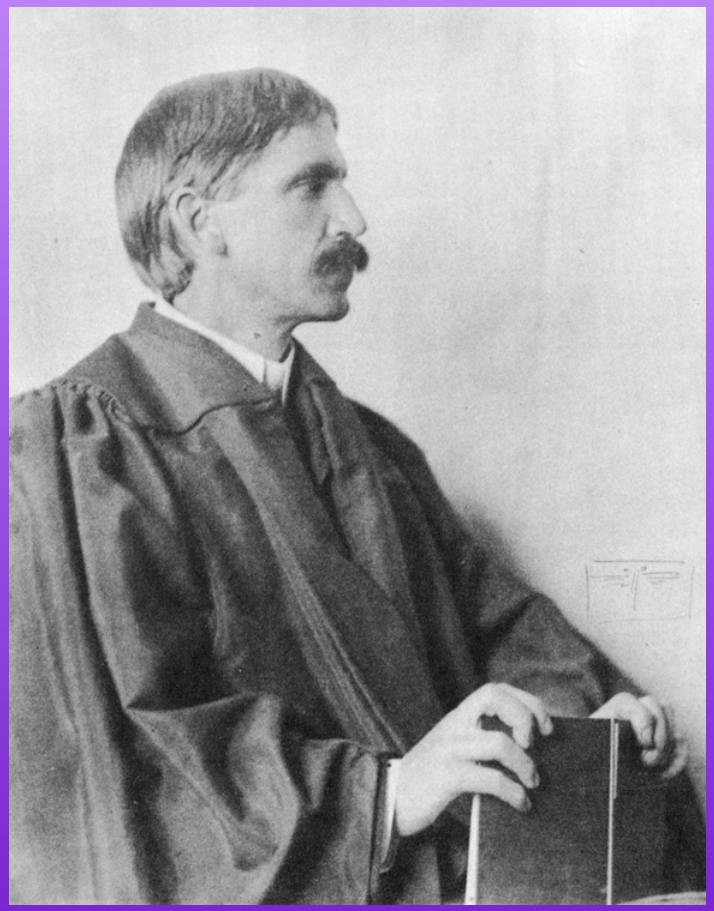
Progressivism, Pragmatism, and Science: John Dewey's Theory of Science

Don Howard
Department of Philosophy and
Program in History and Philosophy of Science
University of Notre Dame

PSA 2008
Pittsburgh, PA
November 6, 2008

A case of collective amnesia

- Prior to World War II, Dewey was, perhaps, the most prominent philosopher of science in North America
- That fact is now almost totally forgotten
- No major study of Dewey's theory of science in over half a century
- Even the better secondary literature on Dewey – what little there is – almost totally ignores this once central part of his larger philosophical project
- Why?



Basic biography

- Born 1859, Burlington, VT
- Educated at

  University of Vermont (A.B.,1879)
  Johns Hopkins (Ph.D., 1884)

