organic and all other kinds of structures have something that plays the role of a body without organs, or “plane of consistency” as Deleuze and Guattari also call it (*Plateaus* 40). Societies might be organisms, but each society has a body without organs acting as its ground, its own Earth, on which its history is recorded, its repressions realized, and its forms imposed. Capitalism, for example, presupposes a self-propagating and eternal flow of money as its own Earth (*Anti-Oedipus* 10). In every case, this Earth-body is a *resisting*, irrecoverable ground hostile to the stability of the structures composed upon it. Were this element of resistance not immanent to them, structures would be incapable of changing or dissolving.

Deleuze and Guattari thus elaborate a conception of the genesis of forms on a resolutely anti-formal basis and a conception of grounding in which the dynamic depth of the ground animates and transfigures whatever is grounded on its surface. And if we accept that it is not possible to think without a body, then neither is it possible to think without an Earth. This is not an attempt to recover thought’s lost foundations or to root the Cogito in some primal territory, but on the contrary to recognize how thinking has the capacity to disrupt our foundations, to cause the ground to quake: “the strata are continually being shaken by phenomena of cracking and rupture” (*Plateaus* 55). Thought is in excess of organic life, but not in the Platonic sense that identifies thought with a capacity to go beyond and thereby triumph over the finite body. Rather, thought possesses the kinds of massively distributed finitude found not only in fault lines and volcanic ruptures but in ocean microplastics, radioactive waste and species extinction. Almost two centuries of philosophical and scientific effort to grasp the relationship between Earth and mind lead to the troubling possibility that thought shares the annihilatory dynamics of the Anthropocene.

Crystals and Spiderwebs

Does this not conflict with Deleuze's reputation as an affirmative thinker of life, difference, and creative intensities? In an important sense, thinking intensity means thinking annihilatory processes. In ways that draw on and depart from the energetic concepts of classical thermodynamics, Deleuze argues that "intensity is difference, but this difference tends to deny or to cancel itself out [*s'annuler*] in extensity and underneath quality" (*Difference and Repetition* 223). Every form is the residue of an annulled difference that nevertheless persists as a virtual field serving as the form's condition of possibility. The science of thermodynamics, emerging in the nineteenth century out of a society increasingly based around turning heat into work, developed ways of calculating expenditures of energy. Deleuze maintains, however, that energy is difference in itself and so ultimately incalculable, an inequality conditioning every equalization. Every phenomenon has its physical cause in an irreducible energetic asymmetry.

In a text that was influential for Deleuze on these points, Simondon analyses the formation of crystals as the movement from a metastable state of potential energy to a state of stable equilibrium in which that energy is at a minimum (Simondon, 302). Crystalline form is the end point of a process in which differences existing at a "molecular" level in a supersaturated medium are stabilized in a "molar" geometrical arrangement (*ibid.*). Deleuze and Guattari's account of stratification proceeds in a similar way. The body without organs or plane of consistency comprising intensities and potentials "becomes compact or thickens at the level of the strata" (*Plateaus* 40). Strata exist only within a system of double articulation; every stratum is the substratum of another stratum. Strata thus fit together in pairs, but each stratum is itself double, composed of formal and substantial elements: "articulate twice, B-A, BA" (*ibid.*). Thinking stratigraphically means thinking difference and repetition together.

Differences are accumulated in a repetition of layers that have sense only in relation to other layers around them. An assemblage is what fits the different parts of the strata together, but it also gives rise to an abstract machine on the plane of consistency (I will return to this later).

Like the organism, the stratification of the Earth is “the judgment of God”: “God is a Lobster, or a double pincer, a double bind” (Deleuze and Guattari, *Plateaus* 40). Arthropods, the phylum that includes trilobites and lobsters, were the first animals to develop segmented bodies and jointed limbs. The success of this body plan was down to a double articulation of the feeding or grasping appendage and the mouth, and the eye and the brain, the basic arrangement of which may have evolved even earlier (Godfrey-Smith, 37-40). Here we have the first intimation of the hand-tool/face-language coupling that will characterize humans (*Plateaus* 60). Evolutionary selection proceeds by double articulation: differences are articulated through couplings that annul or cancel them. This is not yet nihilism, which only appears on the human stratum, but the possibility of nihilism is built into life itself.

