



**between science and literature
an introduction to autopoetics**

ira livingston

foreword by n. katherine hayles

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**AN INTRODUCTION
TO AUTOPOETICS**

IRA LIVINGSTON

Foreword by
N. Katherine Hayles

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As to those for whom to work hard, to begin and begin again, to attempt and to be mistaken, to go back and rework everything from top to bottom, and still find reason to hesitate from one step to the next—as to those, in short, for whom to work in the midst of uncertainty and apprehension is tantamount to failure, all I can say is that clearly we are not from the same planet.

—Michel Foucault, *The Use of Pleasure*

In a certain sense one cannot take too much care in handling philosophical mistakes, they contain so much truth.

—Ludwig Wittgenstein, *The Wittgenstein Reader*

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FOREWORD

Writing Between

N. KATHERINE HAYLES

Years ago I had the exhilarating—and frustrating—experience of coteaching an interdisciplinary seminar on reflexivity with a physicist and philosopher. The physicist led us through Gödel’s incompleteness theorem to show how reflexivity entered into mathematics and physics; the philosopher guided us through Aristotle, Kant, Fichte, and others to trace the roots of reflexivity in the philosophical tradition; I added readings by Borges, Hofstadter, and Calvino. Yet in the end, the students appeared to be even more confused about what reflexivity was than when the seminar began; whether this can be counted as progress I leave to a Zen master to decide. In any event, despite our best efforts our stated goal of illuminating the expansive range and importance of reflexivity in a variety of fields certainly fell short of its mark.

I am all the more impressed, then, with Ira Livingston’s achievement in *Between Science and Literature: An Introduction to Autopoetics*. Instructed by the lessons of Niklas Luhmann’s systems theory, Deleuze and Guattari’s rhizomatic *Thousand Plateaus*, Humberto Maturana’s autopoiesis, and Foucault’s epistemic analyses, he creates a powerful—dare I say seductive?—demonstration of reflexivity that argues for its seminal importance as the mode of performance characteristic of the postmodern era. Sensitive to the sweeping nature of such a claim, he is careful to avoid a “presentist” error that would locate reflexivity exclusively as a postmodernist phenomenon, illustrating its dynamics with a wide diversity of examples ranging from the “See Spot run” primers used to teach reading in the 1950s to Romantic poems and contemporary popular culture. The argument, rather, maintains

that reflexivity in the contemporary era has become so interwoven with globalization, capitalist dynamics, scientific theories, verbal creations, and popular culture that it qualifies as the governing episteme of this period.

Writing with the easy confidence of someone who has thought deeply and well about his tutor texts, Livingston draws on many theorists without being overmastered by any. He is open to the lessons of many, but nearly everything he uses he also modifies at the same time. From Maturana, for example, he takes the idea of a system whose sole object is to reproduce itself, but he crucially modifies Maturana's autopoietic theory by insisting that all systems are continuously open to the environment and networked with other systems. From Luhmann he takes the important idea that a system copies into itself the system/environment distinction fundamental to its construction as a system, but he also modifies Luhmann by blurring the boundaries between system and environment, interpreting them through the rhizomatic dynamics of Deleuze and Guattari's "Body without Organs." He learns from Foucault but also insists that the circulation between physical materialities and discursive structures operates through continuous feedback loops that give physical realities a discursive dimension and systems of discourse physical effects. This part of his argument transforms into an analysis of the "science wars" as the reification of a false dichotomy between words and things. As he lucidly shows, words have performative effects that make them operate like things, while things have rhetorical dimensions that inescapably shape their significance and meaning. Above all, he sees systems bound together in a network through which flows of power and meaning circulate, each affecting the others and affected by them. Interfaces and boundaries, both within systems and between them, become the foci of special attention as sites where these flows become almost too evident—places, that is, where the dynamics that reveal these interconnections are "hidden in plain sight."

This book is more, however, than a discursive argument. It is also an experiment in rhetorical form and the performative possibilities of creating gaps and fissures (should we call them interfaces?) between discrete sections where connections are implied rather than explicated, left deliberately ambiguous so as to maximize the diverse ways in which readers can put the parts together. In a sense, the text exploits the radical polysemy of hypertext, though the exponential proliferation of possible pathways is achieved not through linking structures but through a certain cognitive indeterminacy and ambiguity about how the parts connect. Moving easily between homey examples, autobiographical narrative, and dense theoretical argumentation, *Between Science and Literature* performs what it argues for, the importance

of “betweenness.” Within its own body it performs the importance of performance, especially the flows between its parts and the sites where it astutely identifies and locates the flows within and between other bodies. It is, in other words, intensely reflexive about its desire to privilege reflexivity as the episteme in which we are now currently living.

No account of this book would be complete without recognizing the centrality of pleasure to its methodology and rhetorical strategies. Immediately apparent is the pleasure of engaging with writing this apparently relaxed and playful—effects usually achieved, of course, only through meticulous and painstaking attention to tone, rhetoric, and readerly response. From the first line the book draws us in with direct addresses to “you” the reader, with anecdotes drawn from the writer’s past and present, with its everyday common sense and examples, with its confident yet modest tone. As the pages mount, the examples become more thoroughly analyzed, the argument more densely worked and reworked, leading to another kind of pleasure of working through challenging material and critically evaluating its claims. As the book draws to a close the tone becomes more political and polemical and the implications for politics and ethics more pointedly drawn, leading to yet another pleasure of engaging with passionate commitments strongly argued. The progression exemplifies what still remains the goal of all good literature, to please and to instruct—and to this we must surely now add, to perform and to connect through proliferating reflexive pathways.

Not everyone will agree with Livingston’s arguments, conclusions, or even his methodologies. Nor does he imagine that they will. Part of the charm of this book is that it is not afraid to be wrong. Better to lay out a bold vision and make wide claims, this book seems to say, than to draw back into cautious reserve and timid modifications to accommodate critics—often an unfortunate strategy that ends up pleasing no one and losing the value of the initial insights. The insights here are in no danger of being lost, but they do take time and patience to realize fully. This is a book not only to read but also to reread, teasing out its multiple and far-reaching implications by traversing (some of) the multiple pathways it opens for us. And now, if I may take a page from the book that follows and indulge in direct address, dear reader, the rest is up to you.



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Parts of chapters 13 and 14 are revised from my essay “Defrosting: Self/Poetry/Power/Science,” which appeared in *Poetics/Politics*, edited by Amitava Kumar (New York: St. Martin’s, 1999). Scattered parts of chapters 15 and 17 are revised from my essays “The No-Trump Bid on Romanticism and Gender,” in *Romanticism and Gender*, edited by Anne Janowitz, *Essays and Studies* annual volume (Woodbridge, Suffolk, England: 1998), and “Indiscretions: Of Bodies, Genders, and Technologies,” in *Processed Lives*, edited by Jennifer Terry and Melodie Calvert (London and New York: Routledge, 1997).



1

The Livingthinglikeness of Language

This book is an introduction to a constellation of ideas about self-reference and performativity. What these ideas have in common, to start with, is that they develop alternatives to the narrowly realist view of referential language. The focus on this common feature makes the book an introduction to the most important axis of literary and cultural theory throughout the past century. Along the way the reader will find various definitions of terms, examples and vignettes, images and catchphrases, exercises, and thought experiments that are intended to manufacture new intuitions about words *as things*.

But the axis of literary and cultural theory of the past century is turning, so this book also faces the future: as Allen Ginsberg said, “I’m putting my queer shoulder to the wheel.” The work of this book is best described as the *groundwork* of creating and expanding the interzone between, on one hand, self-reference and performativity in literary and cultural theory and, on the other, related notions of autopoiesis and self-organizing systems in biology and other sciences and social sciences. What has made such an interzone possible is nothing less than an ongoing sea change in the relations among ways of knowing and engaging the world, in the *discursive ecology*. This book is a synthesis, an attempt to assess the basic conceptual and historical cruxes of this interzone and to push and pull them a little further. My general term for the interzone is *autopoetics*, that is, the study of “self-making” systems. The more specific term *autopoiesis* was first coined in 1972 by Chilean biologist Humberto Maturana to describe the biological “self-making” of living creatures (see chapter 13) and most famously adapted since then by German

sociologist Niklas Luhmann, who describes the same process in social systems. My focus is on related processes in the realm of meaning, language, and culture. I have removed the *i* from *autopoiesis* in order to vernacularize the word but also to mark what I would like to remove from the concept (its reliance on specific, ideologically bound notions of the self, the I) and, by referencing *poetics* more pointedly, to mark the realms of culture and meaning I would like to include.

When I say that the work of this book is *groundwork*, what I mean is just about the opposite of laying down a stable foundation and a lot more like Wittgenstein's saying that "the whole of language must be thoroughly ploughed up" (277) and that it is philosophy's job to do so. This kind of groundwork goes through the workings of language, minutely turning and overturning as it goes, creating a more fertile ground in which new kinds of things can grow. "My propositions are elucidatory in this way," wrote Wittgenstein (shifting the metaphor): "he who understands me finally recognises them as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.)" (31).

Theoretical biologist Stuart Kauffman once explained to an interviewer that his own early shift from philosophy into biology had been catalyzed by his realization that "if I had to choose, I would rather be Einstein than Wittgenstein" (cited in Waldrop 105). In other words, he preferred to make discoveries about the real things of hard science rather than the mere words and ideas of philosophy. But the title of Kauffman's subsequent book, *Investigations*—"blatantly borrowed," as he puts it (50), from Wittgenstein's *Philosophical Investigations*—signals another shift. Wittgenstein became exemplary for Kauffman in having followed his own advice and "thrown away the ladder" of his own more narrow early view of language ("logical atomism") in favor of a more dynamic engagement with the *livingthinglikeness* of language, the forms of language constituting something like "forms of life." Kauffman replays this shift in his own Wittgensteinization, or, rather, he got to a point where he no longer had to choose between Einstein and Wittgenstein and could *split the difference*, though it should also be noted that Einsteinian things and Wittgensteinian words were already moving into more of the same neighborhood anyway. The shift that keeps happening here is not Wittgenstein's or Kauffman's but part of the long-term sea change in ways of knowing the world, little waves on the surface of a big wave passing through all that we know.

The form of this book is part of its argument. It is made up of a series of linked essays, meaning that the chapters and subchapters echo and build on each other in such a way that they can be either read in sequence or browsed individually. In other words, they are semiautonomous, linked together not like a chain but more like chain mail—or, better yet, like a school of fish or a flock of birds. The multiple pieces operate according to a kind of holographic principle: each contains images of the others and of some partial version of the whole. So if you are reading this for the first time and you already understand it, you can stop reading now, since everything in the book has already been squashed into this preface, this paragraph. However, for example, those who have come to this paragraph having read other parts of the book (chapter 20 in particular) will have caught other resonances cleverly concealed here.

ASIDE

A Reader's Guide to Autopoiesis. The early chapters of this book spin literary and discursive theory in an autopoietic direction, but the autopoiesis concept is not engaged as such until chapter 13, so those who want more of a sense of autopoiesis up front are invited to read chapter 13 first. To begin exploring further (after you have read this book, of course), I recommend starting with Luhmann's great nutshell version of autopoiesis as social theory, "The Autopoiesis of Social Systems" (*Essays* 1–20). Bruce Clarke's essay "Strong Constructivism" and Cary Wolfe's 1998 *Critical Environments* (especially pages 52–84) are both great introductions to Luhmannian autopoietic theory in action and in broader theoretical context (and, dear reader, please notice that these three recommendations add up to only sixty pages—but William Rasch's book *Niklas Luhmann's Modernity* would make a good addition). For an introduction to autopoiesis as a way of thinking about literary texts, David Roberts's essay "Self-Reference in Literature" (Baecker 27–45) and Joseph Tabbi's *Cognitive Fictions* (especially the introduction and first chapter) are good places to start. For a historicization of the notion of system that informs the development of the autopoiesis concept, I suggest Cliff Siskin's article "The Year of the System" or his book *Blaming the System*, and for situating systems theory generally in its recent discursive history and technological investments, N. Katherine Hayles's *How We Became Posthuman*. For an introduction to autopoietic biology, Humberto Maturana and Francisco Varela's 1973 essay "Autopoiesis: The Organization of the Living" (59–138) still works well.

2

Words and Things

This book takes off from a simple proposition: that language is kin to the world it inhabits; language *bears witness* to the world. Since I was trained as a literary theorist, I consider this mostly as a proposition and less as a truth, but the proposition itself suggests (in this case anyway) that there may be less difference between these two than you might think, so you can suit yourself.

