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Introduction

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OVERVIEW

Although Jacques Derrida and Gilles Deleuze are the leading philosophers of French post-structuralism, very little has been done to compare their work on common issues or to produce new work using a synthesis of their approaches. In *Political Physics* I do both, focusing on their respective approaches to the question of the body politic and combining Derridean deconstructive close readings of the history of philosophy and Deleuzean conceptual creation in dialogue with the contemporary science popularly known as 'complexity theory'. *Political Physics* is thus doubly transversal: crossing the transversal of Derrida and Deleuze with that of philosophy and science.

An additional transversality comes about as the text consists of two different types of readings of classic texts that are themselves transversals. In Part I, I produce readings of Derrida's relation to Husserl, Hegel, the gift of life, and AIDS that highlight the 'forceful body politic' inhabiting a 'general text' of force and signification, crossing that reading of the Derridean concern with metaphysics with the Deleuzean critique of 'hylomorphism' (the doctrine that production is the imposition of formal order on chaotic or passive matter); Part II presents Derridean-style close readings of the Deleuzean theme of the implicit hylomorphism of the 'organ-ized body politic' in Plato, Aristotle, Heidegger and Kant.

The underlying principle of the book is as follows: Although the work of Jacques Derrida is a magnificent achievement and a lasting contribution to the tradition of post-phenomenological European philosophy, it is, while still necessary to any progressive philosophical and political practice, primarily of propaedeutic value in the reflection on and intervention into the convergent fields assuming the highest importance in the

material structuring of the current global system of bodies politic: recombinant genetics, cognitive science, dynamical systems theory and others. Derrida's work, though destroying the self-evidence of the various identification machines at work today-the naturalized self-images of nations, races, genders, subjects and so on-by inscribing the production of meaning in a world of 'force and signification', can only prepare the way for the radicality of Deleuzean historical-libidinal materialism: the principles guiding the empirical study of forceful bodies politic in their material production.

In other words, in moving the concept of the transcendental from that of the conditions of possibility of experience to that of the quasi-transcendental conditions of impossibility, the aporias, of experience, (4) Derrida performs the labor necessary to shake free of millennia of philosophical idealism, thus moving us from the pretensions of the cultural stratum to the point where a Deleuzean investigation of the material forces of all strata can begin. (5) Thus a Derridean deconstructive reading will move us from the pretensions of metaphysics or phenomenology as the self-grounding of a rational, meaningful sign system-the book of nature-to the inscription of marks in a world of force and signification-the 'general text.' (6) At that point the Deleuzean injunction takes hold: conduct a material analysis of forceful bodies politic. (7) Deleuze's own shifting of the transcendental from the conditions of possibility investigated by phenomenology-and from the conditions of impossibility, the aporias investigated by deconstruction-to the virtual realm, (8) the patterns and triggers of actual bodies, thus implicitly articulates a research program for the investigation of forceful bodies politic: he bids us investigate their virtual space to find their triggers ('singularities'), and their patterns of self-ordering ('abstract machines' linked together to form a 'machinic phylum'), in a 'micropolitics' (hence Deleuze's well-known affinity with Foucault). (9) We thus are confronted, in Deleuze's works, with a radically materialist philosophy that engages all the powers of contemporary physics and biology to analyze and intervene in those sectors of the contemporary global system which gleefully embrace difference and flow; with Derrida, on the other hand, we must remain content with the deconstruction of idealist philosophy and the consequent shaking of those political structures still reliant on identity-a necessary and not inconsiderable achievement, to be sure.

FORCEFUL BODIES POLITIC

The three key notions of *Political Physics*, the common content linking the chapters, are the Deleuzean-Nietzschean notion of forceful bodies politic, and what I take to be the major philosophic implications of complexity theory, a notion of material self-

ordering and the critique of hylomorphism it makes possible. In describing Nietzsche's ontology of force in *Nietzsche and Philosophy*, Deleuze describes the production of forceful bodies: 'Every relationship of forces constitutes a body--whether it is chemical, biological, social, or political (45/40). The study of forceful bodies requires a political physics: both a politicized physics (paying attention to the political ground of such basic physics terms as 'law') and a physicalized politics (paying attention to the physical ground of such basic political terms as 'force') are needed in order to understand politics as the forceful organ-ization of bodies. (10) As the Deleuzean-Nietzschean notion of bodies allows us to think bodies in various registers, we have the conceptual license to divest politics of its restricted state-orientation, so that the constitution of physical, chemical, biological and social bodies can be thought politically (in terms of the law of their ordering of force relations), while the constitution of political bodies can be thought physically, chemically, biologically, or socially (in terms of the forces involved in their ordering of laws). Forceful bodies (persons, families, groups, parties, gangs, corporations, races, sects, nations, worlds) are thus particular force-arrangements of chemical, biological and social bodies, themselves force-arrangements: they are forceful bodies politic. In its most radical Deleuzean moment, political physics, in thinking forceful bodies politic, thus moves both 'above' and 'below' the level of the individual as classically conceived in liberal humanism, opening ways to investigate both 'social machines' (inter alia, tribalism, monarchism, liberalism, fascism, and the experimental immanent self-orderings Deleuze and Guattari call 'war machines') and the 'molecular flows' of matter (somatic fluids, of course-milk, sweat, sperm, urine, blood-but also steel, electricity, concrete) they order into forceful bodies politic. The classical modern notion of life, restricted to the organic individual or perhaps the species as collection of individuals, is thus too restricted for the scope of political physics. (11)