Thinking difference as self-cancelling has the great benefit of avoiding hylomorphism, the view that form is simply imprinted on undifferentiated matter, that matter is delivered up as “content” to the forms that will give it sense. The hylomorphic model is untenable because it obscures the conjunction of form and matter, such that matter seems to arrive already “prepared” for the form it receives (Deleuze and Guattari, *Plateaus* 369). The theological taint of such an account is palpable, but so is the division of manual and intellectual labor. How can we avoid seeing form and content reflected in one another in this way? This is the question central to Deleuze and Guattari’s turn to geology, but its origins again lie in their critique and redeployment of psychoanalysis. *Anti-Oedipus* repeatedly discusses the concept of the “double bind,” a term made famous by Gregory Bateson’s work on schizophrenia. A double bind in the most general sense is an alternative in which two different terms reciprocally cancel each other. Bateson argued that schizophrenics were

created when parents transmitted to their children two contradictory messages at once: *love me/don't love me, challenge me/don't challenge me*, etc. (Bateson, 201). Deleuze and Guattari argue that this has nothing specifically to do with schizophrenia but everything to do with oedipal structures (*Anti-Oedipus* 80). As soon as Freud “discovered” that the fundamental contents of unconscious desire were murderous and incestuous, it was a simple step to add that desire can be socialized only through a paternal law that represses it, or a signifier that articulates it, as in Lacan.

Drawing on the work of the linguist Louis Hjelmslev, who described language as a system of stratification, Deleuze and Guattari name the two articulations of any pair of strata “content” and “expression,” which are always relative to one another and reciprocally determined. For Hjelmslev, double articulation means that signification results from combinations of asemiotic elements called “figurae”. Language is not a pure sign system but constructs signs out of non-signs (Hjelmslev, 47). Every sign is the contraction of a content and an expression, but these each have a form and substance of their own. Language is this double process of sign formation working on an unformed matter or “purport”:

Each language lays down its own boundaries within the amorphous “thought-mass” and stresses different factors in it in different arrangements, puts the centers of gravity in different places and gives them different emphases. It is like one and the same handful of sand that is formed in quite different patterns, or like the cloud in the heavens that changes shape in Hamlet’s view from minute to minute. (Hjelmslev, 52).

Deleuze and Guattari call Hjelmslev “Spinozist” because he conceives of language as dividing up a single univocal being, what Spinoza himself called God or nature, which remains singular even in its divisions or modes (*Plateaus* 43).

Their geology, then, is a kind of prehistory of the signifier, an inquiry into how matter becomes expressive, beginning with the inorganic level of rocks and crystals before moving on to the organic and then human or linguistic levels. Sedimentary rock such as sandstone, as Manuel DeLanda explains, is formed in a two-stage process: “when one looks closely at the layers of rock in an exposed mountainside, one is struck by the observation that each layer contains further layers, each composed of pebbles that are nearly homogenous with respect to size, shape, and chemical composition” (59). The first articulation forms matter into a sedimentary substance by selecting and ordering particles. The second articulation cements these formed elements together into the organized substance we recognize as sandstone (Deleuze and Guattari, *Plateaus* 41). The key point is that each articulation has both formal and substantial elements. The homogenous particles in a layer of sediment on a riverbed are not a content awaiting its form but are themselves a formalization of substance into units that the second articulation will formalize in turn. Escaping the form-content dualism of hylomorphism involves a *doubling* of form, as if the way out of the double bind were through it. Deleuze and Guattari oppose the formalism of hylomorphism immanently. In the first articulation, we move from substance to form, in the second, from form to substance. In crystals, molecular materials are selected from a metastable medium and accumulate around a “seed” in layers that determine the form of further layers. The molecular and molar map onto the two articulations such that the relationship between content and expression is between two independent orders of magnitude that the finished crystal mediates (57). While this distribution of molecular and molar only holds in some cases, such as crystals, it serves to demonstrate what remains the case for all strata: the two articulations, though relative to one another and in reciprocal determination, are independent (44). There is a real distinction between the molar form of the crystal and its molecular components, even though the two articulations presuppose each other. The molecules are independent from the crystal that

expresses them, just as the sediment is from the sandstone. They *could* have been expressed otherwise, but expression determines its content as *that which is thereby expressed*, necessarily eliminating all other potential modes of expression: “to express is always to sing the glory of God. Every stratum is a judgment of God; not only do plants and animals, orchids and wasps, sing or express themselves, but so do rocks and even rivers, every stratified thing on earth” (43-4).