What the proposition means, for a start, is that language cannot be understood as a God-given gift or a free human creation or a tool to be bent to human will, but only as an emergent and semiautonomous phenomenon, something more like galaxies, ecosystems, and bacteria. *Language* is shorthand here for a whole sprawling and heterogeneous network that can include everything from language considered in the abstract to individual utterances, functions and figures and patterns of speech (rhetoric), generic formations such as poems and science fiction, discourses and disciplines articulated with large-scale institutional structures (such as religion, literature, biology, and so on), and all that even more sprawling and ill-defined tangle called *culture*.

To start to get an idea of the kinship of nature and culture in this case, one could try to imagine what it would mean to have a *physics* or an *ecology of culture*. These are *metaphors*, since physics and ecology were developed with reference to different kinds of phenomena, but it is important to keep in mind that such differences among phenomena may be themselves neither natural nor eternal; they have been very selectively elaborated in modern language, discourse, and culture—and they are subject to ongoing rearrangement. Increasingly, in fact, there seem to be a number of concepts that move

with relative ease—that fly under the radar—within and between the nature/culture divide otherwise so definitive for modern knowledge, concepts and paradigms such as *system, information, emergence, evolution, diversity, relativity, chaos, ecology, complexity*; these concepts perform *transcending* operations among various realms of the knowledge network.

Although the traffic between the knowledge realms of nature and culture is as old as the realms themselves, modernity consigns much of the traffic to a black market. To take some easy examples, *science fiction* not only is illegitimate science but has also mostly been illegitimate literature as well; the use of metaphor, supposed to make good poetry, has mostly been thought to produce bad science. Though the traffic is changing (and that's what this book is about), it might be grandiose—at least at this time—to think that any constellation of transcending concepts could be made to coalesce into a science or metascience of its own that could fully straddle the nature/culture divide. Likewise, the recent rise of science studies—a set of related fields that investigate the sciences as social and cultural phenomena—certainly does not mean that science studies has achieved the status of a science, much less that of a transcendent metascience, any more than Marxism was able to deliver a “nonideological study of ideology.” Indeed, there is some question as to whether science studies is a stable discipline at all, especially since it has not achieved much of an institutional foothold. If no pretender to the throne of metascience is on the verge of being elevated, then perhaps science itself is being dragged down, back down into the mud-wrestling ring with other vulgar and popular knowledges? This seems to be what some scientists fear. Although disciplinary privilege may be in the process of being redistributed, I am much more interested in how the *kinds* of knowledge are changing than where they fit into an imaginary hierarchy, especially since the idea of a single hierarchy of knowledges seems as misguided as a hierarchy of living creatures. One might as well try to ascertain whether humans, plants, or viruses have been more successful.

The ecology of disciplines is changing as all of the webs of language, people, money, and technology get woven more tightly and widely. The coevolution and interdependence of disciplines are becoming more obvious, and all these changes in the web contribute in turn to changing the overall knowledge climate, shifting discursive niches and allowing for the emergence of new discursive creatures. Sometimes I would like to believe that these more mobile creatures—scurrying around the feet of the giant, sluggish disciplines—will inherit the earth, but I also know that they are not always as warm and fuzzy as the story would have it.

In many ways, too, the kinship of language and the world is an old and even an obsolete idea, part of a way of understanding that got left high and dry three centuries ago and has been repeatedly displaced since then. The story of how “the profound kinship of language with the world was . . . dissolved” is recounted in Foucault’s *Order of Things* (43; as retitled from the French *Les mots et les choses*, literally *Words and Things*). But in another sense such a kinship is also new, even premature, part of a current reconfiguration of ways of knowing the world or, rather, a rewiring of our brains along with our worlds.

In this sense the paradigm seems mostly to serve ideologies of globalization and capitalist triumphalism that accompany an emerging world order that Michael Hardt and Antonio Negri call simply *Empire* (that is, *Empire* with a capital E, not modern imperialism but an altogether new global order of sovereignty). The idea of the kinship of language and the world in their mutual reconfigurations lends itself to a vaguely mystical New Age sense of connection and participation, to a kind of mock-Buddhist picture of a world of ongoing kaleidoscopic reconfigurations. This is most often (as I will discuss later) an aestheticizing and anesthetizing image of transnational capital in its swirling flows, its saturations and ongoing restructurings of all relations, but the *critical* potential of the paradigm has also begun to be tapped into.

So how does one go about separating the proposition from an ideology that seems to be so much in its grain, or is this even possible? Lenin faced such a problem as he considered how Marxists might make use of knowledge generated by mainstream economics, even though, “as a whole, the professors of economics are nothing but scientific salesman of the capitalist class.” Acknowledging, nonetheless, that “you’ll not make the slightest progress in the investigation of new economic phenomena unless you have recourse to the works of these ‘salesman,’” Lenin challenged Marxists “to be able to master and adapt the achievements of these ‘salesmen’ . . . and to be able to *lop off their reactionary tendency*” (83; emphasis added). This challenge could well serve as a motto for this project, though history doesn’t allow us to be so sanguine that reactionary tendencies can simply be “lopped off.”

Even so, it may be that in another sense the idea of the kinship of words and things is *too radical* to be fully embraced either by scientists or by scholars of language and culture, at least insofar as it would require too much rethinking of their most fundamental working hypotheses. By the same token, though, it offers a way through the impasse between the sciences and their humanist critics in science studies. This impasse, sometimes known as the “science wars,” got a whole lot uglier in 1996 when New York University

physicist Alan Sokal managed to get a phony science studies article published in the humanities journal *Social Text*. Sokal claimed that the publication of his bogus article, which was full of extreme claims and bad science, showed that science studies was itself a bogus field with no real standards; the editors said they'd included his article in spite of its overstatements and theoretical naïveté (and in spite of Sokal's refusal to make revisions they'd requested) in their eagerness to encourage practicing scientists to join the discussion (especially, of course, if they seemed to be defectors to the humanist side). In any case, he wheeled in his gift and they accepted it, hollow and wooden as it was.

It is easy enough for each side to caricature the other. The cultural theorists in the humanities, one might say, like to show how science mistakes language for the world. In this account, scientific realism is like a kind of disavowed narcissism: having unwittingly fallen in love with its own reflection on the surface of things, science naively mistakes the thinly veiled projection of its own ideologies for universal and unmediated truth. This is what Marx meant (for example) when he said that Darwin had found “among beasts and plants his English society with its division of labor, competition . . . and the Malthusian struggle for existence” (157). More recent developments of this kind of critique of science are often lumped together under the term *constructionism*, which refers to the way scientific theory and practice are actively shaped and colored—constructed—by their social, ideological, and cultural contexts.

The sciences have lots of security and legitimacy but, by the same token, also a lot to lose (especially in times of downsizing and shifting paradigms), so their regal disdain for cultural theory sometimes gives way to hysterical and self-righteous fury. The world hangs in the balance, we are told. All the grand edifice of modernity painstakingly built since the Enlightenment is threatened, and any deviation from scientific realism is a backsliding step on a slippery slope to the morass of irrationality and barbarism that lies around us—and in us. This is how entrenched privilege, which always thinks the world revolves around it, argues when it feels threatened, understanding the slightest relativization of its power as total catastrophe. As another besieged monarch said, “Après nous, le déluge.”

On the other hand, scientists tend to think that their cultural critics mistake the world for language. In this account, *constructionism* is a naive idealism that imagines material nature to be a kind of will-o'-the-wisp that offers no resistance to any interpretation whatsoever, a frictionless fiction. At the same time, though, *constructionism* is also caricatured as a hypersophisti-

cated theory that defies the most basic common sense (which is, not coincidentally, also a pretty good description of most of the important scientific theories of the past century). To use Sokal's example, with its obvious rage and violence: you can believe what you like about how gravity is a social and cultural construct, but if I push you out a window, you'll still fall.

Interestingly, the same kind of argument works the other way around: you can believe what you like about the objectivity of a scientific account of things, but it will still be permeated with ideology. In other words, humanists can say to scientists about politics and language and culture what scientists say to humanists about the physical world and the laws of nature: in the words of an old TV commercial, "You're soaking in it!"

This symmetry points to what makes the impasse between scientists and humanists so intractable: not the intensity with which the two parties disagree, but rather an unacknowledged and wrongheaded agreement between them. They fight like cats tied together by their tails. What ties them together is a common severing: both scientists and humanists tend to overstate the independence of language from the world. Each begins by treating words and things as separate and then offers to connect them, though in rather different ways.

Science, one might say, offers to nail words to things. In this view, language is fundamentally referential rather than creative, but there is a lot of slippage between words and things. Ideally, words—or, more generally, categories in language—should correspond perfectly to naturally occurring kinds of things, that is, to what are often called the "joints of nature," places where one kind of thing ends and another begins or where they are articulated together. Ideally, language is conceived as a space of pure, undistorted reference to (or representation of) the world, rather like the controlled conditions of a scientific experiment.

To say that language is referential—to anyone who studies language—is about like saying "the sun rises" to an astronomer. You can get pretty far with the idea of referential language—just as those who believed the earth was the center of the universe were able to massage their paradigm for centuries to make quite accurate astronomical predictions. One might even argue that an inability to see beyond the referential dimension of language is an asset for scientists, one that makes it easier to sustain belief in the scientific enterprise. For many scientists, in fact, the term *self-referential* simply means *invalid*, referring to a kind of self-reinforcing circular reasoning. But this kind of rigidity works only up to a point. You can understand playing pool as pure geometry, but if you want to know why some of your shots are going astray,

you'll have to start to understand the physics of the game: increasingly, to disavow all but the referential dimension of language will produce not only a very rudimentary understanding of language but a very constrained science as well. In fact, the increasing recognition and incorporation of ideas of self-reference and circularity into scientific paradigms is arguably one of the leading features of current shifts in knowledge.

You might say that Ferdinand de Saussure, the founder of structuralist linguistics, was the Copernicus of the study of language and culture, displacing *things* from the center of the language system. Saussure taught his students in the 1910s that the view of language as a referential nomenclature "stifles any inquiry into the true nature of linguistic structure" (16). Instead, Saussure taught that linguistic signs are arbitrary and language is a "self-contained whole" (10), a system of interrelational differences with no positive terms. In fact, the idea of the closure and autonomy of language goes back at least to the eighteenth century. For at least that long poets and novelists had been making related arguments about literature, namely, that their autonomy makes literary works subject to judgment only according to their own internal consistency and aesthetic complexity and not according to their verisimilitude.

This principle of autonomy has had many subsequent cultural incarnations, such as the "art for art's sake" of the movement known as aestheticism (in the 1890s) or the New Criticism movement of the 1950s and '60s. New Critics, for example, insisted on an essential literariness that distinguishes such works from all other productions of language and on the autonomy and integrity of individual works of literature as systems unto themselves. This insistence on distinctiveness tends to extend to an individual author's body of work, to genres, and to good literature as opposed to bad. This is not to say that New Criticism considered individual literary works (or genres or bodies of work) in a vacuum, but that it put autonomy first and relationality second.

The thing about autonomy, though, is that it's not ever autonomous. For example, it's easy to see (in hindsight, anyway) the broad outline of how New Criticism participated in a dominant ethos of 1950s North America with its postwar insistence on hard-edged order. In other words, New Criticism was not an autonomous or disinterested theory of literature but one that marched to the same drums as the emergent suburbs and sexualities of the 1950s. The point here is that the idea of autonomy and distinction is not only not autonomous; it's also not exclusively or primarily an *idea* but part of a real way of ordering the world.

In an even broader sense, self-organizing systems themselves are a defining

feature of modernity. It has long been commonplace to define modernity as an increasing set of internal differentiations and specializations in society, economy, knowledge. This is not just an additive increase in complexity but to some extent the formation of something different in kind, involving new kinds of *separations and linkages* among systems and the subsystems that are themselves "autonomous, operatively closed component systems" (Luhmann, *Observations* 12): in this account, modernity *is* systematization. Independence and interdependence are two sides of the same coin here: subsystems become more interdependent and more autonomous at the same time. Such systematization is itself a kind of self-sustaining and fractal epidemic, generating divisions of labor as well as of knowledge and of land, heterogeneous complex entities ranging from cities to guilds and professions and corporations, modern nations themselves along with the so-called world system in which they participate. Globalization, we are often told, is the latest phase of this process.