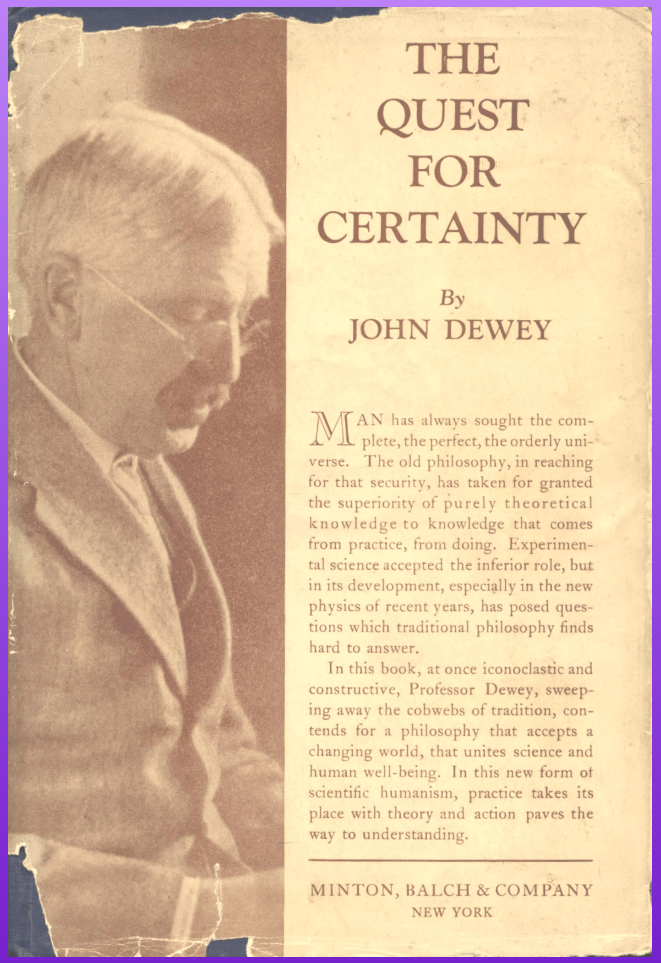
- Taught at

  University of Michigan (1884-1894)
  University of Chicago (1894-1904)
  Columbia University (1904-1952)

- Died 1952, New York, NY

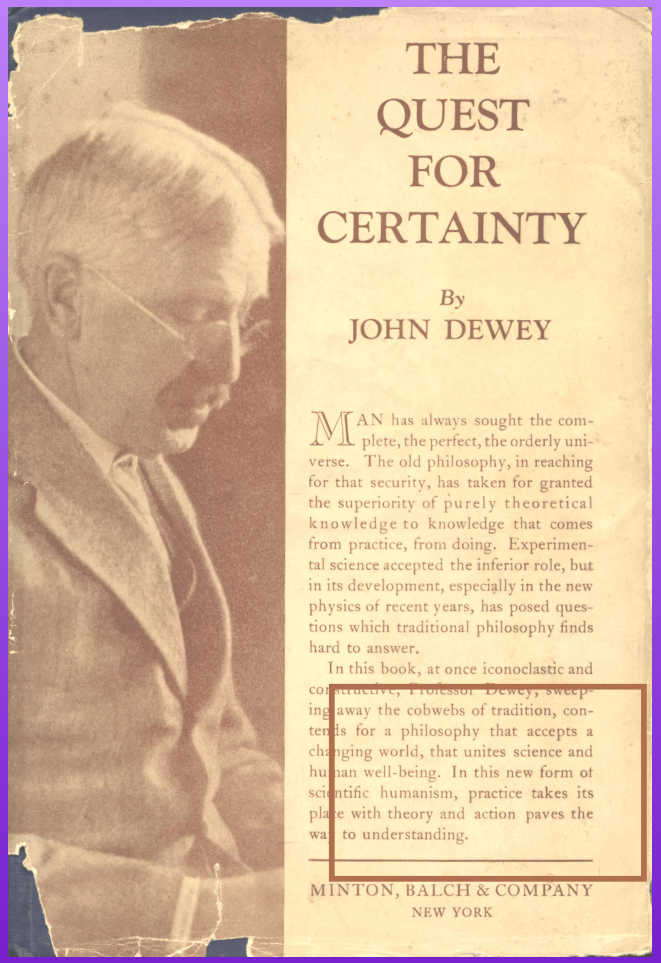
An outline of Dewey's philosophical project

- "Adverbial" theory of knowledge and experience; experience or experiencing as action
- Evolutionary naturalism
- Integral role of valuation in action, hence also in experience
- Science as organized experience
- Objectivity as intersubjectivity
- Social embedding of science
- Antifoundationalism without relativism



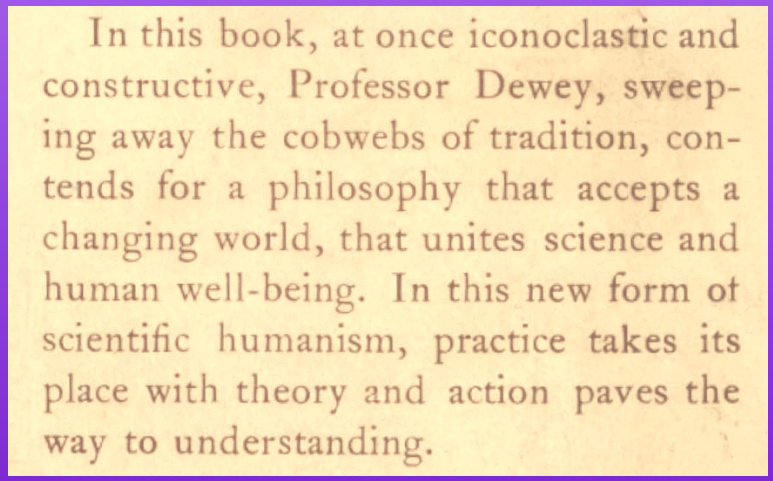
An outline of Dewey's philosophical project

