

OCTOBER

133

Barry Flood, David Joselit,
Alexander Nagel, Alessandra
Russo, Eugene Wang,
Christopher Wood, Mimi
Yiengpruksawan

Yates McKee

Jaleh Mansoor

Molly Nesbit

Judith Rodenbeck

D. Graham Burnett

\$13.00 / Summer 2010

Roundtable on Globalization

*Wake, Vestige, Survival:
Sustainability and the Politics of
the Trace in Allora and Calzadilla's
Land Mark*

*Mona Hatoum's Biopolitics of
Abstraction*

Wild Shanghai Grass

*Maison Tropicale: A Conversation
with Manthia Diawara*

The Objective Case

Published by the MIT Press

D. GRAHAM BURNETT

In the early seventeenth century, writing for readers who took spirit possession seriously, the math-minded metaphysician René Descartes set out to test the reliability of human knowledge by sketching what he took to be a worst-case scenario: imagine that everything we see, hear, touch, taste, and smell is the product of a demonic copilot insinuated into our innermost mind. What seems like our experience of the world is merely the conjuration of this cosmic impresario. Is there any hope of achieving and sharing a veracious account of the universe under such conditions?

In the early twentieth century, writing for readers more concerned with vivisection than exorcism, the math-minded anti-metaphysician Mauritz Schlick (one of the founders of the Vienna Circle, and a progenitor of logical positivism) propped up a very different hurdle for those who wished to worry about reality and how we know it: “imagine,” he offered, “that by means of an operation the optic nerve is connected to the ear, while the auditory nerve is joined to the eye”; a rational being thus configured would presumably “hear all light-impressions as sounds, whereas all tonal impressions would be seen as colours or shapes.” Would such creatures, flotsam from a philosophical Island of Doctor Moreau, be able to make sense of the world and account for it in ways we would recognize?

Both of these thinkers ultimately succeeded in climbing out of the holes they dug for human knowledge, and each eventually recovered what he took to be a robust account of how we can have confidence in our representations of reality. Their respective efforts now occupy a week or so in introductory classes in epistemology. But put their philosophical gymnastics aside for a moment, and consider a historical question that looms over their labors: why such different anxieties in the first place? A diabolical puppet master? An army of teratological synesthesiacs? Whence these peculiar ghouls maundering through the castle of the mind?

*

“All epistemology begins in fear,” write Lorraine Daston and Peter Galison in the conclusion of *Objectivity*, their important new study of changing efforts to achieve fidelity to nature over the last three centuries.¹ It is an observation that pierces the heart of a reader who has navigated these thoughtful pages, since it articulates with epigrammatic precision the fundamentally human drama at the heart of the history of science and philosophy they have recovered. Humanists from Blake to Leavis and beyond have regularly congratulated themselves on not being like their scientist brothers, who, it is alleged, carelessly disregarded our tragic condition and sated themselves on a thin and diligent happiness that Nietzsche called “Socratism”—the sovereign obliviousness of those for whom the pursuit of knowledge would appear to be enough. “As if knowledge could save us!” the poets (and their champions) chortle, and turn back to their lyres. But if Daston and Galison are right, those seemingly bloodless techno-scientific systems for the production of knowledge are perhaps best understood as nothing less than elaborate lullabies for the dark night of the soul, orchestral arrangements for the mitigation of our deepest terrors. This is not to say that they do not produce real knowledge. They surely do. It is just that this is not all they do. They also produce and sustain the knowers themselves.

Such a view secretes a strange and beautiful notion: perhaps those who have long struck the humanists as most immoderately confident (the analytic philosophers, the physicists) have been, somewhere in the primordial history of their disciplines, most profoundly afraid—and the most deeply in need of succor and strength. By these lights knowledge becomes inseparable from something like courage, and science itself starts to resemble a vast spiritual exercise, an existential salvage operation of breathtaking scope and intricacy. Salvation? Perhaps not. But self-preservation? Maybe. And not merely in material ways.