While to my knowledge Derrida does not use the term 'forceful body', he thematizes force in every discussion of politics, as I detail in Chapter 2. Derrida's deconstructive approach to the question of the forceful body focuses on the undecidable role played by force in legitimating a body politic. In deconstructing the social contract, Derrida shows that the 'mystical force of authority', as he calls it, is unthinkable in the history of Western philosophy due to the allegiance to presence constitutive of the text of Western metaphysics. After the ground-clearing work of deconstruction's 'negative' moment, Derrida's 'positive' thought of the body politic conceives it as a 'general text' of 'force and signification'. For Derrida, however, force, while marking the breaking point for consciousness, its point of inscription in a world of force that robs it of its pretensions to self-mastery ('one would seek in vain a concept in phenomenology which would permit the thinking of intensity or force' [Writing and Difference 46/27; translation modified]), remains an inarticulate ('mystical') other, even as the disruption of consciousness by force is affirmed in welcoming the other. Thus while deconstruction can dismantle the presence-form nexus at the heart of the metaphysical

representation of the production of forceful bodies politic (the site for our transverse reading of a Derridean critique of hylomorphism) and move us onto a general text whose thought of the interlacing of force and signification exposes us to the disruption of the same by the other in the 'democracy to come', it can't offer us an empirical research program for exploring that text and the material bodies formed therein. In other words, the powerful and to-be-prized effect of deconstruction-the opening out of phenomenological interiority in the form of consciousness to a world of 'force and signification'-is only the highlighting of the dismantling effects of such a world on pretensions to natural or rational identity and stability; deconstruction is unable to articulate the material processes of production of forceful bodies in the general text upon whose effects it lives. In a word, deconstruction is top-down: starting with claims of bodies politic to natural and simple identity it shows différance or its cousins worrying and shaking those pretensions and thus opening those inhabiting that body to the critical claims of the call of the other in the democracy to come, while Deleuzean historical-libidinal materialism is bottom-up: starting with a virtual differential field it investigates the triggers and patterns of the production of bodies politic and thus offers avenues for nuanced pragmatic intervention and experimental production of immanent and democratic bodies politic, which he calls 'war machines', 'planes of immanence', or 'full Bodies without Organs'.

DERRIDA, DELEUZE AND SCIENCE

This inability to grapple with material production is part and parcel of the (non-) relation of Derrida's work to science-or at least more modestly, to contemporary complexity theory. (13) For a long time people argued whether Derrida's work was philosophical or not. The principal objection seemed to be that it blurred the disciplinary boundaries between philosophy and literature or philosophy and rhetoric. By now, most people seem to have accepted an operational definition: as long as there are people in university philosophy departments who say they read Derrida or that they deconstruct texts, then Derridean deconstruction is as philosophical as anything else currently going on there. Thus it is that Derrida, after having been accused of blurring the disciplinary border of philosophy, gained its very protection in the latest round of 'Science Wars'. Witness the way Alan Sokal and Jean Bricmont, in their recent polemic *Fashionable Nonsense*, absolve Derrida of most of the culpability in overstepping the philosophy/science border they impute to others: 'since there is no systematic misuse of (or indeed attention to) science in Derrida's work, there is no chapter on Derrida in this book'. (15)

But Derrida's virtue in Sokal and Bricmont's eyes is precisely his limitation in others': his relative inattention to science. Now a limitation is not a vice: I do not *fault* Derrida

for not engaging in a direct and sustained encounter with complexity theory (indeed the very genre of polemic, of inquisition, of fault-finding in Sokal and Bricmont borders on the grotesque). (16) No one can do everything, and we must let Derrida set his own agenda, define his own limits. Nonetheless, it is Derrida's post-phenomenological orientation (granting the point that he shows how phenomenology breaks down), his point of departure from the nexus philosophy-literature-rhetoric (granting the point that he wants to work on-not 'blur'-their borders), his very *culture* (granting the point that he shows how culture breaks down in the face of 'force'), that limits his engagement with complexity theory and therefore limits contemporary interest in his work. In the final analysis, then, to consider one of our motifs in this work, for Derrida 'matter' is a concept to be read in metaphysical texts (as that which is resistant to form), or more precisely a marker or trace within metaphysics of a 'radical alterity' that cannot be conceptualized. Although this stance toward matter allows Derrida's thought to be articulated with the paradoxes of quantum mechanics, as Arkady Plotnitsky shows, (17) Derrida remains unable to engage the positive notion of material self-ordering as productive of the real, which, as we will see shortly, is proposed by Deleuze and Guattari in their engagement with complexity theory. Despite these content limits though, Derrida's method remains important and to an extent unsurpassable. A fantastic reader of the history of philosophy, a master at showing the breakdown of philosophy's pretensions to self-grounding, Derrida's post-phenomenological orientation might prevent the direct articulation of his work with contemporary complexity theory, but his reading techniques, his scrupulous attention to detail, are a welcome addition to any philosopher's toolkit: these cannot be forgotten and retain their usefulness in many-but not all-contexts.