Stratification involves five components comprising nodes in the Hjelmslevian net: unformed matter, substances and forms of content, and forms and substances of expression. While content and expression are really distinct, Deleuze and Guattari insist that substance and form have only a “mental or modal distinction” (*Plateaus* 44). The distinction between content and expression is materially real, but it is the same matter, formed into different substances, that comprises them. On each stratum, it is a question of understanding what varies and what stays the same, what repeats and what is different, how the same Earth expresses itself in different forms without becoming identical with any of them (45). The debate between the zoologists Étienne Geoffroy Saint-Hilaire and Georges Cuvier in the early nineteenth century over the nature of speciation is instructive for understanding what this means on the organic stratum. For Geoffroy, there was no “vital matter” specific to organisms but rather a special “unity of composition” encompassing all living things, “a single abstract Animal, a single machine embedded in the stratum” (46). An isomorphism of living forms underlies the diversity of species. Geoffroy was fascinated by the idea that species were different kinds of anatomical foldings. A vertebrate folded in a certain way would have the basic anatomical structure of a squid (Perrier, 99-100). In contrast, Cuvier held that species were fixed types separated by irreducible gaps that could be mediated only by resemblance or analogy. Strata are coupled together by machinic assemblages, but this gives rise to an “abstract machine” capable of diagramming the unity of a particular stratum or set of strata

(*Plateaus* 71). The unity of any stratum, the Ecumenon, itself rests on a destratified continuum of dynamic matter, the Planomenon (50). What Geoffroy's abstract Animal amounts to is a *topology*, inscribed in this continuum, by which distinct forms are created through deformation, whereas Cuvier's fixed types inhabit Euclidean space (47).

The importance of Darwinism is that it allows us to rethink everything in terms of populations and differential rates of change, that is, in terms of codes and territories that change through decoding and recoding, deterritorialization and reterritorialization. Populations, not individual species, are what is coded, which means that there is always a surplus of code without which species could not interact across their different territories or lifeworlds. Deleuze and Guattari introduce two new concepts to explain this: parastrata and epistrata. The parastrata refer to forms of content and expression in the coding of populations (*Plateaus* 52-3). A fly, as a form of content, is expressed in the form of the spider's web (314). A piece of the fly's code enters the spider's code. If one code did not pass into another in this way, the "surplus value" of code could not be reconciled as an ecology of intersecting territories; the spider and fly would never encounter each other (53). What we witness here is a new threshold of the autonomy of expression by which decoding becomes innate to coding. A virus, for example, reproduces by inserting its code into the code of an organism that transmits it. Similarly, a genetic "text" is not repeated without the introduction of differences (Jacob, 291). For Deleuze and Guattari, this play of repetition and difference at the level of forms is the principle of life itself. Life is the becoming-autonomous of expression. A fly-content is not just expressed by the fly but also by the spider in the construction of its lifeworld. The spider possesses a prototypical "image" (*Urbild*) of the fly, as Jakob von Uexküll puts it (Uexküll, 159). This involves a correlative process taking place in the territories of the epistrata, which refer to substances of content and expression. A fly territory is the spiderweb's substance of content, even if—to the extent that it captures flies that

nourish the spider—its substance of expression is a spider territory. Animal territories are formed only through processes that deterritorialize them in relative, not absolute, ways. A spider-expression, deterritorialized by the piece of fly-code it has internalized, reterritorializes on the spider's need for food. The ecological unity or Ecumenon of composition exists only through the differences that epistrata and parastrata, codes and territories, introduce into it (*Plateaus* 52).

Molecules are themselves populations or multiplicities to be coded. This is why Deleuze and Guattari lend so much importance to the “molecular Darwinism” of biologists such as Jacques Monod and François Jacob (*Plateaus* 49). The same molecular materials give rise to different species, but it is no longer a case of molecular content and molar expression. The economy of the cell allows for the internalization of the metastable medium that was always exterior in the case of the crystal. The crystal grows only at its outermost layer since this is the part that faces the medium, but the organism can grow internally because the metastable exterior has been internalized. The organism as a result has a much higher degree of deterritorialization than the crystal. Through its linearity, the genetic code, can detach expression from Euclidean space. An organism's interior is “topologically” in contact with the exterior (60). The real distinction between content and expression becomes internal to biomolecular processes (59). Proteins are the content relative to the nucleic acids that express them. There are forms and substances of expression (nucleic acids and nucleotides), and forms and substances of content (proteins and amino acids), but a form or substance of content can come to play the role of form or substance of expression and vice versa. Proteins are the content expressed by nucleic acids, for example, but certain forms of this content can function as an expression in their own right. Monod describes how the protein fiber has a folded and unfolded form, folding being the means whereby a form of content (the amino acid sequence) is expressed as the three-dimensional protein structure. The relation of content