What sort of a book is this that can raise questions of such queer depth?

In certain respects it is a rather straightforward study: at its heart, *Objectivity* is a book about the shifting conventions of scientific illustration from the eighteenth through the twentieth century. Daston and Galison take as their primary source the genre of the “atlas,” their term for a durable tradition of image-rich reference texts published across the whole range of the observational sciences throughout the modern period. These volumes—say, a manual of mosses, a textbook on pathological anatomy, or a handbook of radio profiles for celestial bodies—are interesting in several ways: as a rule they emerge from scientific collectives (which gives them a particular authority and extends their shelf life); they aim to codify disciplinary knowledge (which means they usually serve an important pedagogical function in a given subject, even as they also get used as workaday tools by established practitioners); and they all claim to be scientifically

1. Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).

valid representations of the actual world (which makes them valuable as metonymies for science itself). Want to know what the scientists know? Here, take a look.

Lining up several thousand such works, published over some three hundred years and drawn from various languages and fields, Daston and Galison believe they can discern something like a three-fold periodization: pre-1840, 1840 to 1900 or so, and post-1900. Reasonable enough—such exercises are the bread and butter of the dutiful art-historian, who identifies the characteristic visual styles of given epochs. But in this study we are less concerned with the pictures *per se* than with the intricate nexus of ideas and practices out of which they emerged. After all, these are not just any pictures; they are *scientific* pictures, which means that they make special claims on us, and on the world. They are, if you like, the actual products of theories of knowledge and the knowing agents that served them—spoor left by migrating epistemologies.

These are the changing cultures of knowledge production—changing ideals for fidelity to nature—that give conceptual coherence to the different modes of image making Daston and Galison identify, and their book is centrally concerned with giving an adequate account of the specific character of their different regimes of scientific seeing. Each is summed up with a helpful catchphrase: the first they call “truth-to-nature,” the second “mechanical objectivity,” and the third “trained judgment.”

It is not difficult to conjure up the sort of thing that the authors might be getting at with this schema, even without reading their thick book. After all, an eighteenth-century taxonomist like Linnaeus thought that opening his *Systema Naturae* was a little like peeking inside God’s own herbarium. The “truth” secreted in botanical atlases in his day aspired to nothing less than a metaphysical (if not actually theological) “Truth,” and thus the skilled illustrator was charged to represent the essence of a given species, not merely any particular instantiation. Angelic idealization went hand in hand with eagle-eyed precision, and the greatest scientific imagery of the day succeeded in transcending the tensions implicit in that pairing. You could thus quite easily say that such artist-naturalists (or such teams of artist and naturalist—they did not always get along) were after something as grand as “truth-to-nature.”

By contrast, the rise of photography in the mid-nineteenth century shifted attention to particulars and gave a new authority to images made without the intervention of the illustrator’s pen. “Mechanical objectivity” would seem to be a punchy way of capturing this move to images made with image-making machines like cameras—technologies that appear, at first glance, inherently opposed to metaphysics (much like the philosophy of positivism, their contemporary). It is a little harder to imagine, just off the top of one’s head, what Daston and Galison would be getting at with “trained judgment” as a feature of scientific image making in the twentieth century, but a good guess would be that it must have

something to do with the deepening professionalization of scientific "experts" and their increasingly important service to political decision making in the last hundred years.

All this is a plausible stab at what Daston and Galison are up to in *Objectivity*, and it is indeed not entirely wrong as a gross sketch of the trajectory of their book. But they are, in the end, after considerably bigger game than this modest, if instructive, typology of the practices of scientific illustration. To understand how the book steps beyond such an exercise and touches the large questions to which I adverted above, it is necessary to probe what they themselves think they have identified as the organizing principles of these different periods. For "truth-to-nature," "mechanical objectivity," and "trained judgment" are not merely chapter titles, and (despite some superficial similarities) neither are they names for those complexes of practical power-knowledge that the late Michel Foucault called "epistemes." They are rather something very specific and peculiar that the authors call "epistemic virtues." What one ultimately makes of the book hinges to a considerable degree on how one assesses the coherence and value of this notion.