Conversely, it's the very willingness of Deleuze to articulate his work with contemporary science that drives much of the current interest in his work. Although post-modern appropriations of science--to say nothing of critiques--have been the focus of much negative attention lately in the post-Sokal era, there does seem to be good cause to take seriously the work of Deleuze. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our Kant. It's not too much, in my view, to say that Deleuze is our world of Euclidean space, Aristotelian time, and Newtonian physics-and just as they (perhaps inadvertently) pinpointed biology as the key science that did not fit that world-Deleuze works to provide the philosophical concepts that make sense of our world of fractal geometry, anticipatory effects, and non-linear dynamics-and to highlight biology as the key science of our time. In other words, Deleuze directly tackles the question of complexity theory, the study of the self-ordering and emergent properties of material systems in widely-differing registers: the physical, chemical, biological, neural, and social bodies politic. The best works in identifying Deleuze's interest in this field are Brian

Massumi's A User's Guide to Capitalism and Schizophrenia and Manuel De Landa's

'Non-organic Life'. We will present a brief overview of Deleuze and complexity theory below in order to set up the themes of hylomorphism and material self-ordering we pursue in Chapter 5-7.

HYLOMORPHISM AND MATERIAL SELF-ORDERING

The second and third of the key concepts of this book, after that of the forceful body politic, are hylomorphism and material self-ordering. These concepts are created through the articulation of the philosophical significance of Deleuze and Guattari's elucidation of complexity theory, which allows us a way to think the self-ordering potentials of matter itself. This forces us to rethink the concept of production as the transcendent imposition of the architect's vision of form on chaotic matter, which Deleuze and Guattari call 'hylomorphism', following the work of Gilbert Simondon. (22) For Deleuze and Guattari, Simondon's work implies that we must add new concepts to the matter-form pair. First, we must see that matter-movement carries singularities as 'implicit forms'; in our terms, 'implicit forms' are potentials for material self-ordering with which the artisan negotiates, as in the case of woodworking: 'the variable undulations and torsions of the fibers guiding the operation of splitting wood' (ATP 508/408). On the other hand, the form must be seen as suggested by the matter rather than as the pure product of the mind of the architect. In other words, forms are not pure but already laden with 'variable intensive affects' and thus tied to 'material traits of expression', that is, actual properties linked with virtual potentials or singularities suggesting ways of working with and transforming the material (such potential transformations are what Deleuze means by 'affects': what the body can undergo; 508/408). Thus forms are developed out of these suggested potentials of the matter rather than being dreamed up and then imposed on a passive matter. In artisanal production, the artisan must therefore 'surrender' to matter, that is, follow its singularities by attending to its traits, and then devise operations that bring forth those potentials to actualize the desired properties. It is this link of singularities and traits via operations that distinguish weapons as belonging to different 'assemblages' or 'machinic phyla', as with the saber and the sword (506/406).

The architect⁽²³⁾ is blind to such traits and despises 'surrender' to matter; he only sees and commands. The link of complexity theory and the body politic found in the social and military resonances of 'surrender' and 'command' is grounded in Simondon's critique of hylomorphism as a socially conditioned doctrine. As Simondon puts it: 'the hylomorphic schema corresponds to the knowledge [connaissance] of someone who stays outside the workshop and only considers what goes in and comes out of it' (L'individu 40). Simondon refines his analysis of the social conditions of hylomorphism by showing that it is fundamentally not just the viewpoint of the

observer outside the workshop, but that of the master commanding slave labor: 'What the hylomorphic schema reflects in the first place is a socialized representation of work ... The technical operation which imposes a form on a passive and indeterminate matter is ... essentially the operation commanded by the free man and executed by the slave ...' (48-49).

Hylomorphism is thus the doctrine that production is the result of an (architectural) imposition of a transcendent form on a chaotic and/or passive matter. This archethinking-that a simple unchanging commanding origin is responsible for change in others-is one of the fundamental philosophical issues of the West (we will see it take shape in the Platonic context in Chapter 5). It can be opposed to a thought of multiplicity, in which changes in a field are attributed to changes in the arrangement of its immanent elements. (It should be obvious how much of the basic Western philosophical vocabulary-One and Many, transcendence and immanence-expresses this same distinction.) In a formula that expresses the basic perspective of this book, we can say that Derrida works out the post-phenomenological consequences of the conflict of arche- and multiplicity thinking, while Deleuze works out the materialist consequences.

