

Reviews

Relatively Speaking

CHRISTOPHER HERBERT, *Victorian Relativity: Radical Thought and Scientific Discovery* (Chicago: University of Chicago Press, 2001), pp. 261, cloth, \$45.00, paper, \$17.50.

In 1910, when Volume 8 (Q-R) hit the streets, the *Oxford English Dictionary* defined *relativity* as “the fact or condition of being relative,” with the prevailing sense clearly marked by an 1867 usage, “those who hold the doctrine of the relativity of knowledge.” You could hardly blame the editors for missing a newer sense: if Einstein’s 1905 article “Zur Elektrodynamik bewegeter Körper” [“On the Electrodynamics of Moving Bodies”] had even come to their attention, they had failed to grasp the import for the English language.

Christopher Herbert’s new book sets out to show us why the lingering residue of the word’s earlier meaning matters. *Victorian Relativity* argues, against conventional wisdom, that relativism was the overhanging tree under which the sapling of relativity sprouted and that, as the song goes, you can’t have one without the other. *Victorian Relativity* aims to aggregate apparently disparate discourses, linking nineteenth-century relativism in various culturalist and perspectivalist forms to Einsteinian relativity under the rubric of “radical thought.” Herbert also wants to show that there is no way to grasp modern physics without understanding the “overwhelmingly ethical character” (xiii) of the matrix of relativist thinking from which it emerged. *Victorian Relativity* analyzes about thirty relevant relativists. The readings of Cardinal Newman, Karl Pearson, Herbert Spencer, James Frazer, and a host of lesser-known names such as George Grote and J.B. Stallo are enlightening, and Herbert makes a strong case for a wide-flung web of relativist ideas in the late nineteenth century. Disavowing a direct study of influences and searching out instead the migration of similar or analogous ideas across disciplinary boundaries, Herbert concludes that Machian positivism, Henri Poincaré’s phenomenology, and even Einstein’s relativity theory belong to or derive from that web.

Herbert’s work seems especially timely in light of various recent attempts to study literary and scientific theory together—ranging from Arkady Plotnitsky’s work on quantum theory and epistemology, to Mary Poovey’s *Critical Inquiry* article about the utility of biological paradigms in parsing literary genres. Such work, like Herbert’s, focuses on the nature of the discursive connections between the humanities and social and physical sciences, and on the validity of translation or transportation of ideas from one realm of thought to another.

Victorian Relativity also sheds interesting light on a question that may be of pressing interest to readers of *Novel*: how does the movement of ideas between the literary and scientific realms shape our understanding of the novel? That question plays out differently, I think, depending upon one’s historical or theoretical concerns. Certainly, the imagined status of the novel in relation to scientific advances of its day will always be of pressing concern to historians of the novel. But the connection runs deeper than that, as evidenced

by Herbert's own earlier work linking Trollope and Mayhew to their era's pervasively ethnological imagination (*Culture and Anomie*).

One way to formulate the connection would be to hypothesize that the question of scientific advances, real or imagined, is of crucial importance to the status of the novel because novelistic capacity to accommodate, represent, mimic, or even analogize such advances determines the credibility of the genre. The ways in which the work, and the ideological underpinnings, of other intellectual realms come home to roost in the novel is thus a key question for various recent influential theories of the novel. Michael McKeon has convincingly argued (in his 1987 *The Origins of the English Novel*) that the novel's rise in the eighteenth century depended upon "its powerful adaptability in mediating questions of truth and virtue from opposed points of view," while according to D.A. Miller's *The Novel and the Police* (1988), "the enterprise of the traditional novel would [...] be the [...] task of forming [...] a subject habituated to [...] a social order whose totalizing power circulates all the more easily for being pulverized." For McKeon, then, the novel is a site where two contrasting intellectual projects (quests for truth and goodness) are confronted with one another, while for Miller the novel is a site where the omnipresent forces of social management are made unusually and tellingly visible. Both allocate to the novel a peculiar status as evidence as well as experiment-site. Even Friedrich Kittler's *Gramophone, Film, Typewriter* (1986), despite an avowedly anti-hermeneutic methodology, relies on readings of fiction to mark the incursion of new media, which suggests that questions about the cutting edge of scientific advance are answered, surprisingly often, by looking to the novel.