- "Adverbial" theory of knowledge and experience; experience or experiencing as action
- Evolutionary naturalism
- Integral role of valuation in action, hence also in experience
- Science as organized experience
- Objectivity as intersubjectivity
- Social embedding of science
- Antifoundationalism without relativism



An outline of Dewey's philosophical project

- "Adverbial" theory of knowledge and experience; experience or experiencing as action
- Evolutionary naturalism
- Integral role of valuation in action, hence also in experience
- Science as organized experience
- Objectivity as intersubjectivity
- Social embedding of science
- Antifoundationalism without relativism



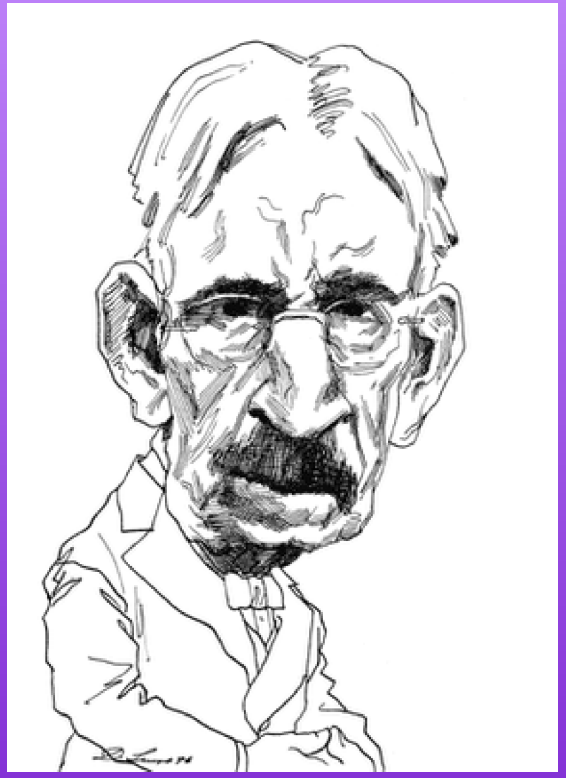
In this book, at once iconoclastic and constructive, Professor Dewey, sweeping away the cobwebs of tradition, contends for a philosophy that accepts a changing world, that unites science and human well-being. In this new form of scientific humanism, practice takes its place with theory and action paves the way to understanding.

Dewey on valuing in cognition

- All valuation is something intrinsic to experiencing and the nature of which that experiencing is part, inasmuch as the ongoing selection of ends is part of experiencing as action.

- Science, as organized intelligence, is thus an instrument both for relating means to ends and for selecting those ends in the first place.

- Moreover, valuation as the selection of ends is as much an integral part of the doing of science as it is of any action.