A hylomorphic representation of a body politic thus resonates with fascist desire: the leader comes from on high to rescue the chaos of the people by his imposition of order, the soul rules the body from on high, the will whips the body into shape, and so on. The key to moving to a notion of production on an immanent plane of the force of material motion is the counter-concept to hylomorphism, material self-ordering. Such non-hylomorphic production can be seen as the artisanal coaxing forth of material self-ordering by moving a physical system toward one of its 'singularities'--one of its thresholds beyond which a process of self-ordering occurs. A self-ordered and non-organismic body politic would be a 'full Body without Organs' in Deleuze's terms or 'radical democracy' in the terms of Antonio Negri and Michael Hardt. (NB: This tentative identification of democracy and material self-ordering should not be taken to endorse a facile identification of 'the market' as a 'natural' force.

As we will see in Chapter 1, while Derrida implicitly critiques the Husserlian production of meaning as a hylomorphic imposition of conceptual form on the stratum of sense, there is no counterpart to the notion of material self-ordering in his work. The closest we come is the notion of 'making sense' as the non-hylomorphic production of meaning in the general text, as I show in Chapter 2. It's precisely the Derridean concern with the (breakdown of the) production of meaning that isolates his work on the uppermost strata of the material world conceived by Deleuze, while it's Deleuze's materialism that enables him to articulate his thought with that of contemporary science in such a fruitful manner. This is not to say that Derridean political intervention is useless-far from it; I attempt to demonstrate the philosophical and political utility of work inspired however fallibly by my reading of Derrida in Chapters 3 and 4.

Nonetheless, it is important to demonstrate where Derrida can help us and where he cannot, and I propose that he cannot help us in engaging with complexity theory; such engagement is the province of Deleuze and Guattari.

In the terms of traditional philosophy, Deleuze and Guattari offer us in their work on complexity theory a consistent materialism that avoids the opposition of mechanism and vitalism, coupled with a immanent and univocal ontology of becoming. (28) To think the former, a consistent materialism without mechanistic reductionism or vitalist reification, we must avoid attributing self-ordering to the components of actual physical systems (mechanism) while at the same time maintaining a distinction between virtual singularities and the actual system. But as Deleuze insists on the univocity of being and hence on the reality of the virtual, he avoids a hypostasized spiritual agent of change (vitalism). In other words, Deleuze exorcises the ghost in the machine, but in doing so leaves us with a different notion of machine, that of a concrete assemblage of heterogenous elements set to work by the potentials of self-ordering inherent in the virtual singularities of the actual system.

To think Deleuze's second contribution, the immanent and univocal ontology of becoming, the key is the time-scale of change. One could say that current mathematical modeling helps us manipulate the time-frame for the appearance of material systems beyond those to which our senses are attuned, so that we can determine the existence-span of any one configuration, whether that be astronomically or merely geologically long or sub-atomically short. With this time-manipulation granting us the ability to think an ontology of becoming, rather than a fixation on a being determined as presence, one can now access at any point the flux of matter and energy pulsing through--and in the 'crystallization' into a sensibly accessible pattern, forming--the sensibly-accessible bodies on which a substantialist ontology is founded. (29)

To summarize then, Deleuze and Guattari's work on complexity theory highlights the way that the flux of matter and energy is self-ordering at various singularities or triggers--thresholds of temperature, pressure, velocity, density, connectivity, etc.--giving rise to patterns of self-ordering such as crystallization, turbulence, autocatalysis and so on. Unable to conceptualize self-ordering, hylomorphic 'State philosophy' displays the basic oscillation between chaotic matter and organizing spirit that organizes much of Western culture; Deleuze and Guattari challenge us to see that the self-ordering properties of matter itself have been 'vampirized' and put into a spirit that must return to organize a chaotic matter.

Let me be clear at this point. Although this work is prompted by the recognition of the philosophical importance of complexity theory-it shows what happens to the history of philosophy when it is re-read from a perspective transversally informed by contemporary science-I do not offer here a straightforward book on 'continental

philosophy and science', for several reasons. First of all, to evaluate critically the scientific work involved in complexity theory is quite beyond any one person's competence, for drawing forth the full implications of a new scientific paradigm is the communal project of all those who have been at work in this field for several decades now. Second, such a book would also entail a comparison of the 'philosophy of science' that can be drawn from the work of Derrida and Deleuze, another major undertaking. Instead, I offer in *Political Physics* a demonstration of the powerful effects of using the theme of material self-ordering in tracing political physics in the history of Western philosophy. In other words, I test the results of using the search for hylomorphic and self-ordering models of the body politic as a reading machine for the history of Western philosophy. Thus *Political Physics* is the record of researches toward tracking down in Western philosophy the road not taken of the immanent self-ordering of a multiplicitous field (the radical democratic body politic) and the supplementary archethought of the transcendent formal imposition of order on chaos (the organ-ization of fascist bodies politic).