If we grant this account of modernity as increasing self-organization, then the question arises as to how much the paradigm of self-contained and self-sustaining systems is a true description of the world (for example, of the universe as understood by physics and of the world of biology) versus how much it simply echoes and universalizes current economic and epistemological trends. Believe it or not, I will actually answer this question, but only after a detour. The detour, which really describes the path of all the essays in this book, has to begin by questioning the terms of the question, which set up an opposition between a referential theory (one that refers, more or less truthfully, to a world outside of itself) and a self-referential or performative one (that projects or enacts itself as a kind of self-fulfilling prophecy). But don't worry: this questioning of the terms of the question does not lead us further and further from an answer but closer, not further from action and ethics (and into more microscopic navel gazing) but into smarter action and ethics (and, maybe just as important, smarter inaction). The opposition of truth and performativity is not simply undecidable; it is a *false* opposition, even an *unscientific* one, and if you stick with performativity long enough you get back to a truth much more resonant and much less brittle than the one you left. For the moment, though, just by deferring the question of truth, one can still ask productively of a theory: What can it do and where can it go? What is it possible to think and to do with it, and what kinds of things or thoughts does it make more difficult or unintelligible?

The essays in this book are all openings and reopenings of these questions.

3

Thirds and Wings

If language is *of the world*, like galaxies and ecosystems, this means it *participates in what it represents*, though how privileged it may be either as a representative or as a participant remains to be seen. “Always part of the totality it represents” is how deconstructionist literary theorist Paul de Man characterized the operation of a symbol (191), at least as it had been conceived by the romantics in the late eighteenth century. De Man argued that the romantic doctrine of the symbol was a kind of philosophical bad faith, the retreat to a comforting wholism in order to avoid confronting the harsher realities of various kinds of alienation (most broadly, the alienation of “being in language”) and of historical limits (most broadly, the predicament of “being in time”). Of course, even Coleridge recognized his own self-aggrandizement and bad faith in imagining the lines of his poetry to be like the strings of a harp caressed by a divine breeze and “all of animated nature” in turn to be nothing but “organic Harps diversely framed.”

The critique of too easy wholism is still useful and necessary: the whole is not necessarily static or transcendent or determining or determinate or, perhaps most important, even singular. *The whole is part of the parts*—that is, it may participate in the system without any necessary privilege. But if deconstructionist theory threw out the baby of participation with the bathwater of totality, subsequent cultural studies theorists have worked to reimagine *participation without totality* and without absolutizing or rigidifying the separateness of language from the world (which can function as a comforting retreat in its own right).

The kinship of language and the world also compromises the doctrine

known as realism. At the heart of realism is the belief in an ultimately definitive description of the world, a single "God's-eye view" toward which we should strive, even if we can only approach it. A more pluralist or "promiscuous" realism (as John Dupré describes it) proposes instead that "there are countless legitimate, objectively grounded ways of classifying objects in the world" (18). Though opening up realist dogma considerably, this kind of pluralism still seems to overstate the separation of language ("ways of classifying objects") from the world, only to overstate in turn its attachment ("grounding") to the world. All realisms, one might say, tend to rely at some level on a kind of *antinaturalism*, defined here as the belief in a radical or categorical discontinuity between language and nature. In the broader sense, such antinaturalism is a kind of exceptionalism about humanity, and in this sense it may derive from a Western religious tradition that situates humanity as categorically different from the fallen world it inhabits and can come to transcend. Naturalism, on the other hand, can stress instead a continuity of language and the world, or, to put it more accurately, naturalism insists only that the continuities and discontinuities between language and the world are not necessarily any more or less radical than those among other kinds of entities in the world. For those who like official-sounding names, the position being advanced here could be called *antirealist naturalism*.

Realism, as I have suggested, tends to efface or disavow the act of representation in order to pose as a transparent window or a perfectly reflecting mirror on the world; it downplays the medium in favor of the message. To start, one might say that antirealism (as I am using the term here) emphasizes instead the *refractivity* of language. The realist who dreams that the articulations of language could correspond perfectly to the "joints of nature"—dead words nailed to dead things—could only be a kind of *butcher*, of language and of nature. Instead, antirealism emphasizes language not as skeletal but as muscular, as performative, as able to make things happen precisely because it *straddles* the "joints" of things. But antirealist naturalism also makes a claim about the world, not just about language: it is a refractive and a muscular world, a world in which, finally, things don't correspond perfectly to other things *or to themselves*. Their noncorrespondence to themselves, one might say, comes from their being creatures of *relationships*. Even (or especially) the simplest or most elemental things—like gravity or quarks or what have you—are not *given* but have coevolved, have been produced and are sustained by—and are definable as—complex relationships, as most physicists and cosmologists will now tell you.

This leads to a paradox: it is precisely in its failure to represent the world

perfectly, precisely in its refractivity, that language most resonates with the world. And this is where the *naturalism* comes in: such resonance is the mark of a real kinship.

It is not that language is either referential or self-referential but a *third* kind of thing. The world and language with it are not simple, jointed skeletons but muscular and moving things more like *wings*. Antirealist naturalism changes the scene from *words and things* to *thirds and wings*.

ASIDE

Witness, via Luhmann. Cary Wolfe, describing Niklas Luhmann's account of language and communication in autopoietic social systems, offers a version of the "witness" paradigm, identifying the "constitutive blindness of all observations" (one might say all claims to *witness*) as "a blindness that does not separate or alienate us from the world but, paradoxically, guarantees our connection with it" (69). This is the case because, "for Luhmann, all observations are constructed atop a constitutive distinction that is paradoxical or tautological, and that the observing system which utilizes the distinction cannot acknowledge *as* paradoxical and at the same time engage in self-reproduction" (65–66). If all systems "are constituted by a necessary 'blind spot' that only *other* systems can see," then "the process of social reproduction depends on the 'unfolding,' the distribution and circulation, of these constitutive paradoxes (which would otherwise block systemic self-reproduction) by a plurality of observing systems" (66); this formula extends the important insight of Marxist social theory and Lacanian psychoanalytic theory that social and psychic systems off-load their contradictions onto others. But if this is the case, how can a theory of language, as suggested here, propose to base itself on an *acknowledged* central paradox? Not by claiming a God's-eye view exempt from blind spots, but by complicating the monolithic distinctions (between blindness and insight and between self-reproduction and annihilation) characteristic of Luhmannian autopoiesis. I would say instead that such a theory can only *partially* operationalize the *paradox* that it acknowledges—for example, by *continuing* to use language as if it bore accurate witness to the world even while understanding that *its witness is radically compromised by its witness*. Likewise, such a theory can only *partially* reproduce itself, changing and mutating (and, one hopes, evolving) in the process. One problem with thinking in terms of systems whose mandate is to reproduce themselves (even if they mutate and evolve in the process) is that it tends to situate difference against a background of the same; this way of thinking has been a leading feature of modern knowledge production (as the next chapter explores). On the other hand, *resemblance* (or resonance or pattern) can be situated against a background of sameness *and* difference.

Thinking in terms of *observation* cannot help bringing the old baggage of metaphors of vision, especially in positing distance between seer and seen (sometimes in order to claim some kind of objectivity) and by implying that what observers do is hang back and make representations (for instance, world pictures and maps) rather than, more fundamentally, engaging and being engaged by the world. The whole thrust of Luhmann's theorizing is to jettison this baggage, but even when the vision metaphor is used "under erasure" (that is, with implicit ironic quotation marks around it), success can be only partial.

The metaphor can be found pushing up against its limits in Wolfe's characterization of the way observers are "joined to the world and to each other by their constitutive but different blindspots" (70). In fact, a blind spot is located at a juncture Wolfe omits: it is the place where a patchworked organism is *joined to itself*. We are not just big eyeballs. Relativizing the vision metaphor a bit to take an already plural and non-self-identical self into account, one could say that the fruits of second-order observations can be tasted, smelled, or touched even when not seen, that witness is *borne*, embodied, and acted out even while fully denied.

4

The Order of Things in a Nutshell

Epistemology is the study of knowledge; an *episteme* is a paradigm or a kind of logic—or more descriptively a kind of *ecology*—that governs various forms of knowledge at a specific time and place. Foucault’s *Order of Things* traces shifts in the Western episteme since the seventeenth century, focusing on the interrelated histories of linguistics, biology, and economics. Of course, to call the interrelations among kinds of knowledge an *ecology* is to put an organicist spin on the story; at one time Foucault preferred to call what he was doing an *archaeology* of knowledge, though his metaphors in the *O.T.* tend to be more consistently *geological* (for example, in representing knowledges as deposits that displace and metamorphose previous strata). These metaphors help convey the sense of impersonal processes at work over very large scales of time and place. It may also be helpful to think of epistemic shifts in analogy with more clear-cut events: I like to use as such an analogy the “great vowel shift” in medieval English, in which the pronunciation of vowel sounds shifted, as if each were yoked in tandem, over the course of several centuries, leaving only traces of earlier pronunciations *fossilized* in English spelling. The point of this analogy is that nobody (and especially no governing body as such) *decided* to change vowel sounds; it was instead an *emergent* phenomenon. Nor did people seem to *hear* the sounds changing: the shift, we might say, was a historical phenomenon of too long a wavelength for human ears to hear and thus had to be *discovered* and reconstructed well after the fact. This analogy also helps show how we might remain entirely unaware of the most fundamental and sweeping changes in how we think, which happen across variously linked scales from the most minute to the most total—that is to say, they happen *fractally*.

Once upon a time (Foucault's account begins), in Europe during the Renaissance, knowledge was based on *resemblances*. Some famous examples of such a logic can be found in what has since been called *homeopathy* (the doctrine that cures work by virtue of resemblances between medicine and symptom) or in the Renaissance paradigm of the "Great Chain of Being" (the set of interlocking resemblances supposed to rule between microcosm and macrocosm, particularly the common hierarchical structures supposed to order the individual, the family, the commonwealth, and the cosmos). Where modernity would come to see the most fundamental differences, the Renaissance saw resemblances—for example, *between the sexes*, which were conceived as different not in kind but in degree: women were merely "cooler" and less perfect men, men turned inside out; ova were simply female sperm, and even menstruation was merely a special case of the many ways all bodies purge excesses of various fluids, which themselves were not fundamentally different but capable of transmuting into each other. Perhaps most fundamentally, modernity has displaced the resemblance between words and things, so for "we moderns" it is this resemblance that most characterizes the Renaissance in its difference from us—and notice that this differentiation of modernity from the Renaissance illustrates how much more definitive differences are than resemblances for modern knowledge!

For Renaissance knowledge, "the face of the world is covered with blazons" (Foucault, *Order* 27); nature is a book of these emblems to be read and interpreted, primarily according to the resonances or sympathies among things, where *sympathy* indicates a demonstrable kinship (that is, a kinship "on the face" of things, the real mark of a common *signature*), and signs signify by virtue of their actual resemblance to what they signify. For moderns and maybe even more for postmoderns, this epistemological regime tends to look like it treats both words and things *as words*, or as some hybrid between them that is closer to words than things—for example, as *hieroglyphs* to be deciphered. The kind of resemblance that seems to be returning or emerging in our time is more inclined to treat words and things *as things*, as suggested by an "ecology of discourse."