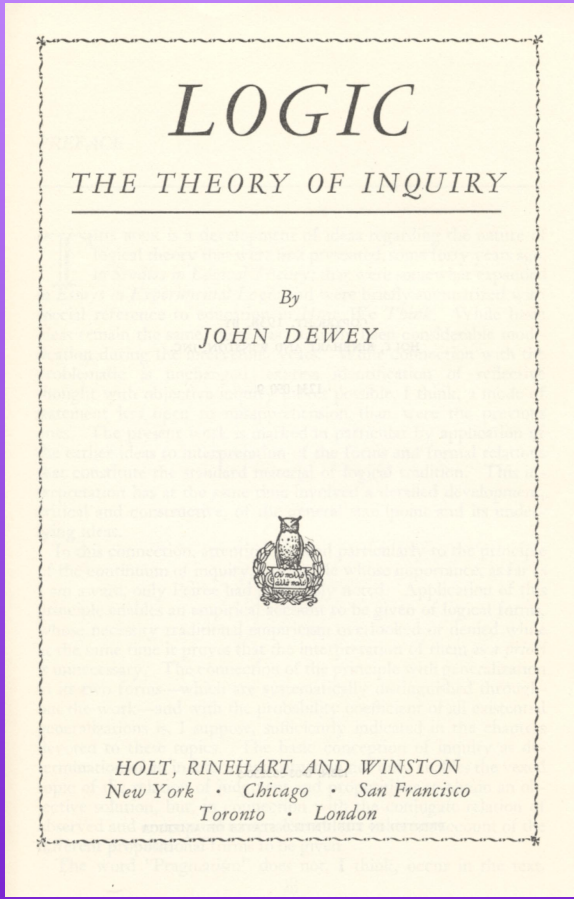


Dewey on valuing in cognition

- One of many consequences of this integration of value in experience as part of nature is that there can be no distinction between judgments of fact and judgments of value:

  "Evaluations as judgments of practice are not a particular kind of judgment in the sense that they can be put over against other kinds, but are an inherent phase of judgment itself."

  (John Dewey. *Logic: The Theory of Inquiry*. New York: Holt, Rinehart, and Winston, 1938.)

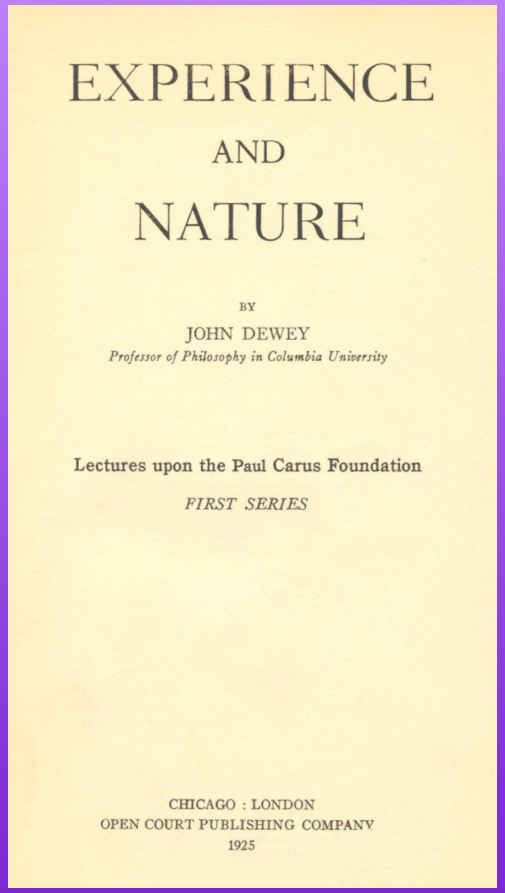


Dewey on valuing in cognition

- For all these reasons, science, as organized intelligence in experience,

  "is inherently an instrument of critically determining what is good and bad in the way of acceptance and rejection."

  (John Dewey. *Experience and Nature*. Chicago: Open Court, 1925.)