COMPARATIVE AND SYNTHETIC ASPECTS

The comparative aspect of *Political Physics* is thus concerned with the questions of the forceful body politic, hylomorphism, and material self-ordering: let us say this is the common content of the two thinkers for the purposes of this book. The synthetic aspect of this work lies in combining Derrida's slow reading and Deleuze's conceptual creativity. Perhaps as a result of a desire to arrive at new conceptual creations in articulation with contemporary science, Deleuze-at least in his work with Guattari in *Capitalism and Schizophrenia*-is notorious for his haste, his ransacking of libraries. In these volumes, Deleuze and Guattari are not in the slightest interested in what authors mean, and they especially aren't interested in a patient deconstruction that shows how texts are refractory to the intentions of their authors. (However, in his early work on the history of philosophy, Deleuze patiently, if a bit idiosyncratically, re-constructed philosophers in his own image: approaching them 'from behind', as he said, to beget 'monstrous offspring' with them. (30)

Overall then, we can say that, Deleuze and Derrida have different reading methods: rather than a work on the borders of philosophy, showing the breakdown of conceptuality in the face of force, as Derrida would have it, Deleuze and Guattari define philosophy as the creation of concepts as multiplicities that select from the 'chaos' of the virtual. Thus for Deleuze the history of philosophy (and science and literature) becomes a resource for such creation, rather than a historical structure whose tricky borders must be negotiated with. When we go to read the history of philosophy in terms of hylomorphism and material self-ordering, however, we must slow down the

hectic pace of Deleuze's reading in *Capitalism and Schizophrenia*. Only a Derridean close reading can reveal the investments of classic philosophers in hylomorphism, their desire for organismic ordering of bodies and their attendant allergy to material self-ordering and Bodies without Organs. In this way, the book strives for a transversal between Derridean method and Deleuzean content, a patient deconstruction aiming not at 'presence' but at hylomorphism.

PREVIEW OF CHAPTERS

In Part I: 'Derrida: Deconstruction and Forceful bodies', I first detail the critical and positive moments of Derrida's thought on forceful bodies, drawing on his readings of Husserl and Hegel. In Chapter 1, 'Forcing Open Consciousness' I show how Derrida implicitly includes force among the denigrated series of opposed terms that structure Husserl's work. The opposition around which *Speech and Phenomena* pivots--that of indication and expression--is the attempt to exile indication as a forced movement of thought to empirical psychology in order to leave a free space for voluntary expression. However, 'Form and Meaning' shows Derrida locating an inner force of thought in the 'limiting power of form' that drives Husserl's hylomorphic conception of the production of meaning. Force is thus shown as the limits of Husserlian consciousness, the ruling agent in the 'conscious body politic'.

Moving to the positive moment of Derrida's thought of forceful bodies, in Chapters 2 and 3 I develop the consequences of his notion of a general text of force and signification. In Chapter 2, 'Force and Signification in the General Text', I examine Derrida's explicit examination of Hegel's thought of force, to which he contrasts his own notion of a general text of force and signification. Derrida's political physics is then articulated by the notion of 'making sense', a non-hylomorphic conception in which meaning arises from the forceful interaction of vectors in a field of force and signification. This general text of force and signification is the site of struggle for the 'democracy to come'.

In Chapter 3, 'Given Time and the Gift of Life', I sketch a Derridean reading of the 'teleological semenology' of the basically Aristotelian patriarchal conception of maternal bodies as mere matter for the reproduction of male form in species reproduction. Aristotle's hylomorphism is countered by the force of maternity in giving life, which ruptures the circle of the species to allow us to think the gift of life as a non-hylomorphic production of another, a production that allows a politics of 'differential species-being' in both the vital and civic bodies politic.

In Chapter 4, 'Economies of AIDS', I depart from a strict analysis of Derridean texts to examine the production of the forceful bodies politic produced by mainstream AIDS discourse. In so doing I examine the economy of truth in the scientific body politic, the

economy of the borders of the somatic body politic, the economy of identity in the sexual body politic, and the economy of meaning in the academic body politic. I trace the disruption of those bodies politic by the thought of the general economy, a key Derridean notion, that demonstrates the threatening power of AIDS, a call to struggle in the general text of force and signification. The disruption of mainstream AIDS discourse by the thought of the general text-Derrida's call for a defeat of hylomorphic arche-thinking-still does not enable us to positively think production as material self-ordering; Chapter 4 thus serves as the segue to Part II, an examination of Deleuze's historical-libidinal materialist approach to the study of the production of forceful bodies politic.

In Part 2, 'Deleuze: Historical-Libidinal Materialism and Bodies Politic', I provide close readings, in the Derridean style, of the hylomorphic representations of the production of bodies politic found in Plato, Aristotle, Heidegger and Kant. In Chapter 5, 'Master and Slave in the Platonic Body Politic' I examine the way in which, for Plato, soul, man, household, city and cosmos are all isomorphic because they all are (or should be) technically produced organic unities. However, the Platonic notion of techne, while it pretends to cover artisanal production, is in fact completely oriented to the perspective of the architect, as I show in a detailed reading of the political physics inherent in the cosmology of the *Timaeus*.