When a new episteme emerged in the early seventeenth century, knowledge based on resemblance was devalued: it was subsequently the *madman* who saw "nothing but resemblance and signs of resemblance everywhere" or at best the *poet* "who, beneath the named, constantly expected differences, rediscovers the buried kinships between things, their scattered resemblances" (49). Rather than informing all knowledge, similitude becomes a kind of foil, an "undifferentiated, shifting, unstable base on which knowl-

edge can establish its relations, its measurements, and its identities” (68). It is instead “a solid grid of kinships that defines the general configuration of knowledge in the Classical age” (74). Whether the object of knowledge is the economy, living creatures, or language, it is defined by a classical knowledge whose mode is *representation* and whose icon is the *table*, which embodies the notion that

all wealth is *coinable*; and it is by this means that it enters into *circulation*—in the same way that any natural being was *characterizable*, and could thereby find its place in a *taxonomy*; that any individual was *nameable* and could find its place in an *articulated language*; that any representation was *signifiable* and could find its place, in order to be known, in a *system of identities and differences*. (175; emphasis in original)

With the rise of the modern episteme in the late eighteenth century, classical knowledge was devalued in turn. The most characteristic dream of the classical episteme—that of an ideal language whose words and grammatical categories would perfectly and logically mirror the real categories and relationships of things in the world—came to be the province of cranks and madmen (while scientists, representing the most privileged kind of modern knowledge, remained invested in this dream *as a dream*). Modern knowledge invents *depth* and *density*, pushing the links and articulations among things to a place “outside representation, beyond its immediate visibility, in a sort of behind-the-scenes world even deeper and more dense than representation itself” (239). This “obscure verticality” dictates that “from now on things will be represented only from the depths of this density withdrawn into itself” (251). To take one example, whereas classical medicine sought to *taxonomize* diseases exhaustively in their intricate interrelationships, modern medicine *anatomizes*, seeking the hidden structures and origins of diseases in the depths of the body and the germs that attack it. Meaning in language must be sought in the depths as well: “Philology, as the analysis of what is said in the depths of discourse,” became “the modern form of criticism” (298). It is as if the *width* of connections and tangled interrelationships that characterized classical words and things had been forcibly compressed so that all words/things became narrow and discrete but deep (as *specialized knowledge is often said to be*) and where the depths of an object or a self or a discipline are also the depths of its own history, the shapely trajectory of its own unique evolution and growth. This is part of the package deal modern knowledge offers (and in Foucault’s account it is an offer you can’t refuse): give up a wide world of interrelations (which come to seem unmanageably messy and sprawling

anyway) but gain a depth and a discrete history and a self. *Give up the world, say the devils and angels of modernity, and gain a soul.*

The modern displacement of representation tends to devalue literature: "Literature becomes progressively more differentiated from the discourse of ideas, and encloses itself in a radical intransitivity," often coming to seem more fundamentally an escape from or "ludic denial" of mainstream values than the instrument of their circulation. Literature becomes *self-referential*, "merely a manifestation of a language which has no other law than that of affirming—in opposition to all other forms of discourse—its own precipitous existence; and so there is nothing for it to do but to curve back in a perpetual return upon itself; as if its discourse could have no other content but the expression of its own form" (300). Although self-referentiality as such was attributed primarily to literature, a similar closure affects other disciplinary objects, such as "living beings, objects of exchange, and words, when, abandoning representation, which had been their natural site hitherto, they withdraw into the depths of things and roll up upon themselves in accordance with the laws of life, production, and language" (313). Related organizing principles include *organicism* in biology and in literature (where *organic form* is one that emerges from the complex internal structures of the content rather than being imposed from outside) and *self-regulation* in such diverse sites as the institutional structures of professions and disciplines, machine design (the early steam engine's "governor" is a famous example), and the ideally self-regulating modern self itself.

How do such thoroughgoing changes in knowledge happen? Classical Marxism regarded knowledge (including ideology, theory, and philosophy) as part of a *superstructure* built on the foundation of a particular kind of economic *base* whose broad outlines (and whose changes) it echoes and elaborates. Foucault and others tended to treat knowledge as a semiautonomous realm in its own right or (in his later work) knowledges as parts of heterogeneous patchworks of ideas, practices, and institutions. Whichever model you prefer, imagine the whole assemblage being riven into realignment by some unspecified combination of slow tectonic shifts and sudden earthquakes. Some knowledges and ways of knowing will be abandoned, but most will be buttressed and retrofitted as long as possible (look over there, where priests and professors and politicians are holed up anxiously in their leaning towers!); some crumble altogether, but more often a wall or two collapses and perhaps the structure is cobbled together with another.

If it were possible to study the faults and stresses and anticipate the realignments well enough, would it be possible to find the epistemological

equivalent of *the Nevada seaside*, some now disregarded way of thinking that will come to be repositioned as supremely valuable? Foucault was quite cautious—one might even say *coy*—when it came to forecasting such realignments: “Nothing can tell us in advance on which side the through road lies” (339). Predicting earthquakes is an unreliable business, but the lack of a transcendental vantage point is really not the problem, since after all (to paraphrase Blake), the mole and not the eagle is in touch with what’s happening underground. Or to change the metaphor slightly, it is not *in spite of* our embeddedness in the web of forces that we study but *because of it*—because it pulls on us from various directions—that we can (like spiders) have some sense of what may be happening and where, even if “we can at the moment do no more than sense the possibility” (387) of large-scale epistemological change in the making.

Foucault’s story of the emergence of the “human sciences”—and in particular of “man” and humanism as the object of study they constituted—ends with the suggestion that if the “fundamental arrangements of knowledge” were to “crumble, as the ground of Classical thought did, at the end of the eighteenth century, then one can certainly wager that man would be erased, like a face drawn in sand at the edge of a sea” (387). Again as in geology, we may be uncertain about exactly where and when big earthquakes will come, but we should at least respect the certainty that they *will* come. When it comes to academic disciplines, one might ask who is crazier, those who stake out land in Nevada for future seaside resorts or those who persist in buying bloated mansions on muddy slopes in Los Angeles?

For Foucault anyway, questions about major reconfigurations of knowledge “must be left in suspense, where they pose themselves, only with the knowledge that the possibility of posing them may well open the way to future thought” (386)—as if a geologist drilling for core samples might trigger an earthquake. Questions about knowledge and language can never be objective observations from safely outside the system in question, just as attempts to *change* knowledges must be *intraventions* and *infiltrations*. Foucault’s mode of doing this is typically to rehearse and rerehearse what a given episteme dictates, actually *to speak in the voice of the episteme* in question with a kind of flattening dramatic irony that distances us from its pronouncements, to act as a kind of epistemic embalming fluid. Historicizing, in this model, is not so much the attempt to ascertain what happened as it is the attempt to *put behind us* the formation in question, to *make it history* in the colloquial sense of relegating it to the past, and especially to neutralize, to undermine, to euthanize a moribund regime of knowledge.

Hegel famously put it this way: “When philosophy paints its gray on gray, then has a form of life grown old, and with gray on gray it cannot be rejuvenated, but only known; the Owl of Minerva first takes flight with twilight closing in.” This means that knowledge of what makes the current episteme tick would necessarily be marginalized, inadmissible. In fact (to develop the metaphor), owls do “spend the daytime in quiet, inconspicuous roosts”—rather like where we are now, dear reader, in this quiet and inconspicuous book, or so I want to say with a combination of humility and grandiosity. But Hegel’s metaphor depends on a very limited kind of “serially monogamous” history in which one very different age or “form of life” completely succeeds another. Foucault’s single-file parade of epistemes is similarly limited: although there is at least some plurality in layering (the new episteme is built on the ruins of the old), it is subordinated to a rigid hierarchy (in which one and only one episteme rules at any time). But what if more than one “form of life” is alive at any time, and what if they are more like species than individuals, not usually dying once and for all but mutating and coevolving? Philosophical knowledge might still be said to reside in the margins (the transitions and interstices between and among species), but the margins would at least be all over the place. Philosophy would no longer fly or stand, like a bird of prey, talons clutching the flesh of a dying age, but would ride, more or less a part of every transaction, like a ubiquitous virus. Like the angel in the film *Wings of Desire*, it would have to give up its transcendent perspective for a lowlier and more transient but more participative role.

ASIDE

Kuhn’s Brilliant Mistake. Another famous version of a linear succession of frameworks is Thomas Kuhn’s 1962 *The Structure of Scientific Revolutions*. Kuhn’s frameworks are *paradigms* rather than epistemes, and they govern work in particular scientific fields rather than whole knowledge systems, but Kuhn and Foucault (at least when he wrote *The Order of Things*) both favored a “serial monogamy” of frameworks with rather abrupt change from one to another, along with a kind of perfect epistemological self-containment. This last feature is known in science studies as “internalism”: treating science as if it cycles through its own changes for its own internal reasons, apart from the other histories in which it is embedded.

Kuhn’s account of the history of science features long periods of stability in which ideas and experiments can be developed *within* a given paradigm—periods of “normal science,” as he called it—punctuated by scientific revolutions in which the old paradigm is stretched to the breaking point and a new paradigm emerges.

Most people understand *paradigm* as a kind of crucial metaphor or central idea (for example, the old solar system model of the atom), but it can also be interpreted more broadly as a common ideology, or more materially as a shared set of institutional structures or procedures, or as a fuzzy set of all of the above, so long as it definitively organizes knowledge in the field in question. Kuhn shares with structuralism more broadly the tendency to emphasize a kind of snapshot account of structure so exclusively as to be incapable of accounting for time and history, making change seem by comparison chaotic, aberrant, or beside the point. Kuhn's exaggeration of the monolithic stability of paradigms melodramatizes the revolutionary sweep of their shift; this was the same song Foucault sang about epistemes (in other words, "the bigger they are, the harder they fall"). Most scholars seem now to agree that this is not a very good account of how things happen in science and that the fuzzy set of metaphors, practices, apparatuses, and institutions is yoked together in many ways but does not march in lockstep (see Galison). Philosopher Paul Feyerabend, who was especially grumpy about Kuhn and his followers, put it this way: "Whenever one tries to make his ideas more definite one finds that they are *false*. Was there ever a period of normal science in the history of thought? No—and I challenge anyone to prove to the contrary" (160).

I am more inclined to think that the failings and fudgings of *The Structure of Scientific Revolutions* (and of structuralism broadly) must be part of a package deal, the blind spots with which it had to pay for its insights about the contingency of scientific knowledge and the recognition that any given framework enables certain kinds of ideas at the expense of excluding others—Kuhn's own framework being no exception. After all, even for its most conservative and progressivist boosters, science itself is arguably a series of just such brilliant mistakes, since to be scientific at all an idea must be falsifiable and since arguably every past scientific idea or theory has been falsified or displaced or relativized every bit as much as we should hope (for the sake of progress) our current ideas will be. But the question of how Kuhn managed to be so smart and so dumb as to make his brilliant mistake and how he stuck to it (and how *it stuck*) is only more compelling the wronger he was. Kuhn himself identified (at least in retrospect) what amounts to a kind of "eureka" moment in his studies of Aristotle's physics, in the late 1940s—the paradigm shift from which his paradigm emerged. His question about Aristotle was roughly the same as ours about him: how could Aristotle have been so smart and so dumb? Kuhn thought he found the answer when he identified in the notions of *quality* and *position* what amounted to a governing principle (that is, a kind of protoparadigm) in Aristotle's thinking: "Position itself was, however, a quality in Aristotle's physics, and a body that changed its position therefore remained the same body only in the problematic sense that the child is the individual it becomes.

In a universe where qualities were primary, motion was necessarily a change-of-state rather than a state" (*Essential Tension* xi–xii).

Ideas that had seemed out of left field in Aristotle fell into place when Kuhn grasped the centrality of this notion, and in the process, he reports, "I did not become an Aristotelian physicist as a result, but I had to some extent learned to think like one" (xii). This kind of formula underlies the notion of progress in relation to the past: that we can come to understand other frameworks but not be bound by them, since our ability to shift frames makes our metaframeworks broader, higher, better. But to the contrary, it seems as if Kuhn *had indeed become an Aristotelian without knowing it*, at least insofar as what he identified as the central brilliant mistake of Aristotle's physics turns out to be pretty damn close to his own central brilliant mistake about paradigm shifts: the fetishization of position (that is, structure) as a primary quality makes motion or change seem revolutionary and all-encompassing. The uncanniness of this is captured by an old joke:

Two Jews walk by a Christian church with a sign promising one thousand dollars to new converts. One wants to go in to see if he can collect the money by making an immediate, superficial conversion. In spite of his friend's objections, he goes in. His friend waits outside. One hour passes, then two, then three. Finally he emerges, and his friend asks (excitedly), "What happened—did you get the money?" and he responds (in a voice heavy with contempt): "*Is that all you people ever think about?*"

The joke suggests that a framework is a package deal and that you can't "get it" without being remade by it, without being subject to it and to its blindnesses along with its insights, its otherings and exclusions (in the case of the joke, its anti-Semitism). The joke is a salutary corrective to the presumption that one could occupy a privileged "metaframework" position, although it does manage to situate itself as "meta:anti-Semitic." But in the process it also makes frameworks all the more monolithic and conversion all the more revolutionary. To begin to suggest an alternative to the conversion model, it seems likelier that Kuhn was already seeing Aristotle through his own protoparadigmatic lenses to begin with, and that even more thoroughly in retrospect, after fully developing the paradigm paradigm, he saw his earlier study of Aristotle as more of a kind of conversion experience in terms of the "paradigm shift" paradigm. This account suggests that a framework is a kind of self-organizing system, a kind of whirlpool in linear time, not something that simply shifts from one to another at a given point but one that has to be ongoingly produced and reproduced and is both stable and unstable for this reason, like a spinning top. This also shows why the statically structuralist metaphor of the "framework" can get us only so far before it has to be pushed aside, like Wittgenstein's ladder.

In any case, historicizing at its best is driven not to try to blow up epistemes and start over but to salvage and use some of what the current or passing episteme has relegated to its margins. Theoretical questions are thus potentially transformative and *performative*, participating in shaping what they study. I will argue later that performativity itself can be thought of as an older kind of knowledge displaced by modernity's fixation on objectivity but now being salvaged from modernity's ruins, something like the figurines of their own gods that the Aztecs hid inside hollow Christian statuary that their conquerors forced them to make and to worship.