The supposition that in the novel lie answers to questions about the social realm at large—and possibly even about the physical world to boot—is not solely a professional deformation among literary scholars. We don't need the evidence of Wilkie Collins's experiments with up-to-the-moment neurology in *Armada* or the half-grasped Darwinism that underlies Naturalism to prove that both ideas and cultural capital pass to and from the novel in a variety of ways. Nor is it viable to argue that such passing is simply a case of science tossing tidbits to the salivating novelist: think for example of science fiction's vigorous interaction with "real science"—Arthur C. Clarke's communications satellite, William Gibson's "wired" cyberpunk neuro-internet, and so on. Yet when the challenge is not simply to locate the novel's claim-making at a unique site in the culture, as McKeon does, but rather to make the stronger claim that ideas from the literary realm have passed over into and inflected social or physical sciences in measurable and describable ways, I don't know if any fully satisfying evidentiary paradigm exists.

Here, Herbert's work raises important questions. Can *Victorian Relativity* show how intellectual experiments with relativism in theology or history are portable to physical science—in much the same way that Richard Dawkins has proposed that "memes" may be portable units of thought between cultures, disciplines, or ideologies? If so, those who—like Miller, like McKeon, like virtually everyone who currently theorizes about novels—want to explore what Miller nicely labels "the explosion everywhere of the novelistic" will have new ways of mapping what might be called trans-discursive portability, or simply genre-hopping.

Victorian Relativity ought to be explored painstakingly, therefore, both for what it has to show about the current state of the physical-science/humanities interface, and for the light it may shed on the novel's relationship to science. I'll try to do so by analyzing the book's two key claims. Doing justice to those two overarching claims unfortunately entails

omitting, in the space allotted, a more detailed account of Herbert's compelling readings of Victorian relativists.

The first key claim is that Einsteinian relativity is part of relativist thinking and hence an important component of a tradition of "radical thought" that worked by denying not only "absolute space, absolute rest and motion, and absolute causation," but also "any 'absolute code or morality'" (172). The second argument takes a number of forms. At times, it appears as the fairly mild claim that, although "my book provides no grounds for the rebuttal of" anti-relativism, there can be demonstrated a laudable and "a distinguished ancestry closely linked to all the achievements in different intellectual fields from physics to history-writing that have occurred under the aegis of 'relativity' in the course of the last century and a half" (234). The stronger version of Herbert's claim is that relativism is the best defense possible against "a broad coalition of allies in the struggle against relativism" who are often driven by something that may "just be the human patrimony—the passionate longing to inflict violence upon those who hold different theories, worship other gods, have different table manners" (26-27). In other words, Herbert holds that relativism—and hence, collaterally, relativity—is the best and perhaps the only check against intolerance and violence toward those whose beliefs differ from one's own. Without relativism's defense of "the plurality of potentially true theories," the advocates of "objective truth" would institute a dictatorship of both thought and deed. Herbert argues that what seems to be simple fact-finding may turn into coercion instead and insists that the very search for truth is compromised unless it admits the ultimately relative status of any truth-claims.

Einstein the Relativist

Claiming Einstein for relativism flies in the face of a long tradition that sharply distinguishes between relativism and relativity. The initial objections certainly appear substantial. Physics and moral philosophy seem apples and oranges here: as a friend of mine asked on picking up Herbert's book, "Remind me—what's the equation for general relativism again?" Einstein considered calling relativity the "theory of invariance" because the theory uses the absolute value of the speed of light to produce comprehensible calculations that will accurately describe the apparent alteration of shape, mass, energy, and time with regard to any point in the universe in motion in relation to any other. And, it is telling that the *Routledge Encyclopedia of Philosophy* (1998) points out that "G[eneral] R[elativity] is quite inimical to a relationist conception of spacetime" (8:198). According to the *Routledge* entry, the theory actually proposes a "substantialist" conception of the universe itself—within which relations between frames of reference are indeed relative but are also calculable from, as it were, a "nowhere" perspective.

However, that is not the only way to approach relativity. Herbert's point is that we should also consider the history of the concept and the genealogy of its generation. Is it not telling, for example, that when asked what he would have done had empirical observation failed to confirm relativity, Einstein replied, "then I would have been sorry for the dear Lord—the theory is correct" (221)? Long live the free play of theory, Herbert hears Einstein say. Behind Einstein's thinking lurk "subliminal-seeming nexuses by which relativity thinking [i.e., relativism] finds its way toward Einstein in the nineteenth century" (166).