In Chapter 6, 'Philosophy and Leisure: The Social Force of Necessity', I examine the denigration of artisanship found in Aristotle's *Metaphysics* and in Heidegger's commentary on it in his 1924-25 lectures, *Plato's Sophist*. I then contrast Aristotle's economic account of the production of the surplus time necessary for the leisured bodies of philosophers with Heidegger's focus on individual temporalities. We also find here a force of necessity, but social rather than natural, a force that produces the forced bodies of workers and the leisured bodies of theoreticians. Heidegger's focus on temporality rather than surplus time reveals an elision of forceful bodies emblematic of his thought.

Finally, in Chapter 7, 'Force, Violence and Authority in the Kantian Body Politic', I present a reading of Kant's use of the term *Gewalt*, detailing the Kantian body politic in its cognitive, moral, aesthetic and civic registers, and showing that the resultant economy of force, violence and authority pivots on the undecidable term 'coercion'. I then present a reading of the *Critique of Judgment* that shows the way Kant flees the revolutionary potential of what he calls 'hylozoism' or 'living matter', to embrace a hylomorphic practical supplement of a divine architect or 'moral author' of the world. Thus rather than focusing on the architect's vision and the denigration of aesthetic sensitivity, as we did in Chapters 5 and 6, here we focus on the force used in the transcendent organ-ization of the contractual body politic, and on the concomitant rejection of the notion of material self-ordering.

In the Afterword I briefly consider the contemporary implications of the relations among hylomorphism, metaphysics and fascism, trying to pinpoint the relevance of the struggle against them in a 'New World Order' of global differential self-ordering capitalism.

NOTES

INTRODUCTION

- 1. This is not to say that no work has been done. See for instance Paul Patton, 'Strange Proximity'; May, *Reconsidering Difference*; and the essays in Patton and Protevi, eds., *Between Derrida and Deleuze*.
- 2. I will define my sense of the term 'body politic' below. The term re-entered common academic usage with Ernst Kantorowitz, *The King's Two Bodies*. Foucault cites Kantorowitz at *Discipline and Punish*, 37/28.
- 3. There is already a huge literature attempting to make accessible to a general audience the basics of complexity theory. Among others, see Prigogine and Stengers, *Order Out of Chaos*, and Cohen and Stewart, *The Collapse of Chaos*.
- 4. Derrida's work of the 1990s increasingly uses the figure of aporia. See among others the eponymous *Aporias*.
- 5. In other words, Derrida's work can help in exposing the 'illusion constitutive of man' Deleuze and Guattari pinpoint at ATP 82/63.
- 6. This movement from 'sign' to 'mark' renders utterly futile attempts to criticize Derrida's alleged 'semiological reductionism,' as in M.C. Dillon, *Semiological Reductionism*.
- 7. Deleuze and Guattari have both an ultimate ontological sense of matter as 'Body without Organs' (BwO) or 'plane of consistency' (the quantum level): 'the unformed, unorganized, nonstratified or destratified body and all its flows: subatomic and submolecular particles, pure intensities, prevital and prephysical free singularities' (ATP 58/43); 'nonstratified, unformed, intense matter, the matrix of intensity, intensity = 0; ... Matter equals energy' (189/153), and a relative analytic sense as the input to a production process analyzed without reference to a transcendent ordering agent (ontologically speaking, then, relatively stratified facing the BwO and relatively destratified facing the product). The resonance with the Aristotlean

problematic of prime matter should be evident.

- 8. See the excellent discussion of Deleuze's notion of virtuality in Daniel W. Smith's 'Introduction' to his translation of Deleuze's *Essays Clinical and Critical*. See also Boundas, 'Deleuze-Bergson: an Ontology of the Virtual.'
- 9. Deleuze's *Foucault* is both among the very best works written on Foucault and one of Deleuze's most intriguing books.
- 10. I hyphenate 'organ-ization' to draw attention to Deleuze and Guattari's concept of the forceful body as stretched along a continuum whose limit cases are the organism and the 'Body without Organs' (BwO), that is, a fixed, centralized body, transcendently formed by exclusive disjunctions, and a changeable body, immanently self-organized by inclusive disjunctions. While all bodies are ordered, not all tend toward the limit named 'organism'. See my 'The Organism as Judgment of God' for a detailed discussion of these terms.
- 11. Noteworthy recent philosophical discussions that interrogate the biological, political and legal notions of life include Keith Ansell Pearson's two works, *Viroid Life* and *Germinal Life*; and Giorgio Agamben, *Homo Sacer*. I reviewed *Viroid Life* in *Parallax* 8.
- 12. For a noteworthy contribution to the already large literature on Derrida and politics, see Richard Beardsworth, *Derrida & the political*. I reviewed Beardsworth's book in *PLI* 6.
- 13. By this I mean that Derrida himself does not dedicate his own work to the deconstruction of scientific texts; in particular, he does not address the epistemological or ontological presuppositions of contemporary complexity theory. This is not to say that a philosophy of science cannot be constructed using Derridean support (most notably, the notion of undecidability Derrida works out with reference with Gödel, and the work on idealization conducted in ITOG) as two recent texts demonstrate. Arkady Plotnitsky's Complementarity is a long and complex work detailing the 'analogies' (2), 'affinities" (3), and 'metaphoric parallels' (86) of Derrida's work with that of Niels Bohr, thereby showing a generalized 'anti-epistemological' effect of an ineluctable loss of meaning accompanying the necessary replacement of the restricted economy of classical physics and metaphysics by a general economy (1-2). Christopher Norris, on the other hand, enlists Derrida's aid in reining in Plotnitsky in support of a defense of some minimal commitment to ontological realism in science. (See especially Chapter 4, 'Quantum Mechanics: A Case for Deconstruction' in Against Relativism.) Without claiming to decide the relative merits of the complex arguments of Plotnitsky and Norris, it seems to me that even if one grants that Plotnitsky has proven his point, it