to expression here is thermodynamic; folded protein “is thermodynamically more stable than the unfolded one” (Monod, 92-3). This negentropic production of organic form is accompanied by an entropic *cancellation* of unstable molecular states or intensive differences, drastically narrowing the range of possibility for the realized form. Monod remarks on what may appear a miraculous increase in informational content resulting from this: “the quantity of information that would be needed to describe the entire three-dimensional structure of a protein is *far greater* than the amount of information defined by the [amino acid] sequence” (93). For Deleuze and Guattari, this increase in information comes about through the recursive double articulation by which content can become expression and expression content. This involves a cancellation of difference in the construction of organic form. With language, however, a new threshold of the autonomy of expression is reached.

Ecumenon, Planomenon, Anthropos

On the human or techno-semiological stratum,² content and expression can be understood in terms of a coupling of the hand-tool relation with a face-language relation. What are regarded as the “essential” human characteristics—technology and language—are merely a “new distribution of content and expression” along these lines (*Plateaus* 60). Deleuze and Guattari draw on the anthropological work of André Leroi-Gourhan:

In the higher vertebrates, the field of responsiveness developed to form two poles between which the neuromotor apparatus coordinates the actions of the face with those of the hand. ... In the physiology of the cerebral cortex the manual projection fibers are very close to the facial fibers. ... A link therefore exists between the hand

and the facial organs, and the twin poles of the anterior field attest their equal participation in the construction of communication symbols. (Leroi-Gourhan, 113)

There is nothing uniquely human in the distribution of the nervous system around twin poles, even if the autonomy of expression it gives rise to is. Recent research suggests that the human nervous system can be traced back to two separate nervous systems which evolved around the mouths and photosensitive areas of marine invertebrates (Arendt, Tosches, and Marlow). Philosopher of science and octopus enthusiast Peter Godfrey-Smith asks us to imagine the history of the mind in terms of a long evolutionary process beginning at some point during the Cambrian Period with “a jellyfish-like animal shaped like a dome,” in which “a motion-controlling brain” centered around the mouth “marches up through your head to meet there some light-sensitive organs, which become eyes” (40). In humans, the link between the hand-tool couple and the face-language couple determines a new distribution of content and expression, giving rise to the linguistic division between “things and words” (*Plateaus* 64). As a form of content, the hand constitutes a “digital code” that is extended in sociotechnical assemblages acting as substances of content that deterritorialize the manual form (60-1). The hand is an *accelerator* marking a new threshold of deterritorialization that sets in motion the epochal decodings produced by science and technology with the arrival of capitalism.

At the level of expression, this is accompanied by a new threshold of autonomy but also a new imperialism or despotism of the signifier. Language as a form of expression is capable of translating *all* the other strata into its own terms:

the scientific world (*Welt*, as opposed to the *Umwelt* of the animal) is the translation of all of the flows, particles, codes, and territorialities of the other strata into a sufficiently deterritorialized system of signs, in other words, into an overcoding

specific to language ... all human movements, even the most violent, imply translations. (Deleuze and Guattari, *Plateaus* 62-3)

This translatability of everything is “the illusion constitutive of man” (63). The illusion has very real effects, however. The abstract machine of the human stratum does not designate the Ecumenon, the unity of composition of its own stratum, but rears up to encompass all the other strata. If signs existed on the nonhuman strata, it is only with language that we can speak of “regimes” of signs capable of overcoding them (65). We have reached the epoch of nihilism, in which language, to borrow from Heidegger, propagates a “devastation” rather than building the “house of the truth of being” (Heidegger, “Humanism” 243). Deleuze and Guattari, of course, reject the Heideggerian path of “dwelling” but their work is in line with his view that nihilism develops within a Western metaphysical tradition that culminates in a technoscientific “assault” on the Earth (Heidegger, “Nietzsche” 100). While Heidegger seeks an Ecumenon of Being beyond metaphysics, Deleuze and Guattari instead seek a new metaphysics of the Planomenon, the destratified plane of consistency immanent to all the strata.