In some ways, Herbert's attempt to forge the link between politics and physics, between the humane and the scientific, is a logical extrapolation of the undermining of fact/value distinctions and the challenge to teleological conceptions of knowledge, initiated in philosophy of science by Thomas Kuhn's famous *The Structure of Scientific Revolutions* (1962) and furthered by such brilliant provocateurs as Paul Feyerabend, Donna Haraway, and Bruno La Tour. These philosophers and historians of science have in various ways stressed the Foucauldian knowledge-power nexus of scientific endeavor, arguing that seemingly objective knowledge is produced, not uncovered. By aiming to recover a genealogy of such radical epistemology, Herbert's project in effect aims to undergird a hermeneutically suspicious project via unsuspecting historicism. Herbert believes that it is more plausible to doubt the validity of science's "objective truth" claims if such objections can be shown to be a century old and voiced by Einstein to boot.

Indeed, there are certainly reasons for treating relativity as part of a long-buried pre-history of such scientific iconoclasm. Einstein apparently did not think of his theory as undermining the reliability of any one perspective in determining absolute values for the mass, energy, location, and time of a given other object. Einstein's popularizing book, *Relativity: The Special and the General Theory* (1916), and *The Meaning of Relativity* (1922), seem to convey his endorsement of a phenomenological account of the nature of space and time. "The only justification for our concepts and systems of concepts is that they serve to represent the complex of our experiences; beyond this they have no legitimacy," he writes in 1922. He refers to the individual experience of "I-time or subjective time" which "in itself is not measurable," and this certainly does seem to open the door for the link that Herbert is making between epistemic relativism (or at least a kind of skepticism) and the birth of special relativity.

The key move in Herbert, however, is ultimately not Kuhnian, but Foucauldian in a quite different way. Herbert aims to agglomerate intellectual movements in various disciplines and show the deep connections that make them part of a single *episteme*. Pierre Bourdieu speaks of "fields" of cultural production, while Herbert's hypothesis is that any given field is readily permeable by the thought that arises in other fields, since all fields, physics included, are "immersed in discourse and in all the figurative operations that constitute the discursive universe" (xiv, emphasis in original). It might be argued that, although immersed in discourse, different fields nonetheless have distinct intellectual structures that mandate the plausibility of claims within them. Herbert, however, sees hard science as immersed in figuration as any other field, but without recognizing it: "relativity physics [...] is an *explication de texte*, a parsing of linguistic symbols" (173). If you grant that discourse establishes homology (all fields are fundamentally discursive) rather than merely mandating analogy (all fields require discursive expression of ideas), the snug links Herbert sees between physics, ethics, and politics become plausible.

The most important such linkage for Herbert is that the radical nature of Einstein's discoveries about space-time can now be related to Einstein's political radicalism. "How might Einstein's ethic of tolerance and freedom be said to express itself in the equations of special relativity? The question, to which in a certain sense the entire inquiry of the present book leads, may be a fruitless one," Herbert writes, but he evidently thinks the question very fruitful indeed (221). I am not clear, however, how he answers the question directly, save by the assertion of biographical continuity between Einstein's political views and theoretical mathematical innovations.

It is surely important to note that in 1933 Einstein's *The World as I See It* endorsed a principle of morality built on tolerance within a community for "groups of different nationality" (215), thus adhering to the sort of "fideist cultural relativism" (to borrow the *Routledge* term) that supposes that different nations have their own viewpoints which are potentially incompatible with one another. However, the connection between such nation-based relativism and the relativity of frames of reference in Einstein's revision of classical mechanics seems much looser to me than Herbert makes out. Physicists exploring the same basic ideas have historically held very different political opinions, perhaps in wartime more than at any other moment—think of German, Soviet, and American scientists simultaneously at work on the atom bomb; think even of the ideological divisions among the Manhattan Project researchers themselves. That in itself does not prove a clear disjunction between politics and physics, since it may be argued that there is a tight connection between the most important scientific insights and certain forms of political belief. But it certainly suggests the difficulty of making descriptions of the physical universe cohere closely to opinions about the social realm.