What is an "epistemic virtue"? The language of "virtues" hails, of course, from moral philosophy, and specifically from a branch of normative ethics concerned with the exercise of the faculties in the living of a good life. The adjective "epistemic" invokes what is today a very different philosophical domain, epistemology, where one is concerned with achieving knowledge. It is by no means clear that these disparate disciplines can be happily brought under the same yoke. After all, very un-virtuous people can know lots of things just fine, and some very good people can get memorably crappy scores on the GRE exam. In fact, one of the very basic stories that gets told about the history of philosophy is that in the late eighteenth century David Hume did everybody a great service by clarifying precisely the distinction between epistemology and ethics: there is the world of "is" and the world of "ought" and they have nothing to do with each other. For better or worse, you can't get from the one to the other, and therefore pseudo-philosophies that mix them up (natural theology, natural law theory) are to be binned with all due haste. Historians of science have sometimes treated "Hume's Fork" as kind of belated philosophical commentary on the scientific revolution of the seventeenth century, since the standard story there goes that practitioners of the new sciences suddenly made long strides toward non-ridiculous ideas about the natural world exactly because they divested themselves of a lot of medieval nonsense about the moral entanglements of knowledge making: the alchemist of old thought his experiments in aurifaction failed because he had not fully brought his own spirit to the requisite level of purity; the modern chemist understood what was going on in his flask as perfectly indifferent to what was going on in his person. That delicious sense of the basic indifference of everything for everything else (with, on the whole, an exception made for human beings, and perhaps a few animals) is called modernity. There is a lot to be said for it. And a

number of things to be said against it, too. But it has been bloody difficult to think one's way past it without seeming like a fool.

*

But have we ever really been modern? It is a question that has been in the air for some time among those who think about science and society. In 1991, the brilliant and slightly histrionic French sociologist Bruno Latour published a caustic manifesto on the subject that wore its position on its dust jacket: *Nous n'avons jamais été modernes* (it came into English two years later as *We Have Never Been Modern*). Latour's contention was that the foundational move of modernity—the prizing of epistemology (and its practical art, science) from ethics (and its practical art, politics)—had always been a shell game, and that we, the willing skills, basically knew as much all along. According to Latour, the “Constitution” of modernity—drafted, signed, and ratified in the seventeenth century—requires us to talk about the realms of politics and ethics as if they are the domains of freedom, where we make decisions as willing agents (since the social world, like our individual lives, is a world of our making), and to talk about the realm of nature and science as if they are the domains of necessity, where our thinking and willing are irrelevant (since the actual world is just out there). But this way of talking about things, as far as Latour is concerned, is really just talk: no sooner do we try to make one of those “free” decisions in politics or ethics (“I think I’ll have an abortion!”) than a scientist shows up to give testimony about some feature of the natural world that constrains our actions (“Look: fetal brainwaves!”). Is a “fetal brainwave” an “is” or an “ought”? Latour understood perfectly well the way that a certain sort of garden-variety realist (a “modern”) was going to handle that question: “The EEG reading is just an ‘is’; what you make of it in the sphere of ethics or politics is entirely up to you!” But this was precisely the sort of ruse that he considered the original game of modernist monte. After all, where was an EEG reading “just” an EEG reading? Only someplace where it was *totally irrelevant*, and if it stayed there, then we did not really have anything to talk about, did we? Insofar as modern politics and society are inconceivable without the “stuff” of science and technology (and insofar as, conversely, the modern sciences and technologies are inconceivable without the pecuniary and administrative support of contemporary society and politics), one’s notional ability to parse the “is” from the “ought” is pure metaphysics. Or, if you like, ideology.