EXPERIENCE
AND
NATURE

BY
JOHN DEWEY
Professor of Philosophy in Columbia University

Lectures upon the Paul Carus Foundation
FIRST SERIES

CHICAGO : LONDON
OPEN COURT PUBLISHING COMPANY
1925

Dewey on the social embedding of science and its philosophy

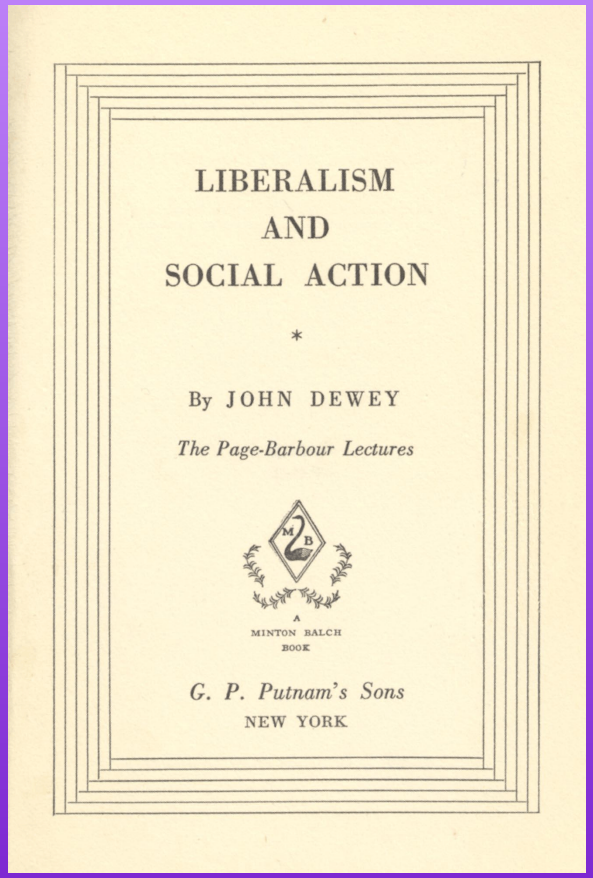
- "Social . . . organization enters into the formation of human experience," because ideas are not the private possessions of individual knowers but live only through the expression they find in action, including communicative action, which is inherently social.

  (John Dewey. *Reconstruction in Philosophy*. New York: Henry Holt and Co., 1920.)

Dewey on the social embedding of science and its philosophy

John Dewey. *Liberalism and Social Action*. New York: G. P. Putnam's Sons, 1935.

"The conception of intelligence as something that arose from the association of isolated elements, sensations and feelings, left no room for far-reaching experiments in construction of a new social order. It was definitely hostile to everything like collective social planning. . . . The crisis of liberalism is connected with failure to develop and lay hold of an adequate conception of intelligence integrated with social movements and a factor in giving them direction."


LIBERALISM
AND
SOCIAL ACTION

*

By JOHN DEWEY

The Page-Barbour Lectures

A
MINTON BALCH
BOOK

G. P. Putnam's Sons
NEW YORK

Dewey on the social embedding of science and its philosophy

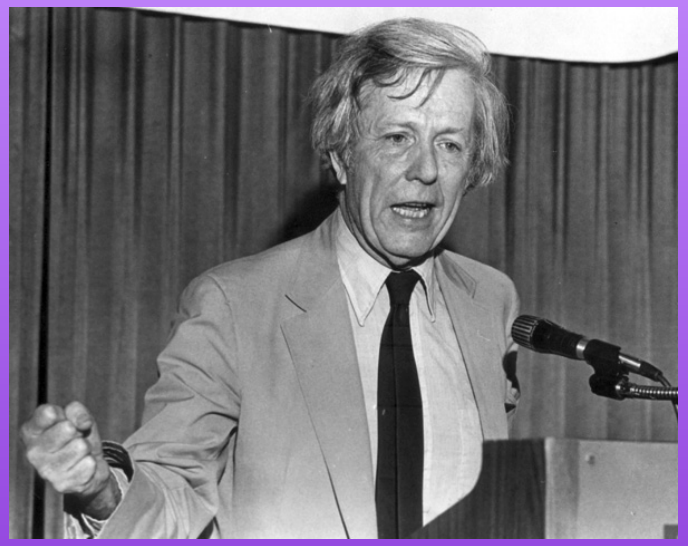
John Dewey. *Liberalism and Social Action*. New York: G. P. Putnam's Sons, 1935.

"Social and historical inquiry is in fact a part of the social process itself, not something outside of it. The consequence of not perceiving this fact was that the conclusions of the social sciences were not made (and still are not made in any large measure) integral members of a program of social action. . . .

"The application of science, to a considerable degree, even its own growth, has been conditioned by the system to which the name of capitalism is given, a rough designation of a complex of political and legal arrangements centering around a particular mode of economic relations. Because of the conditioning of science and technology by this setting, the second and humanly most important part of Bacon's prediction has so far largely missed realization. The conquest of natural energies has not accrued to the betterment of the common human estate in anything like the degree he anticipated."