should not be forgotten that for an anti-reductionist stance quantum effects are negligible in the 'mid-range' of material bodies-precisely those areas in which Deleuze can help us see how complexity theory works in investigating bodies politic. See Prigogine's declaration of an "end of universality" in science at 217-18 of *Order out of Chaos*; and Cohen and Stewart, *The Collapse of Chaos*, 33-34 et passim; Deleuze and Guattari make the anti-reductionist point at 119 of *What is Philosophy?*. In the biological context, Sarkar is very clear on this point: 'Whatever strong reduction in molecular biology is, it is not a reduction to the quantum level' (*Genetics and Reductionism*, 148).

In other words, granting Plotnitsky the point that Derrida's thought can be usefully articulated with Gdel's work on undecidability in mathematical systems (the 'highest' or signifying stratum of the material world) and to Bohr's work on complementarity in quantum mechanics (the 'lowest' or material/energetic stratum), it still has no purchase on the ontology needed for mid-range complexity theory work (the notions of phase space, attractors, bifurcators, emergent effects, and so on) that Deleuze's notion of the virtual enables us to think. The basic difference between Derrida and Deleuze relevant in this case is that between a post-phenomenology and a historical-libidinal materialism: the study of the breakdown of presence into *différance* and the study of the material production of bodies politic.

Several more or less unsatisfactory attempts have been made to link Derrida's thought to that of chaos theory, but none go beyond noting analogies at a very high level of abstraction. In descending order of rigor, see N. Katherine Hayles, *Chaos Bound*, especially Chapter 7, "Chaos and Poststructuralism"; Laurie McRobert, "On Fractal Thought"; and Robert Smith, "Short Cuts to Derrida." Alexander Argyros' *A Blessed Rage for Order: Deconstruction, Evolution, and Chaos*, while not un-interesting on the latter two topics of his subtitle, is sadly ill-informed and (hence) needlessly polemical on the first.

Derrida's relation to biology, cybernetics, and information theory is treated by Richard Doyle, *On Beyond Living*, Chapter 5, "Allergies of Reading: DNA, Language, and the Problem of Origins"; and Christopher Johnson, "Derrida and Science."

14. After being quite brutally and stupidly attacked in its first round. See Plotnitsky's devastating critique ' "But It Is Above All Not True": Derrida, Relativity, and the "Science Wars," ' of the serious reading and conceptual errors (and the lack of the merest professional courtesy, not to say ethics) in the attacks on Derrida by Gross and Levitt, *Higher Superstition* and by Alan Sokal in the *Social Text* and *Lingua Franca* articles in which he springs his now-famous 'hoax.' Plotnitsky adds a brief explanatory note in *Postmodern Culture* 7.3 (May 1997) and has a much longer and more detailed exchange with a physicist who is critical but (unlike the others noted above) interested in a serious and respectful intellectual encounter in *Postmodern Culture* 8.2 (January

1998).

- 15. Alan Sokal and Jean Bricmont, *Fashionable Nonsense*, 8. In general, Sokal and Bricmont's caveats about easy and exaggerated conclusions drawn by some minor authors about the so-called 'limits to science' or 'revolution against Newton' allegedly shown by the results of 'chaos theory' are extremely well-taken. See, for example, their very clear and useful Chapter 7, 'Intermezzo'. The reader will note the complete absence of such speculation in *Political Physics*, which deals exclusively with the implications of new scientific notions as reading grids for the history of philosophy. This consonance does not mean, however, I agree with their treatment of Deleuze and Guattari, although space does not permit a full examination of the remarkable chapter on Deleuze and Guattari in *Fashionable Nonsense*, in which extended quotation without context competes for space with out-of-hand dismissals without discussion.
- 16. One of Foucault's most noble late works is his wonderful critique of the polemical genre in 'Polemics, Politics, and Problematizations.'
- 17. See notes 13 and 14 above.
- 18. About Manuel DeLanda's 'Non-Organic Life', which highlights the relation of Deleuze and complexity theory, no less severe critics than Gross and Levitt say in their *Higher Superstition*, 267-68n17: '[although] there is some muddle ... [it is] pretty clear and straightforward ... a good and honest job, although one might wish for a more careful delineation of how much of this is really speculative'. As readers of *Higher Superstition* will attest, this is praise indeed from Gross and Levitt. Since DeLanda explicitly links his account with Deleuze and Guattari, and since Gross and Levitt somewhat approve of DeLanda-although admittedly without mentioning Deleuze and Guattari by name (they do contemptuously dismiss Deleuze's treatment of Riemann in his *Cinema* series, although they do not mention the similar treatment in ATP)-I assume the connection of Deleuze and Guattari and complexity theory is at least an avenue worth pursuing.
- 19. This is not to say Kant was at the forefront of his times, as was Deleuze. See Zammito, *The Genesis of Kant's* Critique of Judgment, Chapters 8 and 9, for a critical assessment of Kant's relation to the science of his times, especially 190: 'Kant's attitudes impeded his recognition of ... recent developments in eighteenth-century science and left him sharply estranged from its most creative and effective currents'.
- 20. Throughout the *User's Guide* and in his otherwise splendid "The Autonomy of Affect," Massumi makes the to my mind unfortunate assertion that quantum indeterminacy is "fed forward" through all strata (230). While the Deleuzean concept of virtual can be used to think the quantum level, as Massumi shows at 52-55 of *User's*