What is a performative question? To use a rather homely example, it is as if a sense of growing intimacy between two people getting to know each other were to lead one to ask the other, pointedly, "What is happening between us?" Though phrased as a request for information, the question participates fully in—and in fact *precipitates*—the object of its inquiry; the *meaning* of the question is *what it makes happen*, and who or what is *us* (friends? lovers? what?) hangs in the balance. It is clearly part of an experiment, a trial balloon, but neither the question nor any answer to it could possibly be disinterested, or, rather, it is clear that disinterestedness on the part of the questioner or respondent will also shape in very particular ways what is happening! It is important to notice that the question's participation does not *invalidate* the inquiry: on the contrary, that is what activates it at all, charging it with such interest. The philosopher of science Isabelle Stengers makes the case that it is precisely their *interest* that makes scientific questions work (83–84), where the *inter* in *interest* refers to the betweenness—the relationality—of the questioners and the things in question. One might say (dear reader!) that "what is happening between us" is *the* interesting question.

My book begins, in several senses, where Foucault left off *The Order of Things*, which is in any case the *Old Testament* of the Foucauldian faith. Foucault himself went on to revise the sense of the *episteme* as a closed set of interrelations—a plate tectonics of knowledge as hyperformalized as a kind of four-dimensional Rubik's Cube. In his later works Foucault continued to explore the interrelations of knowledge and power but less as abstract systems and more as *embodied* in practices and institutions and their particular histories and discourses. This shift in Foucault's work—from closed to open systems, one might say—characterizes a more general transition from structuralist to poststructuralist theory (see chapter 13 for an account of how autopoietic systems can be understood only as open *and* closed). In retrospect it seems now that it is the *airlessness* of the theoretical framework of the closed system itself (as much as it is the history presented therein) that gives the sense of impending change such utopian and apocalyptic sublim-

ity—the sense that the angel that had stood guard at the tree of life is about to leave his post, as if the theorist were opening up a translucent rift in time through which he was able only to glimpse, pointing us toward a promised land that he could never hope to enter, a star beckoning us onward to a place where words (now relegated to *semantics*) and things (now situated in the realm of being or *ontology*) will rejoin: “In the firmament of our reflection there reigns a discourse—a perhaps inaccessible discourse—which would at the same time be an ontology and a semantics” (Foucault, *Order* 208).

More than three decades after *The Order of Things*, it is much easier to make the case that we have entered the promised land of the new episteme and, accordingly, much harder to sustain its utopian sublimity, especially given the way it is being sold to us by its many boosters and “scientific salesmen.” Like the United States, the democratic promise of the episteme will have to be worked and tricked and wrung from it.

5

Artistic Interlude I: The Sick Mind Continues to Infinity

It appears that certain aphasiacs, when shown various differently coloured skeins of wool on a table top, are consistently unable to arrange them in any coherent pattern. . . . Within this simple space in which things are normally arranged and given names, the aphasiac will create a multiplicity of tiny, fragmented regions in which nameless resemblances agglutinate things into unconnected islets; in one corner, they will place the lightest-coloured skeins, in another the red ones, somewhere else those that are softest in texture, in yet another place the longest, or those that have a tinge of purple or those that have been wound up into a ball. But no sooner have they been adumbrated than all these groupings dissolve again, for the field of identity that sustains them, however limited it may be, is still too wide not to be unstable; and so the sick mind continues to infinity, creating groups then dispersing them again, heaping up diverse similarities, destroying those that seem clearest, splitting up things that are identical, superimposing different criteria, frenziedly beginning all over again, becoming more and more disturbed, and teetering finally on the brink of anxiety.

—Michel Foucault, *The Order of Things*

Foucault milked the drama of “the sick mind” in implicit opposition to the supposedly stable and normal categories of language, science, and reason. Of course, it is more than a sick mind’s fancy that things are capable of being categorized in all kinds of ways, capable of entering into a range of different and sometimes mutually irreconcilable kinds of relationships with other things. In fact, this capacity seems to be as fundamental to the things of physics and chemistry as it is to language, culture, and knowledge and to the webs of linkages and disjunctions between and among them. Clearly, though, different orderings of things do have different statuses in different contexts, even if this observation just raises the question of how many

ways the orderings can themselves be ordered (without suggesting whether more or less stability can be manufactured at such a metalevel). You might think that the recognition that different orderings and metaorderings are possible would be especially obvious when examining a broad historical or cross-cultural range; in these cases we have come to expect (thanks a lot to structuralism) irreconcilable differences in how things are engaged, ordered, and valued. It is important to keep in mind, though, that even such differences between cultures and epistemes are mostly far from obvious and have proved to require very careful unearthing and, furthermore, that they are so volatile that engaging them cannot be as simple as producing a metacontext that contains them all: it turns out to be more like a process that changes everything. It is just as important to recognize (as poststructuralism has been better at doing) that a single ordering cannot maintain a seamless and uncontradictory hegemony even at a single historical moment or in a single culture or knowledge system, even if the fiction that it does so may be a very powerful one.

Where certain categorizations become hegemonic, others will be more or less unintelligible or devalued. Foucault argued that when *difference* became the ruling logic, *resemblance* became the province of mere poetry or even of “the sick mind.” This became abundantly clear to me in a new way as I began rearranging my library, on a whim, to produce something like poetry or art merely by clustering books according to grammatical resemblances among their titles, as follows:

Chaos (Gleick)
Power (Dowding)
Nova (Delany)
Genome (Ridley)
Zipper (Friedel)
Dracula (Stoker)
Maitreya (Sarduy)
Hysteria (Johnson)
Neveryona (Delany)
Chaosmosis (Guattari)
Neuromancer (Gibson)
Homographesis (Edelman)
Capitalism (Saunders)
Pluralism (McLennan)
S/Z (Barthes)

NASA/Trek (Penley)
Poetics/Politics (Kumar)
Feminism/Postmodernism (Nicholson)
Culture/Metaculture (Mulhern)
Disorder and Order (P. Livingston)
Pride and Prejudice (Austen)
Romanticism and Consciousness (Bloom)
Nietzsche and Metaphor (Kofman)
Beamtimes and Lifetimes (Traweek)
Stars and Planets (Ekruitt)
Genes, Peoples, and Languages (Cavalli-Sforza)
Race, Class, and Gender . . . (Rothenberg)
Hustlers, Beats, and Others (Polsky)
Simians, Cyborgs, and Women (Haraway)
Money, Language, and Thought (Shell)
Romantics, Rebels, and Reactionaries (Butler)
Naturalism, Evolution, and Mind (Walsh)
Deceit, Desire, and the Novel (Girard)
Capitalism, the Family, and Personal Life (Zaretsky)
Troubadours, Trumpeters, Troubled Makers (Lee)
Romanticism, Nationalism, and the Revolt against Theory (Simpson)
Gossip, Grooming, and the Evolution of Language (Dunbar)
*Cinema, Theory, and Political Responsibility in
 Contemporary Culture* (McGee)

Positions (Derrida)
Labyrinths (Borges)
Mythologies (Yeats)
Awakenings (Sacks)
Illuminations (Rimbaud)
Investigations (Kauffman)
Disidentifications (Muñoz)
Anti-Semitic Stereotypes (Felsenstein)
Multi-Cultural Literacy (Simonson and Walker)
Middle English Lyrics (Luria and Hoffman)
Molecular Revolution (Guattari)
Monstrous Imagination (Huet)
Satanic Panic (Victor)
Silent Poetry (Mirzoeff)
Stranger Music (Cohen)

Literary Theory (Eagleton)
Natural Supernaturalism (Abrams)
Tennyson's Poetry (Tennyson)
Everybody's Autonomy (Spahr)
Hamilton's Blessing (Gordon)
Pandora's Hope (Latour)
Frankenstein's Children (Morus)
Queer Acts (Muñoz and Barrett)
Second Skins (Prosser)
Sapphic Slashers (Duggan)
Posthuman Bodies (Halberstam and Livingston)
Immigrant Acts (Lowe)
Primate Visions (Haraway)
Symbolic Economies (Goux)
Wuthering Heights (Brontë)
The Black Jacobins (James)
The Black Curtain (Woolrich)
The Persistent Desire (Nestle)
The Female Man (Russ)
The Romantic Ideology (McGann)
The Human Condition (Arendt)
The Postmodern Condition (Lyotard)
The Einstein Intersection (Delany)
The Unabomber Manifesto (Kaczynski)
The Literary Absolute (Lacoue-Labarthe and Nancy)
The Wittgenstein Reader (Wittgenstein)
The Lesbian Body (Wittig)
The Accursed Share (Bataille)
The Many-Headed Hydra (Linebaugh and Rediker)
The Complete English Poems (Donne)
The Nazi War on Cancer (Proctor)
The Norton Anthology of English Literature (Abrams)
Arrow of Chaos (I. Livingston)
City of Quartz (Davis)
Ecology of Fear (Davis)
Anatomy of Criticism (Frye)
Reproduction of Mothering (Chodorow)
Signs of Life (Sole and Goodwin)
Spirits of Fire (Rosso and Watkins)

Forms of Distance (Bei Dao)
Margins of Philosophy (Derrida)
Visions of Excess (Bataille)
People of the Book (Halbertal)
Epistemology of the Closet (Sedgwick)
The Feast of Love (Baxter)
The Well of Loneliness (Hall)
The Rhetoric of Romanticism (de Man)
The Troubadour of Knowledge (Serres)
The Subject of Semiotics (Silverman)
The History of Sexuality (Foucault)
The Philosophy of Biology (Hull and Ruse)
The Taming of Chance (Hacking)
The Botany of Desire (Pollan)
The Moment of Complexity (Taylor)
The Tales of Canterbury (Chaucer)
The Sextants of Beijing (Waley-Cohen)
The Order of Things (Foucault)
The Disorder of Things (Dupré)
The Evolution of Physics (Einstein and Infeld)
The Life of the Cosmos (Smolin)
The Birth of the Clinic (Foucault)
The Politics of the Family (Laing)
The Invention of Modern Science (Stengers)
The Practice of Everyday Life (de Certeau)
The Making of the English Working Class (Thompson)
The Simple Art of Murder (Chandler)
The Traditional Theory of Literature (R. Livingston)
The Elementary Structures of Kinship (Levi-Strauss)
The Presentation of Self in Everyday Life (Goffman)
The Four Fundamental Concepts of Psycho-Analysis (Lacan)
The Politics of Culture in the Shadow of Capital (Lowe and Lloyd)
War in the Age of Intelligent Machines (de Landa)
Gender and Sexuality in Twentieth-Century Chinese Literature and Society (Lu)
Women in the Eighteenth Century (Jones)
Keywords in Evolutionary Biology (Keller and Lloyd)
The Monster in the Machine (Hanafi)
Observations of Modernity (Luhmann)

Exercises in Style (Queneau)
Scaling in Biology (Brown and West)
Bastard Out of Carolina (Allison)
Aliens in America (Dean)

Reading through the rearranged titles reveals surprising consistencies (for example, the way *threeness* in titles seems to function as the sign of plurality in interrelation) and surprising inconsistencies (for instance, the ease with which couplings signify similarity or difference, the unease of the subordinations enacted by modifiers and possessives, the erratic orbit of *of*), along with variously promising ad hoc juxtapositions. The rearrangement magnifies crosscurrents and undertows in the otherwise regular flow of grammar and thus may induce a sense of the underlying turbulence of knowledge and language. I have to admit that just having the books on my shelves in this order feels like a kind of silent rebuke, a constant low-level disturbance, like having an epistemological ghost or alien in the room.

Since art can work with what is abjected by hegemonic categories, it is easy to make epistemological art by deploying grids and combinatorics that play with similarity and difference. Here are just a few projects using everyday things around the house (Michel Foucault meets Martha Stewart):

- * Make a grid of twelve-inch squares on your wall, with small nails at the intersections. Hang small objects of approximately the same size on the nails, each as different from each other as possible (for example, a book, a wine glass, a photograph, and so on).
- * Assemble a group of very different objects and spray paint them all uniformly white.
- * Affix labels to a cluster of objects, making the descriptions a mix of congruent and incongruent categories (such as “fork,” “gift from Mother,” “made of wood,” and the like).
- * Using strings, grid out a room into twelve-inch cubes and cut everything in the room along the grid lines (this will be a major technical challenge). Place the cut-out sections into clear Plexiglas cubes and stack them up slightly off-kilter.