Dewey's brand of socialism

Democratic Socialism in the tradition of Eugene V. Debs, Norman Thomas, and Michael Harrington



Dewey's brand of socialism

Dewey and Trotsky

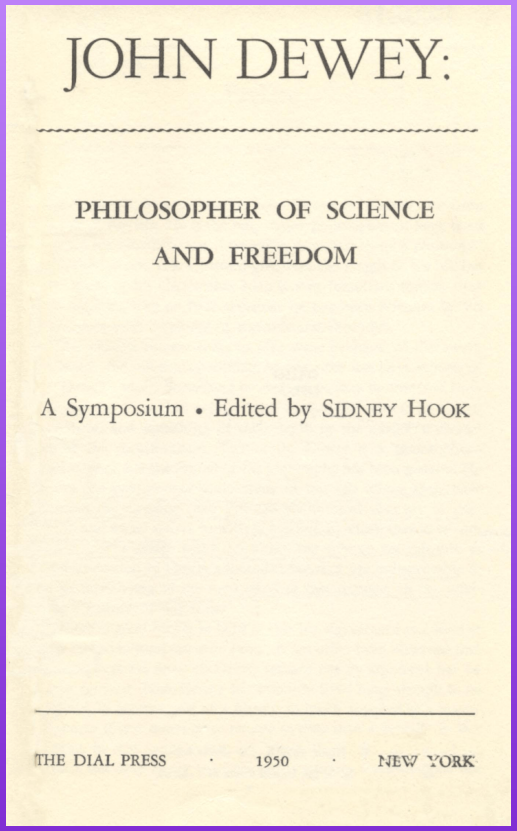
Dewey Commission, April 1937,
Coyoacan, Mexico

The Dewey Commission, 1937 (by Dorothy Eisner)

See: Leon Trotsky, John Dewey, and George Novack. *Their Morals and Ours*. New York: Pathfinder Books, 1973.

The critical reaction to Dewey's theory of science

- Roy Wood Sellars
- Morris Raphael Cohen
- Hans Reichenbach
- Ernest Nagel
- Sydney Hook



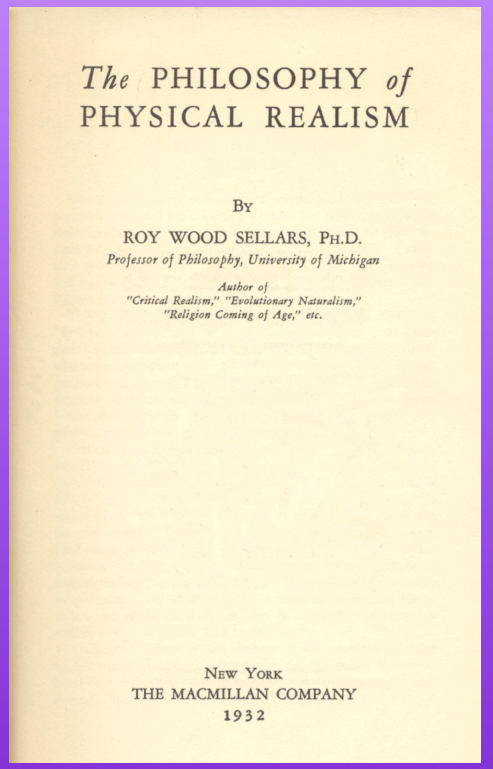
The critical reaction to Dewey's theory of science

Roy Wood Sellars. *The Philosophy of Physical Realism*. New York: McMillian, 1932.

"It is with Dewey's dismissal of theory of knowledge that I am here concerned. That it has had a bad influence on American philosophy I am convinced. . . . Why is he so anxious to eviscerate philosophy and to leave it neither theory of knowledge nor cosmology?

"I think I can tell. Professor Dewey is an experimentalist, a half-reformed idealist. He rejects a frank physical realism. . . .

"Dewey has never given quarter and, I presume, desires none. I feel justified, then, in saying that his influence on American philosophy has not been altogether healthy. His very scepticism with respect to theory of knowledge and his neglect of cosmology have been destructive of the morale of the younger generation."