The attempt to bind those fields closer together leads Herbert at times into inconsistencies that point up the difficulty of finding comprehensible commensurability across disciplines. At one point, for example, Herbert lauds Einstein for a crucial "intervention [...] the proposition of the absolute value of the speed of light. [...] Underlying this structure of reasoning, tacitly but irresistibly, is the anthropocentric imperative" (173). The intervention and its underlying assumption about the speed of light thus seem to be, politically, a good thing. But how are we to reconcile that "human-centered[ness]" of light with this later claim: "Einstein, for his part, deifies [i.e., proclaims to be absolute] the speed of light and increasingly aligned himself intellectually with deterministic scientific absolutism" (226)? Light-speed absoluteness had seemed human-centered, but it now seems deterministic and hence anti-human. Such contradictions suggest difficulties with Herbert's (and perhaps with anyone's) effort to apply a determinate political valence to physics. That Bruno Latour argues equally vociferously and seemingly from similar axiomatic assumptions as Herbert that "relativity [...] is the exact opposite of relativism" ("A Relativistic Account of Einstein's Relativity" 14) seems a telling argument for the built-in slipperiness of such cross-disciplinary "portability" of ideas.

Relativism: Yesterday and Today

Arguably, we all practice relativism every day. I may not believe your God exists (your belief in God may be real, but so is my disbelief; therefore, it would be absurd for me to conclude that there exist two worlds, one with and one without God). But I almost certainly believe that your calling a work of art good means something true about your own experience of it—otherwise why would the disputing of tastes be generally frowned upon (except in English departments)? Clifford Geertz argues in a recent article, "Anti Anti-Relativism," that broad-minded comparativism ought to fight back when enemies of relativism strive to establish the primacy of rationality everywhere. And Ian Hacking in a fine 1982 piece—modestly entitled "Language Truth and Reason"—argues for an "anarcho-rationalism" that carves out crucial ground for another sort of anti-anti-relativism, one that casts doubts on our ability to know that the questions we ask about reality are the right ones. There exist, in other words, a wide range of ways that more or less strong kinds

of relativism can be ably defended against the most stringent advocate of general rationality.

But, as Edward Craig puts it in his *Routledge Encyclopedia of Philosophy* article, "Relativism has many varieties, some are very plausible, others verge on incoherence" (1:189). Central to the incoherence, argues Craig, is the status of the truth claims that relativists themselves make: are a relativist's statements meant to be a species of "truth as being itself true" or only "true by the standards of x"? If the former, where is their relativism? If the latter, why ought we take their claims as lodging any claim outside x? Any account of relativism that starts off without addressing the question of its own perspective on "truth-claims" runs into the same problems that dog Nietzschean perspectivalism: what makes your own claims undermining general claim-making generally credible? When Herbert praises the "militant principle, 'No Absolutes!'" that the "relativity movement" endorses, he seems to me to come close to endorsing as his own a position that is not simply "potentially incoheren[t]" but actually contradictory in its claim to have discovered the truth that there are no truths (35, 8, 26).

Herbert passionately supports a position that he admits flirts with incoherence, because "the discoveries modern relativity has produced in many scientific fields [...] flow from this intuitive revulsion from 'absolutism'—a revulsion on one level from its intellectual coarseness and ultimately, most profoundly, from its implicit and often explicit code of punitive and purifying violence" (26). Herbert's companion assertion about the true agents of "absolute truth" underscores the gravity of the war he is prepared to wage with anti-relativists: "The Nazi and Soviet campaigns against Einstein and modern physics are reminders that if the oft-alleged social evils proceeding from relativism are for the most part risible fantasies, the continuity between the cause of intellectual absolutism and that of violent political tyranny is easy to document" (26). I have argued that Herbert is making two distinct claims—one about science, the other about the efficacy of Victorian relativism in modern debate. At moments like these, the second claim too appears to founder because it depends on arguments in which radically different fields of thought/action are too closely connected.

I am almost tempted to try to make the opposite argument to Herbert's: that cultural relativism, rather than being anti-authoritarian in nature, lends itself well to the free exercise of violent power, since with no basis for establishing the truth of any claim, might does make right (nothing else can). However, I think I would fail in my effort to make that link between relativism and tyrannical government, for the same reason that Herbert cannot make the opposite case. No definitive connection between forms of cognition and forms of political action exists. That Herbert believes such a tie can be demonstrated leads him to ask several rhetorical questions like this one: "Is it possible in the real world of discourse to maintain a theory of 'absolute truth' that is unallied to motives of coercive authority and to the intended suppression of specific people and ideas? Does the bitter hostility to relativistic theory spring finally from anything but outrage at the idea that this theory denies one the right to impose one's thinking by compulsion upon others?" (64). Herbert clearly believes the answer is No, but I don't think he proves it.