That said, Latour distanced himself from a venerable tradition of leftist *Ideologiekritik* directed at the sciences, one that tended to try to show that the “truths” of the sciences were, in fact, merely the reifications of social relations. You can get some way with this sort of thing when talking about the Victorian diagnosis of “hysteria,” but it gets a good deal harder with Newton’s laws of motion (though this was tried), and well nigh impossible with, say, nuclear fission. Sure,

there is plenty of stuff to say about the role of social and political forces in the making of the bomb, but the claim that the distressingly unstable nucleus of an atom of Uranium 235 is "socially constructed" hardly seems credible, at least once one has exited the windowless confines of a particularly intense graduate seminar.

Latour's puckish surpassing of this kind of sophisticated sophistry (which, it should be said, like most sophistry, has periodically been turned to good use) involved insisting that the explanatory vectors of the Marxist science-studies types had to go both ways: nature was *both* real and constructed, *and so was society*. He called this the principle of "symmetry," and it might seem at first glance like a reasonable compromise, but in his hands it became something more along the lines of a double dare, requiring a Gallic grace and quasi-theological lightness-of-spirit that has tested his followers. For instance, history itself, Latour went on to suggest, is exactly the process by which those apparent poles (the natural world, the cultural world) are stabilized and made to appear autonomous—a process that he believes involves the continuous erection (and erasure) of a vast interconnected scaffolding of "quasi-objects" which we have no language to describe and no philosophical categories to understand. Oh, and they disappear when you look for them and reappear when you look away.

It should be said that expounding Latourian arguments is nevertheless a great deal of fun if one has a taste for it, since: 1) it is extremely tricky to make his theory plausible in normal conversation with a non-academic; 2) his scheme leads to quite deranged (if exhilarating) positions on a variety of seemingly quotidian matters, including time, ontology, political representation, etc.; and finally because 3) Latourian analyses generally infuriate just about any sane interlocutor (e.g. How exactly are we going to set up a "parliament of things"?).

The nasty "science-wars" of the 1990s ended up squelching a good deal of this sort of thing, for better or for worse, and left serious-minded commentators wondering about how humanistic or social-scientific scholarship on the sciences might move forward. The traditional moves of ideology-critique seemed to have self-destructed when applied to the sciences, which were, of course, the original domain in which the difference between reality and mere ideology had been worked out. What was left? Perpetual friendly yarn-spinning about the origins of modernity? Hagiography of some great moderns? Going to work for a pharmaceutical company? In reality, everyone in these academic sub-fields mostly fell back on dutiful and demanding and diligent micro-histories of science of different sorts (archivally intensive, theoretically unambitious), and the monographs stacked up.

But the question still loomed before the philosophically inclined: if human beings had really made a kind of knowledge that transcended humans, what, exactly, could a humanist say about it?

*

I rehearse this sketch of recent work in science studies because without it one might miss the full ambition of the book under review. *Objectivity* wishes to offer a way forward for a whole field, even as it sets out to answer some discrete historical and philosophical questions about the making of scientific images. The larger gambit of the book, its bid to reshape the disciplinary terrain, involves making the Latourian argument (*we have never been modern*) in a thoroughly un-Latourian way: for Daston and Galison, the fundamental fiction about “modernity” is that story about the birth of chemistry from alchemy, the story about the purported “discovery” that the character of the knower is irrelevant to the business of knowledge. It is? They claim, on the contrary, that when you start to look closely at the history of changing ideas about knowledge, it is in fact a history of changing ideas about knowing selves, and vice versa.

Which brings us back to those griffin-like “epistemic virtues.” Take objectivity for a moment, the tough nut at the center of this study. One might be inclined to think of “objectivity” as a sempiternal ideal of rational enquiry, but as Daston and Galison show persuasively, this isn’t really right. As an explicit desideratum for the investigation of nature, objectivity comes on the stage in the late eighteenth century, and it emerges in tandem with a new fear about the security of our knowledge and, significantly, a new fear about *ourselves*: subjectivity.