The PHILOSOPHY *of* PHYSICAL REALISM

By

ROY WOOD SELLARS, PH.D.

Professor of Philosophy, University of Michigan

Author of "Critical Realism," "Evolutionary Naturalism," "Religion Coming of Age," etc.

NEW YORK
THE MACMILLAN COMPANY
1932

The critical reaction to Dewey's theory of science

Morris Raphael Cohen. *Reason and Nature: An Essay on the Meaning of Scientific Method*. New York: Harcourt, Brace, and Company, 1931.

"It was Spencer who first used the argument that as thought has arisen in the biologic struggle for existence, it must serve a useful biologic purpose. Despite the fact that this argument has been accepted by Mach, Avenarius, Simmel, James, Dewey, and others, we ought to have no hesitation in denying it any force or even relevance in any discussion as to the logical nature of truth."

See:

David A. Hollinger. *Morris R. Cohen and the Scientific Ideal*. Cambridge, MA and London: M.I.T. Press, 1975.

The critical reaction to Dewey's theory of science

Hans Reichenbach. "Dewey's Theory of Science." In *The Philosophy of John Dewey*. Paul Arthur Schilpp, ed. The Library of Living Philosophers, vol. 1. Evanston and Chicago: Northwestern University, 1939, 159-192.

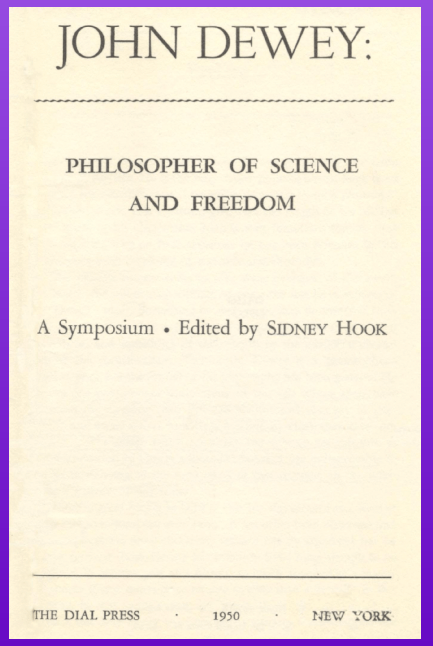
"In restoring the world of everyday life as the basis of knowledge, Dewey does not only want to establish knowledge in a better and more solid form. What he intends, and perhaps to a greater extent, is establishing the sphere of values, of human desires and aims, on the same basis and in an analogous form as the system of knowledge. If concrete things as immediately experienced are the truly 'real' world, if the scientific thing is nothing but an auxiliary logical construction for better handling of the 'real' things, then ethical and esthetical valuations are 'real' properties of things as well as are the purely cognitive properties, and it is erroneous to separate valuations as subjective from cognitive properties as objective. In persuasive language and in ever renewed form Dewey insists upon this outcome of his theory, the establishment of which seems to be the motive force in the work of this eminently practical mind, 'practical' to be taken in both its implications as 'moral' and 'directed toward action.'"

The critical reaction to Dewey's theory of science

Ernest Nagel. "Dewey's Theory of Natural Science." In Sidney Hook, ed. *John Dewey: Philosopher of Science and Freedom*. New York: The Dial Press, 1950, 231-248.