6

An Introductory Vignette

Once upon a time, about a billion years ago (or so geologists say), near the middle of the North American continent, the earth split open and oozed out vast amounts of molten rock. As it cooled, the rock collapsed in on itself and formed a giant depression that would later fill up with the waters of Lake Superior. Millions of small air bubbles petrified in the cooling rock, riddling it with hollow vesicles. Rainwater percolated down and volcanic waters pulsed up through hairline fractures of the basalt. As dissolved minerals leached from the rock crystallized out of the water, they lined the interiors of the vesicles with thin layers, filling the vesicles to form nuggets of the semiprecious stone now known as Lake Superior agate. Because of the abundance of iron, mostly rusty reds tinge the translucent bands of chalcedony (a kind of quartz), often alternating with bands of white and crystal-clear. Long, slow erosion, followed by the advance and retreat of Ice Age glaciers, dislodged the agate nuggets from their basalt matrix, scattered them across the upper Midwest, and buried them again in the soil.

The fast, cold rivers that run into Lake Superior have cut deep gorges through the basalt that slopes steeply down to the lake. The rivers are stained the color of Coca-Cola by the dissolved iron, and the names of the rivers (Manitou, Baptism, Temperance, Knife, Gooseberry) speak of the lives and gods of the Native peoples and the white settlers who displaced them—the alternating bands of red and white that settled around the lake. The stalwart Protestants, whose God was a mighty fortress, called the concentrically banded rocks “fortification” agates. It was meant as a compliment. About a century of farming, quarrying, and road building exposed and scattered the

agates again, and collectors have regathered them and rescattered their little bunches of agates around the globe.

To say that every agate tells the story of a billion years of earth and fire and water and humans in their various interactions is not really to distinguish them from anything else. After all, even the kitschiest piece of plastic junk is made of atoms forged in the hearts of exploding stars, come to life on earth in ancient forests, folded back into the ground and squeezed into oil before being pulled out, by earth's more recent stardust creatures, into their own convulsive history. As Leibniz put it (back in 1712), "Each simple substance has relations that express all the others, and is in consequence a perpetual living mirror of the universe" (24). Tzinacan, an Aztec priest in a short story by Jorge Luis Borges, puts it this way: "Even in human languages there is no proposition that does not imply the entire universe; to say *the tiger* is to say the tigers that begot it, the deer and turtles devoured by it, the grass on which the deer fed, the earth that was mother to the grass, the heaven that gave birth to the earth" (171). Borges's priest, imprisoned by Spanish conquistadores, finds in the patterned fur of a jaguar caged in an adjoining cell the ineffably perfect archetype of human language: the "God's Script," which speaks everything at once. To say I find in agates a northerner's version of what Tzinacan found in his jaguar is only to confirm what Borges seems to have anticipated, cannily (and uncannily) as ever: he placed his priest and jaguar in a round and compartmented fortress of stone.

It does seem to me that there is something especially elegant in the geology of agates, like an elemental game of rock-paper-scissors played out through all its permutations: liquid rock breaks through solid, air petrifies in rock, waters from earth and sky pulse through rock, rock dissolves in and separates from water, rock replaces air, water freezes into ice, ice grinds rock, rock separates from rock. The alternating bands of agates seem to make them fingerprints of these successive phases, reechoed in the subsequent waves of ice and of peoples in their collections and distributions of themselves and of agates. Even the atoms of which they are made—the atoms themselves aptly enough described as concentric nuggets of waves, or the larger layered nugget of our planet, or the solar system and the galaxy, concentric waves of nuggets—seem like fractal echoes of agates at different scales. The universe, one might say, is an agate of agates. As if to relieve so much self-similarity, every agate comprises not one pattern but many: depending on how erosion or human intervention has lathed or cross-sectioned an agate, the same features will appear in different configurations of plain surfaces, parallel lines, concentric cat's-eyes, or irregular serrations.

As it turns out, scientists have been hard at work getting to the bottom of these metaphors, or to put it another way, the fortuitous similarities between fundamentally different realms that characterize these metaphors are turning out to be not so fortuitous at all, but manifestations of processes that enable all the phenomena in question to be grouped into the same realm as self-organizing systems. After folding Borges's jaguar into my story about agates (based on what seems to be merely a clever poetic analogy between them), I am charmed to discover, via Philip Ball's *Self-Made Tapestry: Pattern Formation in Nature*, that the patterns of agates and jaguars seem to derive from versions of the same kind of "reaction-diffusion" process. Take a moment to register the wildness of this claim, given not just the differences between the sciences with primary jurisdiction over agate stripes and jaguar spots (that is, geology and evolutionary biology) but also the hegemony of an episteme of *difference* that relegates such apparently far-flung resemblances to the realm of metaphor. Ball tells how, in 1896, German chemist R. E. Liesegang showed that the crystallization of chemicals in a gelatinous medium could generate a pattern of regularly alternating rings. Liesegang saw a similarity with banded patterns in rocks; others went further to suggest that the rings might be "a simplified version of the stripes of tigers and zebras or the patterns on butterfly wings." A 1931 critic's comment that in such speculations "enthusiasm has been carried beyond the bounds of prudence" was typical of the mainstream response, and even Ball will venture only so far as to call the speculations a "lucky guess." In any case, for a start, "there is now good reason to suppose that many banded rock formations do indeed arise from cyclic precipitation" (62). Agate bands have smaller bands, which have even smaller bands (known as iris bands) invisible to the naked eye except by the iridescent shimmer they produce in some agates. The reaction-diffusion explanation has been most convincingly developed for the iris bands, but it seems that there must be "several hierarchical mechanisms for oscillatory patterning at play" (64). The fact that "this fractal quality is common to agates around the world" suggests a crystallization process that is (as the primary scientists put it) "universally complex" (Heaney 1564). This universal complexity leads to the jaguars, whose patterned spots (like those of leopards, their Old World cousins) may well derive from "a subset of reaction-diffusion processes called activator-inhibitor systems" (Ball 79). Such patterns were first theorized by Alan Turing in 1952 as "the chemical basis of morphogenesis," an article that began to be hailed as visionary in the 1970s, after two decades of neglect. Studies of Turing patterns have since suggested the likelihood that "the diverse range of pelt markings can be explained with the same basic mechanism," which depends

on how the chemical that triggers cells to produce melanin (responsible for skin and hair pigmentation) is distributed during the first weeks of embryo formation (Ball 84). Patterns very close to leopard and jaguar spots have been reproduced in the lab in chemical solutions by “an activator–inhibitor scheme that involves two interacting chemical patterning mechanisms” (89). (And by the way, as its title indicates, physicist Janna Levin’s *How the Universe Got Its Spots* relates pattern formation in leopards and jaguars to large-scale pattern-formation processes in the cosmos.)

Agates also speak to me in a more homely way, of my childhood in Minnesota, when I began collecting them. Some tell me more particular stories: this one I found in a gravel pit in Elk River, Minnesota; a retired welder (cranky old guy) with a homemade grinding rig in his basement polished it into a sphere for me. Later it came to sit on a bookcase in my apartment in San Francisco, and when I returned there a few hours after the big quake of 1989, the sphere had jumped from the shelf and rolled to the center of the floor. It was the only thing out of place in the room. I imagined the agate sphere wandering across the moving floor, confused by such high drama after its billion sedate years in the middle of the continent, almost too neat an allegory for my life at that moment.

As a kid, I guess I just got on a wavelength with agates. Their telltale colors and patterns make them leap out, to the trained eye, from the prevailing black basalts, darkly mottled granites, and dull shales. I catch a glimpse of the translucent red glow around the edges of an agate, like a hand held in front of the sun, and my own hand leaps to it. Looking for agates was a way of orienting myself to something in the world, something to do, a reason to take a walk along the edge of a road, treasure affirmed as such by the time and attention you devote to cultivating it, like love or life or work or money or identity or what have you. I have never bought or sold one, and I gave away to various friends, many of whom I have since lost, all the agates I ever found as a child. I still keep a boxful of some agates I have found since then, but I don’t display them or even look at them much. I liked to find them, but I never cared about amassing a collection.

When I revisited Minnesota after moving away, I tried to hunt for agates in some of my favorite old gravel pits, but the owners, afraid of lawsuits, had all adopted a policy of chasing off agate pickers. Times had changed. Once, I showed my university ID and pretended to be a geologist. They gave me an hour in the pit, but the necessity of my little ruse had put the whole experience in another category, completely displacing the subtler charm of finding agates.

Eventually, I got a job in New York. The seacoast has never really spoken to me; it's not in my blood. The beaches of Long Island struck my eye with a stupefying sameness: all whites and beiges and pastels of plain quartzes and light-colored granites, uniformly rounded by the waves, like a vast crowd of nattering voices, and no one speaking to me. Not content even with so much sameness, the town where I lived had the beaches raked periodically with a giant machine, removing every rock larger than a golf ball. In these mostly white-flight suburbs of New York City, stretched out like the beaches along the north shore of Long Island, the dominance of whites and beiges and pastels seemed to define the people and their houses and clothing no less than the rocks on the beaches.

How was I supposed to orient myself? What was I supposed to look for on the beach? I made up categories as I went, playing with permutations of sameness and difference. One day I found myself assembling a little collection of round rocks in gradations of pink and red, another day clamshells in concentric size increments, as if I were trying to assemble an agate by gathering up various things among which its features had been scattered. One day I started finding spiral things (a dried tendril, a broken conch shell, a snail, a rusty bedspring). One day my friend and I collected the whitest rocks we could find and assembled them on the beach into a circular patch that shaded gradually, like the dots of a pointillist painting, into the surrounding whites and pastels. The idea was to make it just obvious enough to be noticed—like a test for color blindness—but subtle enough so that anyone who noticed it would have to wonder if it was a random, statistical occurrence or a deliberate installation. Another day I spelled out words using white rocks arranged into letters, again almost unnoticeable amid the not-very-different surrounding rocks. I noticed on one beach that the flattest stones, which the waves can carry farther than most, get deposited in a band about fifteen feet from the water's edge; a few feet farther up is a band of seaweed, shells, sponges, driftwood, and plastic junk. All our sorting and arranging is, after all, only an extension of what is already being done by the waves.

But this is not a story of nostalgia for bygone days when agates were agates. How could it be, when agates themselves are never merely themselves, and when the stories they tell are of ongoing waves of scatterings and gatherings—diasporas and ghettos—of complex reconfigurations, in which they participate but which seem to shape all words and things? There is a word for things that are never perfectly equivalent to themselves: we call them *signs*.

7

Sometimes a Cigar

Is there such a thing as things in themselves? We can at least circle around this question by thinking through one of the most famous pronouncements on the subject: Freud's supposed assertion that "sometimes a cigar is only a cigar."

To begin with, it should be noted that this is an especially dubious assertion from a man who kept smoking cigars even after he was diagnosed with the mouth cancer that would kill him and, finally, even after parts of his jaw had been cut away. Such devotion (not to mention such cancer) could have been inspired only by a cigar that was much *more* than a cigar. The dismissive assertion only seems more disingenuous in light of what Freud identified elsewhere as his drive to analyze his pleasures and his claim that "wherever I cannot do this . . . I am almost incapable of obtaining any pleasure. Some rationalistic, or perhaps analytic, turn of mind in me rebels against being moved by a thing without knowing why I am thus affected" ("Moses" 80–81).

Still, as a former smoker, I can testify that addictions do seem to have an excessive singularity. What could ever hope to take the place of smoking, the elusive and ineffable smokingness of smoking (or the cigarness of cigars, if you prefer)? But what gives addictions their singularity is their *overdetermination* (to use Freud's term), that is, the number of things they take the place of—starting, no doubt, with the usual suspects, the defining fixations of the oral, anal, and genital phases of human development as Freud mapped it out (and cigars do seem to bear various resemblances to breasts, shit, and penises). As the explorer John Lloyd Stephens put it, one stormy night in the Yucatán in 1840: "Blessed be the man . . . who invented smoking, the soother

and composer of a troubled spirit, allayer of angry passions, a comfort under the loss of breakfast, and to the roamer in desolate places, the solitary wayfarer through life, serving for ‘wife, children, and friends’” (Von Hagen 158).

One really need not go so far afield to begin to unravel the paradoxes of Freud’s assertion, since there is a glaring contradiction right at hand: what Freud’s aphorism *says* contradicts what it *does*, since what it does is to refer to the cigar not just as a cigar but also as a philosophical and psychological example. To elaborate a little, what it does is to oppose the philosophical claim that seems to be advanced by Freudian psychoanalysis itself, namely, that every human activity is always rife with unconscious and symbolic meaning. One imagines Freud responding to cut off some interlocutor who has begun to analyze his cigar smoking; of course, he would not deny unconscious symbolism flat out (since to do so would be to disavow psychoanalysis) or even its priority in human affairs. He only asserts, apparently, that it can be temporarily (“sometimes”) suspended. But this suspension of meaning is not something that simply happens: it is *something the statement itself attempts to enact*. In this sense, the statement seems to be mainly a polite way of saying, “Sometimes it’s rude to analyze” or, more plainly, “Shut up and let me enjoy my cigar!” Or to put it another way: Freud’s invention of psychoanalysis has been so successful that it has taken on a life of its own and has come back to haunt even his own most pedestrian pleasures; the statement reasserts psychoanalysis as a game whose rules its creator can make up as he goes along.

