

The Pleasures of Method

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Henry M. Cowles, [The Scientific Method: An Evolution of Thinking from Darwin to Dewey](#) (2020).

Henry M. Cowles has written an absolutely brilliant book that traces the history of the idea of “the scientific method” from Darwin to Dewey. Although Cowles’ intended audience is historians of science, the book has important and tantalizing implications for those interested more generally in the twentieth-century modernist turn to method, process, procedure, and technique. This is a turn that American legal historians will recognize in the massive emphasis on procedure and process that marked twentieth-century American legal thought, beginning with the rise of the administrative state in the early twentieth century and reaching its apogee with the Legal Process School in the 1950s and 1960s.

The conventional account of the modernist turn to method runs as follows. Around 1900, thinkers in diverse realms of Euro-American intellectual life—ranging from law to literature, mathematics to music, physics to painting—became newly aware of the rickety scaffolding propping up their disciplines and endeavors. What were once deemed established truths, unassailable rationalities, given moralities, and transcendental aesthetic norms suddenly seemed spurious, the product of nothing but history, the tottering fabrications of fallible men. In the American legal context, this moment is exemplified in the scholarly writings, addresses, and judicial opinions of Oliver Wendell Holmes, Jr. The modernist moment was famously disorienting, simultaneously frightening and challenging, at once fraught with promise and uncertainty. Old moorings had come undone. How was one to make sense of the world? How was one to proceed?

Although responses varied widely depending upon discipline and national tradition, one broad important trend reverberated across diverse fields and formations. Thinkers increasingly turned *away* from a conception of knowledge as ends, truths, substances, and foundations and *towards* knowledge as tools, means, methods, procedures, processes, protocols, and techniques. This was true of the sciences, the principal focus of Cowles’ book. As he puts it, science went from being “something like knowledge” to becoming “a tool for thinking.” (P. 6.) But the trend extended far beyond the scope of Cowles’ study. A creature of the early twentieth century, scientific management theory, applied alike in government bureaucracies and corporations, placed ends firmly in the background as a knowledge of means, methods, and processes took center stage. Artists and writers foregrounded in their work their means of production—painterly technique or language itself—instead of the object those means had once served to represent. In the 1940s, articulating a development that was already decades-old when he was writing, the Legal Realist scholar Karl Llewellyn would argue that law was not so much “*what* courts have decided” as it was “*how* they go about deciding cases, and *how* they use the authorities *with* which they work, and how and why those authorities themselves came into existence,” in short, that law was primarily a method or way of doing things.¹

Philosophy was hardly immune to this sweeping re-orientation. Indeed, it played a central role in bringing it about. American philosophical pragmatism, the United States’ most celebrated homegrown philosophical tradition, insisted that ideas mattered principally insofar as they became means or tools and were put to work in the world. Early in his book, Cowles invokes John Dewey’s *How We Think* (1910), in which Dewey announced the five sequential steps of what came to be seen as the blueprint for “the scientific method,” beginning with a “felt difficulty,” moving on to the identification of a hypothesis, and ending with “observation and experiment leading to its acceptance or rejection,” in short, the testing of the tool/hypothesis in the world of facts. (P. 2.) If Dewey was a key figure in the articulation of “the scientific method”—and thus in the reorientation of modern science from substance to method—it is important to emphasize that Dewey’s shadow (and hence the shadow of “the scientific method” as he imagined it) fell over fields extending well beyond the sciences to law, politics, education, and even the arts.

In a series of chapters that offer brilliant, penetrating, and highly self-assured readings of the writings of nineteenth- and early twentieth-century Anglo-American philosophers, philosophers of science, and scientists, Cowles gives us a history of how we got to Dewey's *How We Think*. It is Cowles' origin story—if a concept as simple as that of an “origin story” can be applied to so sophisticated a book—that is of interest.

As it emerged from the eighteenth century, Cowles argues, British science was still tethered to—and continued uncritically to venerate—Baconian empiricism. As revealed in the writings of Herschell, Whewell, and others, however, British philosophers of science were beginning to insist on the importance of hypothesis as a way for the scientist to proceed. Scientists could not begin from a brute collection of facts; they needed the conceptual leap into the void that the hypothesis represented. Of course, once formulated, the hypothesis would have to make its way in the world and be tested against the facts. It would succeed or fail based on how it would fare.