William E. Connolly is right to call the Anthropocene an abstract machine in which capitalist “triggers” are articulated with planetary “amplifiers,” leading to runaway processes of environmental collapse accompanied by new fascistic social formations (67). But the abstract machine has at least two states: it can remain enveloped in strata, constituting their unity, or it can become destratified, inscribing itself directly on the plane of unformed matter without regard for the differences between strata (Deleuze and Guattari, *Plateaus* 56). This is how we should understand the ambiguity of the Anthropocene, which is also the ambiguity of nihilism: in one sense, it suggests the triumph of the Anthropos over the forces of the Earth but in another it abolishes the unity of the Anthropos altogether. Language enables an

overcoding of everything in human terms, but this is only possible through an autonomy of expression that detaches the human from any necessary content. The Anthropocene is a double articulation of human forms of expression with nonhuman contents of every imaginable kind, but it also disarticulates the Anthropos such that humanity becomes the sediment for a new stratum yet to come. Capitalism is itself a mode of destratification, an epochal planetary accelerator in which a vast heterogeneity of materials is mixed together on the Planomenon:

if we consider the plane of consistency we note that the most disparate of things and signs move upon it: a semiotic fragment rubs shoulders with a chemical interaction, an electron crashes into a language, a black hole captures a genetic message, a crystallization produces a passion, the wasp and the orchid cross a letter ... they have been uprooted from their strata, destratified, decoded, deterritorialized, and that is what makes their proximity and interpenetration in the plane of consistency possible.

(Plateaus 69)

Deleuze and Guattari pin their hopes on being able to reach this plane via processes of absolute deterritorialization that do not coincide with capitalism's planetary accelerations: "absolute deterritorialization is not defined as a giant accelerator; its absoluteness does not hinge on how fast it goes" (56). But capitalism is not just an accelerator, it is also a mode of violent reterritorialization or capture comprising state apparatuses and judgments of God by which the aura of a human likeness is patched together at the very point where the Anthropos seems to be disintegrating. If the imperialism of language within technoscientific assemblages is the Anthropocene's form of expression, its *substance of expression* is that object of anthropomorphic self-recognition par excellence, the face: "the face is the Icon

proper to the signifying regime, the reterritorialization internal to the system. The signifier reterritorializes on the face” (115). The face here is understood as the face of the white man (176). The Anthropocene as abstract machine can in this way enable a terrifying homogenization and surveillance: “you've been recognized, the abstract machine has you inscribed in its overall grid ... Racism operates by the determination of degrees of deviance in relation to the White-Man face” (177-8). Capitalism’s destratifications, immense as they are, retain a “memory” or an “aura” of the human likeness in the form of the White-Man face that governs the processes of reterritorialization on which political hierarchies are based (70). A politics of the future rests on finding ways to dispel this aura.

The Anthropocene is premised on human forms of expression becoming readable in the strata. The content of this expression consists of GHG emissions, the annihilation of biodiversity, ocean acidification, plastic waste, radioactive particles and many other things whose environmental effects will unfold in temporalities that far outstrip the temporalities of cause and effect normally at work in social and political considerations. Nihilism reigns as long as we measure everything in human terms and according to the recognitions facilitated by the face. But the Anthropocene also alerts us to a radical futurity in which human forms of expression will, in their turn, become a content for an unrecognizable new expression. If we accept Deleuze and Guattari’s assertion that every stratum is a substratum of another stratum, then the human signature we are currently inscribing on the Earth will itself furnish the materials of a stratification to come. As Yusoff writes, the Anthropocene relates to “an anticipatory geologic moment” (123). This is how we can understand the enigmatic promise of a new Earth, which by no means entails apocalypticism in the normal sense. Rather, it gives us access to a future beyond the nihilism that demands a perpetual maintenance of the present. Capitalism today appears as a suicidal destratification, but this is inseparable from the furnishing of a content whose expression has yet to be assembled. Capitalist humanity has

mixed all strata together, it has unearthed ancient stocks of carbon and reshuffled the planet's flora and fauna in unprecedented ways, precipitating violent assaults on the Earth's systems. The Anthropocene concept labels these lethal mixtures "human," but humanity's inscriptions themselves await a new expression in a future that marks a radical break with what we recognize as our "own" time. Deleuze and Guattari's emphasis on the liberatory potential of destratification can thus be questioned because, beyond the destratifications of capital, we are in the process of being doubly articulated with a future that refuses all likenesses. The political and ethical tasks lying before us require that we rescue from the nihilism of the Anthropocene an affirmative and radical thought of the future that is both pessimistic and optimistic at once.

Notes

¹ See, for example, Saldanha; Conty; Clark; Yusoff.

² I am borrowing this term from Ian Buchanan, *Assemblage Theory* 28.

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