“Objectivity/subjectivity” is of course a Kantian pairing, and the authors could be accused of a kind of philosophical determinism as they unfold the ethico-scientific reverberations of Kant’s ideas across the nineteenth century. But one can sideline much of that detail and still feel the force of their observation: nineteenth-century scientific atlas makers were newly obsessed with *themselves* as the sources of error in their images (they feared their own distorting preferences, biases, and proclivities), hence their frankly bizarre preoccupation with a kind of epistemic *austerity*, which they enacted by means of extravagant commitments to purely mechanical processes of image making, and which they heralded in long prefaces about their intellectual and corporal hygiene. It was all about keeping one’s hands, and indeed one’s head, out of the business of good science.

All this was rather new: an unretouched photo of some hairy rootball? Such an artifact would have struck Linnaeus as a downright odd contribution to botany. Who could possibly want a thing like that? And what for? Why take the mind of the scientific seer, and the skilled hand of the practiced draftsman, out of the process? The problem with getting true images of nature, as far as Linnaeus was concerned, lay mostly with *nature*, which was oozy and unpredictable, fallen and worm-eaten. His whole ethos as a knower was *selection* and *perfection*. He was an orderer and an arranger, who feared above all the indiscriminate and disorienting ways that a worryingly wonton nature sometimes seemed to mix her categories and dissolve her own boundaries (hence his enormous distaste for fossils, which

seemed to mush together the basic three-fold division of rocks, plants, and animals; and his abiding ambivalence concerning the squirmy things at the bottom of the sea, which seemed formless and protean). That the defining habits of his scientific practice (perfect, restore, redeem) would become scandalous irruptions of an execrable "subjectivity" just a few generations later would have surprised Linnaeus no end. "Why the heck would everyone work so hard to absent themselves from the business of knowing and seeing?" he might well have asked, and in doing so he would have admitted that he came from a world in which the scientific "self" was thought of, however implicitly, as a cross between Aristotle and Adam (which is to say that he thought our faculties were actually configured for reasoning about the world), whereas the times had moved on: in the post-Kantian world we had become voracious and solipsistic subjectivities driven by a dangerously self-interested will. That former Greco-Genesical person you could trust; the latter character not so much.

As Daston and Galison would have it, then, the shift from an overriding concern with "truth-to-nature" to an absorbing interest in "mechanical objectivity" was not merely a drift to the new technologies of photography (as we might have guessed), but rather a fundamental reimagining of the "scientific self" itself: its ethic, its anxieties, its ideals. We are here in a realm where theories of knowledge and theories of what is right, theories of how to live and theories of what there is, are difficult to parse. As the authors put it with charming restraint: "It is perhaps conceivable that an epistemology without an ethos may exist, but we have yet to encounter one." And that, they allege, is because "as long as knowledge posits a knower, and the knower is seen as a potential help or hindrance to the acquisition of knowledge, the self of the knower will be an epistemological issue."

One thus begins to see how seriously the authors take the hybrid character of these things they call epistemic virtues. They are real virtues (in the sense of being simultaneously the means to and the expression of a kind of good life in the community), and they are really epistemological (in the sense that they are inextricable from a philosophy of knowledge). Or, as Daston and Galison put it, they are "norms that are internalized and enforced by appeal to ethical values," even as they are also reinforced by reference to their "pragmatic efficacy in securing knowledge." The strongest claim is that the latter can't really consistently be separated out from the former, since anywhere people are practicing "collective empiricism" what is going to count as knowledge is going to itself be a function of these deeply rooted ideas of the proper character of a scientific self.

In sketching the sort of scientific self that pursued truth-to-nature, and then similarly the kinds of selves that practiced "mechanical objectivity," and later "trained judgment," and by outlining what they take to be the dynamics of this cumulative evolution/succession, Daston and Galison tell a very interesting story about the history of scientific ideals and practices, and they make some lovely observations about the shifting conventions of scientific representation.