The key notion here is that "absolute truth" gives one "the right to impose one's thinking as compulsion upon others." But when we accept that "two plus two equals four," we are compelled, as Kant argues, cognitively, by our own minds. If logical claims are at issue, agreement must proceed from one's own mind or not at all: Habermas labels this the "force-

less force" of a claim. Herbert rightly suggests that, when we consider, let us say, competing ethical systems, it may be difficult or impossible to apply some internally compelling cognitive principle to force agreement. One would thus be justified in refusing to acquiesce to another's *unconvincing* argument about morals. But we must distinguish between cases of attempted coercion and cases when assent is won immanently, by the logic of the argument. Without forceless force, we must harbor grave doubts about the truth-claims that seem to validate our own thoughts—but, then, we must also harbor doubts even about those grave doubts, and so on.

Herbert's desire to find a way to prove that a connection exists between belief in absolute truth and coercive force leads him to elide the differences between technology and science—a distinction that such earlier critics of Enlightenment thought as Theodor Adorno, for example, were very concerned to maintain. The potential slippage between technology and science is especially evident when Herbert wishes to extol admirable scientific thinking, such as Einstein's relativity, as part of a vibrant relativist tradition and excoriate other thought for stemming from or abetting less admirable ideologies. He imagines, for example, a debate between the best voices from his "relativity movement" and a hypothetical defender of the authoritarian tradition of anti-relativism:

one can imagine these writers [Pearson and other relativists] asking, for example, to what extent did and does admiration for the sheer scientific achievement of the building of an atomic bomb (the achievement habitually cited to refute those who seem to doubt the almost miraculous efficacy, and thus the proven "truth," of modern scientific method) allied to the deeply ingrained conception of science as the engine for the repression of prideful error, account for the failure of the West to stand appalled at the nuclear bombing of the civilian populations of Hiroshima and Nagasaki? (177)

It seems telling that Herbert—here offering Pearson's imagined viewpoint as a historical surrogate for his own views—supposes that proponents of modern scientific method would cite the atom bomb as the glorious exemplar of "truth" as they admire it. Such advocates are unlikely to argue that "efficacy" proves a proposition's truth—that's a utilitarian line. I imagine opponents of scientific relativism would be very unlikely to stress the atom bomb, because they would wish to dissociate scientific breakthrough from such a troubling sort of technological advance. The technology-minded proponent of the scientific method might cite the lunar landing, or, nowadays, the internet; but the advocate of science as a kind of cognitive truth, Herbert's real foe here, would be far more likely to cite the splitting of the atom, the Michelson-Morley experiments, or relativity theory itself.

My point is that Herbert makes his argument easier by supposing that his opponents accept what he propounds—science and technology conjoined. The debate about relativism turns on separating truth claims and actions. Can it be tyrannical for a logician to expound "the law of noncontradiction"? Herbert thinks so, as an index entry—"law of noncontradiction, confounded by Bain"—makes very clear (293). He claims that relativism properly applied can banish such necessary logical standpoints. He does so in part because he is angry enough about "authoritarian truth-claims" that accompany claims for "objective truth" that he refuses to separate out a truth-claim (here, the idea of nuclear fission) and the actions that certain people undertake as a result of that truth (the making and dropping of the atom bomb). By my lights, though (and here Herbert and I simply may dis-

agree, so that my review should be read with this bias in mind), atom bombs may be tyrannical, but the idea of atomic fission is not. If one is forced to accept the equations whereby the splitting is explained, that force comes not from authoritarians, but from the logic of the equations themselves.

But let there be an end to this. Surely, the length of this response to *Victorian Relativity* proves that Herbert is wildly successful in spurring into action both those who agree and those who disagree with the relativist claims launched more than two hundred years ago and relaunched here. Herbert applauds Victorian scientific literature for its power to “serve as the conduit for a challenge to reigning values” and “to startle us from ideological somnambulism even today” (xv). If *Victorian Relativity* receives the attention and respect it deserves, it cannot fail to spark a fruitful debate that will push those who distrust relativism’s axioms, or doubt its connections to relativity, to reexamine the grounds for that dislike or doubt. I hope it will serve as a wake-up call dispelling “ideological somnambulism” among Herbert’s allies and critics alike.

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