What Cowles shows dazzlingly is how, through a set of complex back-and-forth journeys (hence: no simple origin story), the injection of hypothesis into the empiricist terrain of British science came to be mirrored in the Darwinian account of nature itself and *vice versa*. Even as British scientists were coming to accept the idea that the scientific method should consist of hypotheses tested against facts, the Darwinian organism came to be seen as itself a kind of hypothesis as it confronted its environment, either to flourish or perish therein. And if evolution was neither more nor less than “the method of nature,” as the Darwinian account came to be understood to be, would that not also necessarily be the way in which the human mind proceeded, as a continual hypothesizing of ideas and a trying out of those very ideas in the world? As Cowles proceeds, exploring contexts ranging from the study of animals to the ethnography of “savages” to psychologists' study of children, the link between Darwin and Dewey—a link of method—comes gradually into view. As exemplified in Dewey's 1910 articulation of “the scientific method,” pragmatism's “trial-and-error” approach to the world was, if one follows Cowles' argument, nothing other than the Darwinian “method of nature” itself.

The star of the show in Cowles' book is reflexivity. As philosophers and scientists thought harder and harder about the problem of knowledge, training their gaze relentlessly outward and inward, the lines between subject and object, mind and world, investigator and investigated, blurred and eventually vanished. Objects of inquiry became versions of the subjects performing the inquiry, even as those subjects rendered themselves objects. Cowles writes of his subjects' “ratcheting up the reflexivity of the mind sciences” (P. 142), one of many comparable characterizations in the book, but one gets the impression that “ratcheting up ... reflexivity” is as much Cowles' *own* intellectual commitment as it is that of his nineteenth-century subjects. The reader senses Cowles' enjoyment of his own *bravura* performance in talking about the *bravura* performances of his subjects. Here, too, then, investigator and investigated mirror one another, historian becoming archive and *vice versa*, reflexivity always leading to more of itself, although one is left wondering whether Cowles' nineteenth- and early-twentieth century subjects were as invested in the pleasures of reflexivity—and the pleasures of method—as he so evidently is.

Cowles is not the first scholar to have explored the connections between evolution and pragmatism. Many have recognized that Darwinian evolution, together with pragmatism, played a crucial role in destabilizing the foundations of the Euro-American disciplines around 1900. But what Cowles does that is arresting, in my view, is to show to spectacular effect how the Darwinian “method of nature” underlies (even as it mirrors) the pragmatist method. Just as nature tested its hypotheses in the world, the Deweyan pragmatist (himself a part of nature) would try out his ideas in the real contexts in which he or she lived and worked. Cowles thus reveals that the pragmatist method—with its (to me) maddening Teflon-like resistance to critique and its bland and ubiquitous “but what else could there possibly be?” correctness—itself has a concrete historical grounding in the Darwinian understanding of nature and the related methodological crises of nineteenth-century Anglo-American science. Far from being a response to the modernist vanishing of foundations, Cowles shows, the pragmatist method remained anchored in an understanding of nature as foundation, where the foundation was, of course, method. In *The Promise of Pragmatism* (1994), the intellectual historian John Patrick Diggins articulated the modernist/pragmatist focus on method as follows: “Without access to the objectively real, the philosopher settles for the processes of knowing instead of the thing known.”² But Cowles seems to suggest that, far from “settling for the processes of knowing instead of the thing known,” a tragic maneuver for a

newly disenchanted world, the pragmatist philosopher might instead have been instantiating in his thinking something like “the objectively real,” namely, nature’s method. In other words, Cowles’ leaves us with the conundrum of puzzling through the joining of the anti-foundational modernist turn to method, on the one hand, with pragmatism’s embrace of nature’s method as foundation, on the other, forcing together yet again that which we take to be opposites, anti-foundationalism and foundationalism.

Cowles does not pursue, except perhaps obliquely, the conventional story of the modernist turn to method in law and elsewhere with which I began this review. But his story about the connections between the Darwinist “method of nature” and the pragmatist/modernist method must compel some rethinking of the conventional story, including the current narrativization of the development of twentieth-century American legal thought. Precisely what *kind* of rethinking is another matter. Towards the end of the book, Cowles recognizes that the larger turn to method in the twentieth-century would repeatedly exceed or overshoot its imagined referent in the Darwinian “method of nature.” After all, brute nature did not ordinarily become “aware” of its history with a view to changing it; its methods of proceeding were always realized in and by its results. By contrast, the early-twentieth century modernist/pragmatist, aware that history had left his world devoid of foundations, turned to method without any assurance that the method would be confirmed by its results. The goal was frequently to transform the existing world in one way or another, with results that ranged from the benign to the disastrous. At the same time, the link between the Darwinian “method of nature” and the diverse methods that were adopted in different disciplines and endeavors (for example, the turn to procedure in law) is far from obvious. None of this is Cowles’ problem. He has written a wonderfully smart book that complicates our understanding of modernism by giving us a unique account of its past.³

1. Karl Llewellyn, *The Crafts of Law Re-Valued* (1942) in Karl Llewellyn, **Jurisprudence** 318 (1962) (emphasis in original).
2. John Patrick Diggins, **The Promise of Pragmatism: Modernism and the Crisis of Knowledge and Authority** 48 (1994).
3. I wish to thank Anne Kornhauser for comments on this review.

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