But by outlining a way of thinking about the inextricability of human beings and what has all too often seemed like inhuman knowledge, Daston and Galison are genuinely pointing to new kinds of history of science, and new kinds of historically sensitive philosophy. We are here without the bombastic pretensions of the *marxisant* constructivists, and similarly without the performative derangements of the Latourians. Rather, the project is sober, respectful, and unstintingly serious: there is a sensitivity to the existential dimensions of knowledge, but a stern dismissal of cack-handed relativism; there is genuine enthusiasm for the high achievements of the sciences, but a measured assurance that without intellectual history, the full scope of those achievements would be inscrutable. By the end, there is even a proper "finding" about the essential nature of science: noting that moral philosophers have argued persuasively for some time for an "irreducible plurality of visions of the good, which can be reasonably debated in specific cases, but never eliminated in principle by reason alone," Daston and Galison elegantly make the case for an analogous understanding in the sphere of epistemology; "we believe," they write in conclusion, "that a plurality of visions of knowledge, understood in the most capacious sense of fidelity to nature, is likely to be a permanent aspect of science."

*

Objections to all this articulate thoughtfulness? Yes, yes, to be sure. I recently taught *Objectivity* to an entering class of ambitious doctoral students in history and history of science, and they tempered their admiration for the book (which is, after all, the product of a fifteen-year collaboration by two of the very most gifted scholars now living) with a chorus of not unreasonable complaints. Sharpest among them was a distaste for this preoccupation with "selves" as an explanatory unit. A Chinese student was especially put off by the book's preoccupation with the "self" and with the various "personae" available for the enacting of one's handy inner homunculus. All this felt to him like an analytic approach that could only have been dreamed up in Paris or Berlin or Cambridge. What about collectives, he wanted to know. And along those lines: *Where's the politics, anyway? Where's the economics? Have you people ever heard of class?*

These are genuine concerns, for Daston and Galison do turn the knowing self into something like an annulus through which the whole spooling circus of traditional historical "forces" must pass. They defend this approach by appeal to a particular vision of historical explanation, one that is interesting, but not uncontested. Intellectual historians, they note, have tended to reach into a large grab-bag of causal phenomena—political revolution, rising wealth, shifting technologies—to find the blocks out of which to build their stories of the rise of new concepts and theories. This sort of thing gives a thrill, but it derives much of its satisfaction from maximizing the distance between the *explanans* and the

explanandum. The greater the heterogeneity and remoteness of the causal forces, the more virtuosic the new historical explanation (modern science arises because of the printing press, or the fall of Constantinople, or *the technique of double-entry book-keeping*). Daston and Galison do not precisely reject this way of thinking about explanation, but they explicitly put it aside in this book, arguing instead for the pursuit of what they call “intrinsic” explanations—explanations that are “on the same scale and of the same nature” as the thing to be explained. Thus they take “objectivity” to be explained best by a serious investigation of “subjectivity,” its inextricable doppelganger, rather than by reference to Daguerre, republicanism, or the proliferation of daily newspapers. Not that they think those things are totally irrelevant, but rather they wish them to enter their explanation through the tight ring of the scientific self.

Whether this is a good idea or not is open to debate (one grad student called it an “incestuous” model of historical explanation—the “self” of the historian can only really love an historical “self”; another, disenchanted, called it “mirror-licking”), but this is a debate probably best left to the philosophers of history. To the philosophers of knowledge, similarly, must be left the whole question of the formal validity of the concept of an “epistemic virtue.” There is, in fact, an actual school of more or less neo-Aristotelian “virtue epistemologists” who have, since the 1980s, worked to reintegrate virtue ethics and theories of knowing, and to do so to the exacting requirements of analytic philosophy. I have read a bit of this material, but can’t quite say how they are doing with the project; Daston and Galison do not engage with this literature, though they would seem to be informed by it.