V. N. Volosinov began *Marxism and the Philosophy of Language* by distinguishing between an object qua object and an object qua sign: “A physical body equals itself, so to speak; it does not signify anything but wholly coincides with its particular, given nature.” It is only “when the physical object is converted into a sign” that “such an object, to some degree, reflects and refracts another reality.” But if the story I am telling has any bearing, there is a big problem with Volosinov’s assertion, a problem that one can begin to identify by observing that the distinction between objects and signs itself *belongs to signs* but not to objects as so constituted. Volosinov hints at this himself: “A physical body equals itself, *so to speak*” (9). In other words, things-in-themselves are a convenient fiction, a way language distinguishes itself as intriguing and intelligent by caricaturing its Other as dumb and inert. But again, just ask any physicist: things are not inert; they do not coincide with themselves but emerge in complex webs of interrelation, outside of which they are inconceivable. In order to begin to redress this caricature (of smart

words and dumb things), we need to engage both the materiality of language and the signlikeness of matter. (And by the way, it is fitting that *Volosinov* is not so simple to pin down, either: the name may be a pseudonym of Mikhail Bakhtin or of several authors working collaboratively.)

There is a would-be general science of signs—or at least a name for such a projected science—*semiotics*, first proposed in modern form in the late nineteenth and early twentieth centuries by American philosopher C. S. Peirce and independently by Ferdinand de Saussure. Peirce in particular wanted to extend the reach of semiotics to cover the entire universe, which he regarded as “perfused with signs, if it is not composed exclusively of signs” (cited in Noth 41), whereas Saussure was more concerned with establishing the independent status of language (in the more narrowly conceived sense) as a system-unto-itself. There are many reasons semiotics has neither coalesced into a discipline nor taken over the universe (though it has thrown off very bright sparks along the way); the shorthand version will have to suffice here: the modern chasm between words and things has remained too wide and deep. But this is the chasm that present epistemic shifts are closing, and if future disciplines can ever be built there, it will be over the wreckage of would-be Evel Knevels like semiotics as well as with the support of various flying buttresses from the “hard science” side (such as chaos and complexity theory, systems and information theory, and autopoiesis).

8

On Meaning

Occasionally, when I've been bored with a book I've been reading, I've flipped ahead through the pages and thought, there is nothing but *words* here!

What was I expecting?

Never mind that people have lived and died for what is written in books; at these moments, it is thoroughly dispiriting to reflect that the text to come—no matter how informative or meaningful—will only be, after all, more of the same, word following word, eyes scanning back and forth, back and forth, back and forth. The sky will not open. The world will not change.

This must be why Shakespeare has Macbeth, in a moment of hopeless fatalism, seem to describe living itself as the reading aloud of an already written text:

Tomorrow, and tomorrow, and tomorrow
Creeps in this petty pace from day to day,
To the last syllable of recorded time . . .

(5.3.19–21)

The repeated words “tomorrow, and tomorrow, and tomorrow” mark the repetitive sameness of reading, not only in the eyes scanning back and forth but also in the very marks on the page: the same thirty or so letters and punctuation marks, again and again, and mostly the same words, too, and in the very same grammatical patterns, repeated over and over with only petty permutations. This is *information*: a controlled mix of redundancy and predictability with novelty. Of course, it doesn't stop with language.

As Macbeth sees it, *days*, like words and syllables, follow one another with stultifying predictability. We might as well add *conversations, meals, dreams, sex acts, wars, generations, worlds, universes*. It doesn't *stop* with language, but maybe this steamrolling ennui *starts* with language, whose every single word seems to aspire to flatten all its referents to more of the same. This is the depressive view of language, the flip side of which would seem to be a yearning for apocalyptic escape. To one so deeply bored one wants to ask: how is it that you have inoculated yourself so effectively against thinking that nothing could move you?

On the other hand, one might emphasize difference and novelty. After all, every sentence in this book, with the exception of a few scattered quotations, will be unique to this book, and thus will be occurring here *for the first time in the history of the universe*, as far as we know. And this very same book, read by different people, will bear radically different fruits, and all the more so if it travels between cultures, in time and space. Even for a single reader, this book may well function at one moment to spark a long-lost memory or a new inspiration, at another a headache or a nap or just the blink of an eye. Far from being oppressively the same, arguably, a book is oppressively plural and different: its wake is too choppy and too fleeting; its meaning is too slipperily, swarmingly different at every moment even to handle, much less to master.

The meaning of a book is its wake, the little ripple of turbulence that often seems only to disappear (or may only *seem* to disappear) as it widens. Its meaning is how it is *in the loop*, how it is wired into the circuit of things, the circuit of making things and of making things happen, and humanity in turn is wired together and to the world through language (among other things). A book changes (though perhaps only slightly) the way we think and know, like a switchboard operator, reconfiguring synapses maybe even one at a time, and the wiring of the brain is wired to the circuitry that wires people together and to the world: "Puppet strings . . . are not tied to the supposed will of a puppeteer but to a multiplicity of nerve fibers, which form another puppet in other dimensions connected to the first" (Deleuze and Guattari 8). A book is a node in a network of nodes that are themselves networks. It is a variegated network with all kinds of gaps and disconnects and degrees of freedom wired into it, but it could not be a network at all if that were not the case (since if everything were connected perfectly to everything else, it would constitute an adamantine and eternally frozen crystal). There is no such thing as an independent thought: there is no thought that is not wired into the whole network, even if, as in dreams, the switch is turned off

between thoughts and muscular actions—that is, all the more so if dreams are the safety valves for noise or excess that the system generates and must continue to dump or be compromised by.

ASIDE

Meaninglessness Is Not Possible. The famous example of a meaningless sentence invented by linguist Noam Chomsky—“Colorless green ideas sleep furiously”—has turned out to be famously meaningful. It seems to suggest that some ideas that are lively but relatively new and untried (green) and apparently invisible or easy to ignore or emotionally neutral (colorless) nonetheless must struggle desperately or violently (furiously) to remain unconscious (sleep). Of course, what Chomsky seemed to mean was that the sentence is meaningless if one rejects contradictions and metaphors as meaningless, and this is precisely the anxious disavowal that seems to underlie the blithe confidence of rationalist science; to disavow contradiction and metaphor is to “sleep furiously.” Chomsky ends up illustrating, as did Goya in a famous engraving, that “the sleep of reason produces monsters.” The sentence itself hatches into the meaningful monster the scientist disowned. Its meaning is in how it is thrown out and comes back to bite the scientist in the ass.

Peirce suggested that the thinglikeness of an idea can be appreciated in the “steadiness of the hypothesis that enables us to think about it” and thus the realization “that if our mental manipulation is delicate enough, the hypothesis will resist being changed” (89). If this friction is what makes for the labor of thinking, it is also what makes for its pleasure, its *frisson*. The friction derives not from dumb inertia but because all the synapses are wired in such a complex way with each other and with so much else. The philosopher Willard Quine argued that our hypothesized versions of the “laws of nature” are all rather arbitrary and changeable—or, rather, they would be so if many other hypotheses and calculations did not depend on them: the more in the loop they are (or the more in the more loops), the more difficult they are to reformulate; in business one would say that the *transition costs* are too high. Freud’s word was *overdetermination*: multiple dream-thoughts converge to produce a single dream image capable of referencing all of them (thus, for example, the vampire who showed up in my dream had bushy eyebrows not just because vampires tend to have bushy eyebrows but also because my old professor Rene Girard had bushy eyebrows and so did the president of the college where my father taught—and also because of the *I* in *eyebrow* and the *ire* in *vampire* and the *Ira* in *Girard*). Memory tends to work like this

too, like a safe deposit box that takes two different keys to open. Meaning is resonance, straddling, nodality, being in the middle.

The fact is, when I get bored and flip ahead through a book, I am not really oscillating wildly between existential despair and apocalyptic mania, I'm just looking for some pictures! I might even settle for a chart or graph, or even the intermittent interruption of otherwise unrelieved blocks of prose by bits of poems. I seem to require a kind of minimum heterogeneity. In other words, the difference between one word or sentence or paragraph and another—which is difference wholly *within* language, narrowly conceived—does not seem to make any difference to me at these moments, when words begin to fall on me like light rain and I search for some trace of difference *between* language and something else. This suggests one of the cruxes of the argument of this book: *meaning is the interaction of difference within and difference between*, the way they are wired together.

To recognize that thoughts are made of other thoughts and are raw material for new thoughts and that books are made of other books and are used in turn to make more books is merely depressive unless accompanied by the recognition that such self-organizing systems can be generated and sustained as nodes only in radically heterogeneous (that is, *lumpy*) networks and intersecting and incommensurable economies.

9

Fact and Fiction

Since the opposition between fact and fiction has come to seem such a given, it is surprising to find that the words *fact* and *fiction* both derive from Latin words that mean nearly the same thing—to *do* or *to make* (as does *poetry* from the Greek *poeien*). In English, *fiction* has always had the primary sense of something fashioned or feigned—though *fashion*, like *fact*, derives from the Latin *facere*, whereas *feign*, like *fiction*, comes from *ingere*. It took until the nineteenth century for the sense of fact as something actively done or made to be completely driven out by the sense of something that simply and passively *is*. Fiction too seems mostly to have fossilized into a genre, a stable kind of thing, a noun. In other words, the distinction between fact and fiction has itself come to seem like a fact. In fact, though, as even this thumbnail etymology shows, the distinction between fact and fiction is really a fiction, something people have manufactured.

In telling the story of how this state of affairs came to be, it would be misleading to repeat the old cliché that the ancients lived in an enchanted world, lacking our distinction between reality and fantasy—a childlike world we have since lost. For one thing, ancient languages are very capable of making similar distinctions using their own words. One might say instead that the distinction has branched out, wedging categories apart the way a tree root splits a sidewalk, or that some long-term continental drift in language has put oceans between once contiguous regions of discourse: “There rolls the deep where grew the tree,” as Tennyson put it. As fact seems to have petrified into something that simply *is*, it has become more difficult, at least

in ordinary language, to understand the world as an event, as something continuously made.

So how did the sibling rivalry between fact and fiction arise and devolve into such a crude and entrenched impasse (IS! Is NOT! IS! Is NOT!)? Well, it's a long story, culminating in the invention and polarization of *science* and *literature*—two more words that acquired their modern currency only in the nineteenth century. For example, scientific authority came to aspire to anonymous objectivity (for example, in the ideal of the repeatable experiment), whereas literature was fixed to subjectivity through the ideological figure of the author—a fixation Foucault identified as a way of containing “the great danger with which fiction threatens our world” (“Author” 118). Although this arrangement has been naturalized for so long as to seem common sense, it is in fact a reversal of much older traditions that attach *scientific authority to great authors* and *literary value to anonymity and repeatability* (especially when oral transmission and performance predominate over written texts). But the story is a soap opera, and these are only the first couple of episodes; stay tuned for more big plot twists.

As it is, so much of our world has seemed to be built on the distinction between fact and fiction that even imagining its being breached tends to take the form of an apocalyptic scenario. Jorge Luis Borges's 1940 short story “Tlön, Uqbar, Orbis Tertius” tells of a secret society that, for many generations, has been compiling an encyclopedia of Tlön, a fictional planet where even the physical world is subject to lively traffic between fact and fiction. When parts of the encyclopedia are discovered, the fascination with Tlön spreads like wildfire: “Almost immediately, reality began to yield. The truth is that it longed to yield” (17). Disciplines such as history begin to metamorphose into their Tlönian counterparts, and strange artifacts described in Tlön's archaeology begin to be found. The narrator—who has withdrawn into his own pre-Tlönian scholarly pursuits—gloomily predicts that within a hundred years or so, “the world will be Tlön” (18).