Guide, identifying all indeterminacy, undecidability, physical free play, political resistance, economic crisis, and so on, with quantum indeterminacy is speculative overkill. Indeed Massumi himself seems a bit uneasy in wrestling with such identity and difference. He first writes that 'On each level, it [sc. quantum indeterminacy] appears in a unique mode adequate to that level', but then goes on to use scare quotes, which seem to indicate some hesitancy: 'Each individual and collective human level has its peculiar "quantum" mode ...' See Cohen and Stewart's critique at 425-27 of *The Collapse of Chaos* of Penrose's analogous attempt to ground free will in quantum indeterminacy in *The Emperor's New Mind*. For another take on Deleuze and quantum mechanics, this time from the perspective of the work of David Bohm, see Murphy, 'Quantum Ontology.'

- 21. See also the remarks on Deleuze and Guattari interspersed throughout DeLanda's *War in the Age of Intelligent Machines* and *A Thousand Years of Nonlinear History*.
- 22. Deleuze and Guattari cite Simondon's major works, *L'individu et sa genèse physico-biologique* and *Du mode d'existence des objets techniques* at several crucial passages of the 'Nomadology' plateau of ATP, e.g., 457n28/555n33 and 508/408. Very little has been written about Simondon in English, although there is a translation of the Introduction to *L'individu* inCrary and Kwinter, eds., *Incorporations*. For French literature, see the monograph by Gilbert Hottois, *Simondon et la philosophie de la culture technique*, and the collection of essays published by the Collège International de Philosophie, *Gilbert Simondon: Une pensée de l'individuation et de la technique*.
- 23. 'The' architect is only an ideal figure of hylomorphism, indicating the arrogation to the seer of form of the credit for an ordered product and the denigration of the corresponding figure of the 'artisan' who is allegedly responsible for the mere imposition of that form in a chaotic or passive matter. That a real person with the professional title 'architect' is aware of material limitations to the imposition of form is no escape from hylomorphism; what is needed is the 'artisanal' recognition of the ability to coax forth the positive contributions of material inputs to ordered products. I thus retain the reference to architecture more because of its links to the Greek *arch*, as we will see in Chapters 5 and 6, than to contemporary architectural practice, as analyzed in a Deleuzean vein by John Rajchman, *Constructions*.
- 24. Deleuze and Guattari's loose use of the term 'fascism' in *Anti-Oedipus*, replicated here, is controversial. I detail ATP's rigorously materialist sense of fascism in 'A Problem of Pure Matter'. For a view that upholds the *Anti-Oedipus* conception see Land, 'Making It with Death'. See the Afterword below for the important distinction between 'micro' and 'macro-fascism' that results from ATP's more nuanced stance regarding National Socialism as an historical event.

- 25. Deleuze and Guattari define coaxing as the work of the 'artisan'. 'We will therefore define the artisan as one who is determined in such a way as to follow a flow of matter, a *machinic phylum*. The artisan is *the itinerant, the ambulant*. To follow the flow of matter is to itinerate, to ambulate. It is intuition in action'. ATP, 509/409.
- 26. As developed in both *Labor of Dionysus* and *Empire*.
- 27. See the breathtaking naivete of Stuart Kauffman's *At Home in the Universe*, or Kevin Kelly's *Out of Control*. Gilles Châtelet critiques such identifications in 'Du chaos et de l'auto-organisation comme néo-conservatisme festif.' See DeLanda, 'Non-Organic Life', 156, for the important qualifications to the assumptions held by mainstream economists necessary before 'the market' can be considered dynamically.
- 28. See Daniel Smith, 'The Doctrine of Univocity: Deleuze's Ontology of Immanence.'
- 29. 'Crystallization' needs scare quotes as the self-ordering patterns of bodies politic are often far more complex than crystallization. It is, however, the basic example used by Simondon, on which Deleuze and Guattari rely. See note 23 above.
- 30. Deleuze, *Negotiations*, 6. Deleuze's work in the history of philosophy is the subject of Michael Hardt, *Gilles Deleuze: An Apprenticeship in Philosophy*.
- 31. Deleuze and Guattari, What is Philosophy?, 112/118.