Plenty of other quibbles and questions come to the fore when this book is thrown into the pit of two dozen ambitious young scholars: Daston and Galison argue that their epistemic virtues (and the periods they define) do not change clearly like an apostolic succession, but rather stack up over time, remaining distinct even as they are mutually transformed through the availability of new alternatives. This model of gathering mass and momentum (they liken it, in one of the book’s many happy similes, to an avalanche), leaves little room for clean-breaking conceptual “revolutions” of the sort that obsess historians of science. Some of the students found it hard to let go. Others fretted over a counter-intuitive chapter in which the authors argue, in what would appear to be an admission against interest, that an important early twentieth-century reaction to mechanical objectivity was in fact a kind of flight from image making altogether, into a world of what they call “structural objectivity,” where fidelity to nature was won by identifying patterns of invariance that would be conserved across seemingly disparate domains. Because such approaches (the chapter treats Frege, Carnap, Poincaré, and Einstein) mostly eschewed representation altogether, it is difficult to shoehorn this topic into a book on scientific representation. These guys did not make a lot of pictures—indeed, that was sort of the point.

Finally, in the closing sections of the book, the authors test the always dubious business of bringing their history up to the present and permitting it to bark at the future: they examine what they take to be new ways of knowing and seeing emerging at the very forefront of contemporary techno-science. Looking at the fatally hip world of nanoscience, Daston and Galison claim to observe a synthesis of science and engineering, one in which “fidelity to nature” itself (the holy grail of all their subjects, across some three hundred years, regardless of their divergent approaches) is no longer the aim, and instead a *fusing* of the artificial and the natural is itself the project. Here the aesthetics of scientific imagery can return to the techno-scientific fore, after having been banished to the domain of the arts in the nineteenth century, when the Kantian scissoring of objectivity and subjectivity sent the scientists and the artists scurrying to opposite corners of the intelligence. Here, in this brave new world, “seeing” and “making” converge. There are still things to be afraid of, to be sure, but it is not clear that “the nature of reality” is very high on the list, since the relevant bits of that reality are wholly synthetic anyway. If you have a problem with them, just reset the parameters and run the whole thing over again. What happens to the classic problems of epistemology in such a world? What epistemic virtues will emerge to make knowledge—and selfhood—possible? It is anyone’s guess.

*

In reading over what I have written about this genuinely remarkable book, I find myself concerned that by attending so closely to the philosophical soul of *Objectivity* I have failed to convey an adequate sense of its embodied pleasures. They are very real. This is a beautifully written book, beautifully produced, and stuffed to its somber black endpapers with surprising and satisfying erudition. The authors have an impeccable sense of how to show, rather than merely tell, their story, and significant stretches of the text are close, surprising, and illuminating readings of particular scientific images. Chapters are consistently framed by dramatic episodes of scientific controversy or misprision, which are eventually shown to hinge not on malfeasance or simple error, as the protagonists themselves often thought, but on exactly the sort of divergent ideals of image making (naturalism vs. formalism, fidelity to detail vs. commitment to illustration) that are at stake in the book’s larger argument. One swims through a profusion of engrossing and well-chosen examples, only to claw ashore on some remote provocation where one can stand for a moment and survey the broad torrent of new ideas. I’d like to meet the reader who can emerge from this book unstimulated. Or perhaps not.

Does all epistemology really begin in fear? It feels right to me. And is “objectivity” the product of a certain fear of ourselves? It could well be. There is fear enough to go around. I am reminded, though, of a gnomic aside in Roland Barthes’ *The Pleasure of the Text*: pondering the inordinate delight that he takes in

reading (a pleasure that involves entering and inhabiting a host of characters whom he finds, in his saner moments, remote, irrelevant, even nauseating), Barthes finds himself wondering on the page, "Can it be that pleasure makes us objective?" Here is a thoroughly polymorphous-perverse way of thinking about objectivity: what if all of that careful work of distancing and austerity is merely the precondition, the means to the end, of a fantastic and promiscuous commingling of the self with a whole universe of newly-defined others? It is intellectual history as only a Parisian eroticist could dream it. Or a historian, since the "objectivity" of the historical thinker is perhaps best understood as a kind of coy but necessary foreplay, the prelude to the exercise of imaginative empathy that is the real end of historical knowledge. Call it *jouissance*.

For a taste, try *Objectivity*.