William Burroughs's short narrative “Apocalypse” (1990) starts with the premise that the god Pan was declared dead at the birth of Christ. Until then, Pan had induced “the sudden awareness that everything is alive and significant,” and though he “lives on in the realm of imagination” he has been “neutralized, framed in music, entombed in books.” Thus, when the collective realization that “nothing is true” begins to take hold, it leads to “a basic disruption of reality itself” in which “art leaves the frame and the word leaves the page.” “One rent in the fabric is all it takes for pandemonium to sluice through”: machines come alive, “graffiti through glass and steel like

acid races across the sky in tornados of flaming colors,” crowds panic as the earth breaks free of its orbit, and, finally, Pan “pulls down the sky” as the narrator chants, “Let . . . It . . . Come . . . Down.”

The apocalypticism—or what we can now call, following Foucault and Burroughs, the *epistemological panic*—associated with breached boundaries between fact and fiction also informs a widespread strain of thinking about postmodernity (of which Borges and Burroughs are often taken as representative). We have been told that a leveling of distinctions between facts and images is leading us all down the road to irrationalism, relativism, amorality, and the loss of a consensual reality. Never mind that the breach is better characterized as the failure to sustain a modernist *fetish* about fact and a rationalist *ideology* that never were what they were cracked up to be, though they seem so to their adherents now that they have, in fact, cracked up. There is a very specific word—*romanticism*—for the *nostalgia for what never was*. In the late eighteenth and early nineteenth centuries, romanticism harkened back to a happy premodernity; two hundred or so years later, romanticism is just as likely to harken back to modernity itself: Remember those happy nuclear families? The comforting stability of sexual identity? The civility? The trust we had in our scientists and politicians? I don’t!

Not surprisingly, science fiction is a genre in which questions of the borders between fact and fiction are commonly and obsessively thematized and theorized: what contradictions, costs, and consequences are attendant on maintaining such a border, and what are the costs or consequences of refusing to do so or of trying to do something else? Such theorizing amounts to nothing more or less than the work in question negotiating a role for itself in *policing* the border and in *trafficking* across it. In other words, self-reference is not only a navel-gazing metadiscourse in which the work in question meditates impotently on its own position but also a major part of how the work actually jockeys for discursive position and, in so doing, participates in reproducing and potentially changing the discursive ecology in which it operates. The two films I discuss below illustrate typically “modernist” and “postmodernist” jockeyings for position but both in ways that also gesture beyond the modern/postmodern distinction.

The 1997 comedy/action film *Men in Black* is based on the premise that alien beings from all across the universe live among us, passing as humans, and that the earth is constantly teetering on the brink of one cosmic crisis or another. A secret government agency is charged with managing the alien presence and with perpetuating the facade of an orderly planet inhabited only by terrestrial species—a real feat of information control. An ongoing joke in

the film is that the agents turn to the most sensational of tabloids—such as the *Weekly World News*—for accurate information, whereas stolid sources like the *New York Times* are filled with what amount to cover stories. The joke seems to turn the tables on middle-class rationality and its contempt for tabloid-reading lowbrows, its sense of comfort with what it thinks it knows about the world, its confidence in the stability and orderliness of things.

The film also adds a nice twist to one of the oldest and most generically definitive devices in sci-fi and supernatural fiction, whereby the rationalists are helplessly befuddled in the face of what only those who reject scientific dogma can recognize. Hamlet's famous comment to his scholarly friend Horatio—"There is more in heaven and earth than is dreamt of by your philosophy"—still serves well as a motto for an abiding mistrust of all official versions of the world. But *Men in Black's* twist is that official information control is ongoing and systematic—and *benign*. The profoundly alien is passed off as familiar, and fact is disguised as sensationalist fiction. Such damage control seems necessary to protect middle-class rationality, to foreclose mass hysteria. And this would seem to be a self-amplifying system: the more the sense of order and familiarity is shored up, the more it is likely to freak out upon confronting chaos and strangeness, thus the more it needs to be shored up. The film offers itself to us as a confidential aside, an ironic wink: we know the official version is a fiction, but a necessary fiction, for our own good.

This quietism contrasts starkly to the apparently revolutionary activism of the 1988 John Carpenter film *They Live*, an earlier film also based on the premise of aliens living on earth, passing as humans. The heroes of both films are a white man and a black man, and, curiously enough, special sunglasses play a key role in the plots of both films.

In *They Live*, the aliens have conspired with human elites to rule the world and exploit the human workers. Two workmen, one black and one white, find special sunglasses that enable them to recognize the aliens and to see the otherwise subliminal messages printed everywhere—exhortations to OBEY and CONSUME. In the climax of the film, the machine that projects the force field to cloak the aliens is finally destroyed by the two men, who die heroically in the process. A final series of vignettes shows people suddenly awakening from "false consciousness" as they see the now uncloaked aliens in their true ugliness and rise up to throw off their oppressors.

They Live is driven by the modernist premise that capitalist consumer society is the means of world domination by a devious and inhuman elite, and when this is revealed, the revolution will commence and the oppres-

sors and their collaborators will be brought down. Like all science fiction, the film reconfigures identities and differences. Here, racial and ethnic difference is negated by heroic male bonding, and the otherness displaced by this negation is *added* to class difference, so that the significant difference is not between black and white or even between human and alien as such but between the workers and the elites keeping them down. Plenty of extra otherness is left over for women, too: the woman who appears to offer help turns out to be an alien agent, and the closing vignettes feature prominently a woman-on-top sex scene in which a recumbent man rises up in horror to throw off his partner when she is revealed to be a grotesque alien. The message is a familiar one: male-bonded working-class men are the only agents of truth and revolution; women are manipulative sirens.

The sunglasses neatly represent the film itself as it would like to be understood. Like its sunglasses, *They Live* offers to mediate the worldview of the spectator to undo the distorting mediation already in operation—the “false consciousness” of dominant ideology—and to reveal oppression as it really is. By emitting a force field that makes the aliens appear human, the projector stands nicely for the dominant ideology’s erasure of class difference. Having done their work and enabled the projector to be destroyed, the sunglasses, like the film itself, are no longer needed: reality can now be seen as it is, without mediation.

However, unlike the cloaked aliens who can at least be revealed as such, the contradiction that defines the film is hidden *in plain sight*: social reality *cannot be revealed by realism* but only by science fiction. In other words, the “world as it really is” that the film offers to show us—one in which the ruling class is “literally” an alien species—is precisely the world as it really is *not*, not literally, anyway, but metaphorically. Metaphors both displace and condense what they stand for: the representation of class difference as species difference does more than simply transpose or displace one kind of difference onto another; it also works to condense it, to make it more discrete, more representable, more visualizable in the first place. One might go on to ask whether representing the complex process of radical consciousness raising as something so succinct as putting on a pair of sunglasses—or as watching a single film—offers not a metaphor to be realized but a metaphor *instead* of a reality, a kind of inoculation with the dead virus of activism.

In fact, this question is nicely thematized in a 1999 episode of the much more elaborately paranoid *X-Files*, in which agents Mulder and Scully are captured and are about to be digested by a giant underground fungus that, in order to lull its victims into passivity, induces in them the dream that their

everyday lives are continuing, a nice figure for any dominant ideology (and also very close to the premise of the 1999-2003 *Matrix* film series). Scully figures out that this must be the case, and this realization enables the two of them to struggle up from underground and gain their freedom. But wait: it is only when they realize that their struggle to freedom was *too easy*—that it was *itself* a lulling dream induced by the fungus—that they can truly begin the struggle that leads to their rescue. Again, though, it is hard to say whether this extra twist offers a loophole big enough to wiggle out of ideology and into freedom (not bloody likely, eh?) or whether it just leads to a higher-class prison, since as Paul de Man once put it, “To know inauthenticity is not the same as to be authentic” (214). And de Man knew plenty about inauthenticity, since at the time he was a literary theorist at Yale (higher-class prison indeed) with a secret past as a Nazi-collaborationist journalist. In any case, such typically vexed postmodern complexity is definitive for the *X-Files* main characters, government agents whose zeal to find and reveal the truth about paranormal events is continually co-opted by their employers, who are interested in covering it up. Thus, workers in the culture industry thematize their own dilemma.

This liminal “insider/outsider” status is also definitive for the agents of *Men in Black*. The “They” of *They Live*, the professional and managerial class represented as aliens in the Reagan-era film, are the “Us” of the later film, the men in black of *Men in Black*, but now it’s “hip to be square.” The new recruit (Will Smith) agrees to “sever all human contact” in order to join the agency, and just as he puts on the conspicuously anonymous black suit that will be his uniform from that day forward, the voice-over informs us that the agency is “above the system; over it; beyond it. We’re ‘they’; we’re ‘them’; we are the men in black.”

In the postmodern world-picture offered by the film—the world of cosmic diaspora and transgalactic capital—difference must be not eradicated but regulated, as it offers both opportunity and danger. The men in black are the ones who can engage with aplomb otherwise mind-boggling difference; the agency “licenses, monitors, and polices” all alien activity on the planet. They ensure that the Other passes as the Self; they maintain the fiction of a shared identity, a sovereign nation, and a consensual rationality—a job all the more important, it seems, since it has become clear that identity, sovereignty, consensus, and reason are available *only* as fictions. These secret agents are so hyperprofessional, so supremely *cool* and competent (in the face of freaked-out people, rampaging and malevolent aliens, imminent Armageddon, and the like), that they make the James Bonds of old look positively hysterical.

ASIDE

Coolness. Two boys, about five and six years old, were sitting next to me on the subway. They were taking turns snapping their fingers and clapping and waving their hands inches from each other's face, trying not to blink. I realized that they were training each other to be *men*, with the implication that the ideal man is so phlegmatic as to be almost totally unresponsive. I noticed a young woman sitting across from me, also observing the boys. Her arms were folded across her chest, and she looked hurt and angry.

Such *coolness* is finally what the film is selling, *literally*. *Men in Black's* special sunglasses are worn by the agents to block the effects of the "Neuralyzer"—a flash device they use to erase the memory of people who have seen aliens and to make them receptive to a hypnotically implanted "screen memory." The Neuralyzer and sunglasses are imported alien technologies, along with Velcro and microwave ovens, the patents on which generate the agency's funding. In actuality, of course, the film tie-in was used to market the sunglasses and watches worn by the agents.

In making the agents immune to their own brainwashing, the sunglasses enable them to spread their cover stories without themselves forgetting the truth; in other words, they represent a *technology of irony* with which, apparently, all ideologues must be equipped. The thoroughgoingness of this irony, and with it the film itself, is further represented by the film's tabloids, since they are where the truth is hidden most conspicuously in plain sight, *generically*, as a kind of sensational fiction, as in the film itself. *They Live* had offered to reveal transparent, unmediated truth as such, only to show more nakedly its metaphorical and generically mediated—that is, science fictional—premise. *Men in Black*, we might say, suggests instead one of the first principles of antirealism: that whatever represents itself as a transparent window onto the truth—as realism—is thereby suspect, inherently untrustworthy, unrealistic.

Although the film clearly plays on anxieties about immigration and diplomacy in a global economy (with *intergalactic* substituted for *global*), it tries to refuse the simplest reading of its extraterrestrials as science-fictionalized immigrants. In the opening sequence, a dumb local sheriff begins harassing a busload of Mexicans being brought illegally across the border, but when the men in black show up, they pointedly release the immigrants, seeing correctly that the only real danger is the single extraterrestrial merely *passing* as an undocumented immigrant.

After the opening sequence of the film, a tired older white agent retires. Agent K (Tommy Lee Jones) then recruits and trains J (Will Smith, a younger black man), and at the end of the film K retires in turn, returning to enjoy private life and his long-lost love (after the obligatory memory wipe). The film's final scene shows J with *his* new recruit, a young (and suitably hyperprofessional) white woman with whom he had been flirting. The implication is clear: unlike his predecessor, J will be able to mix love and work in a profession now admitting women. Remarkably, then, for a big-budget Hollywood film, *Men in Black* manages to suggest early retirement as the best option for two older white men, and appreciatively but without even making an issue of it, to replace them with a younger black man and the white woman who is his love interest. The catch, of course—and it is a pretty big one—is that the new agents are assimilating perfectly into the hetero-WASP-guy impassiveness that characterizes professionalism in the film, thus conforming to the imperative to assimilate that they enforce, in turn, on all aliens. The message is clear: identity must be sacrificed to be an insider; to enjoy the privileges of real citizenship, one must become an unmarked and transcendental subject.

Both films thematize their own contradictory status as political and epistemological acts. But if they both end up passing as generically appropriate science fiction, and if in so doing they reproduce the fact/fiction border more or less intact, as they found it, what's the point? To this depressive question one might pose another: who says the fact/fiction border is intact? In order to be actuated as the possibly "miraculous weapons" they might be (that was Aimé Césaire's phrase for revolutionary artworks), science fiction texts in particular must be read against the grain, as the men in black read the tabloids—not as true facts but at least as potentially valid theory.