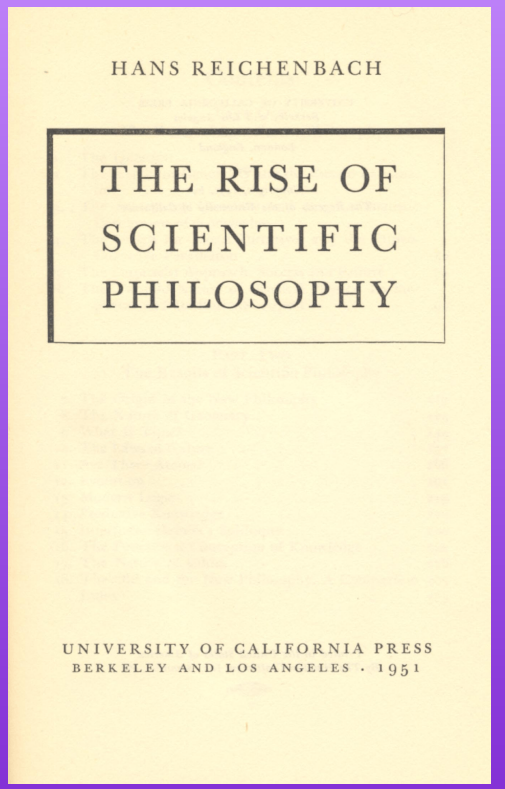
"The great William Harvey is reported to have said of Francis Bacon that he wrote about science like a Lord Chancellor. Of Dewey it can be said with equal justice that he writes about natural science like a philosopher, whose understanding of it, however informed, is derived from second-hand sources. . . . It is indeed curious that a thinker who has devoted so much effort to clarifying the import of science as has Dewey, should exhibit such a singular unconcern for the detailed articulation of physical theory. . . .

"His central views are in close agreement with conceptions that have been developed during the past half-century by eminent physicists concerned with the methodology of their discipline. Nevertheless, though he is obviously familiar with many of these analyses, he does not appear to have been strongly influenced by them, and he cites them only rarely. But what is more to the point, he does not use these specialized and expert studies to the best advantage in his own discussions."



The critical reaction to Dewey's theory of science

Hans Reichenbach. *The Rise of Scientific Philosophy*. Berkeley and Los Angeles: University of California Press, 1951.



"I should like to express the hope that my formulation will open the path to an understanding with pragmatist philosophers, who maintain the existence of a scientific ethics. The difference between their formulation and mine is merely verbal when the term 'scientific ethics' is meant to denote an ethics that uses scientific method for the establishment of implications between ends and means. Perhaps that is all that pragmatists want to say; and yet I should be very glad if I could find, in the writings of the pragmatists, a clear statement in which all attempts at validating primary goals by cognitive means are openly denounced as unscientific. The pragmatist speaks of human needs; but that men have needs does not prove that needs are good. . . .

"A scientific philosophy cannot supply moral guidance; that is one of its results and cannot be held against it. You want the truth, and nothing but the truth? Then do not ask the philosopher for moral directives. Those philosophers who are willing to derive moral directives from their philosophies can only offer you a sham proof. There is no use in asking the impossible.

The answer to the quest for moral directives is therefore the same as the answer to the quest for certainty: both are demands for unattainable aims.

Dewey and Logical Empiricism

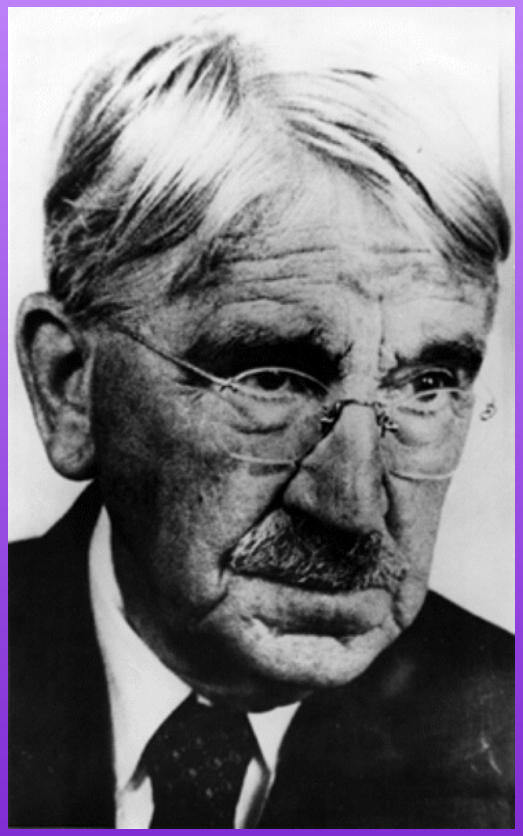
John Dewey. "Unity of Science as a Social Movement." In Otto Neurath, et. al. "Encyclopedia and Unified Science." *International Encyclopedia of Unified Science*, vol. 1, no. 1. Chicago: University of Chicago Press, 1938, 29-38.

John Dewey. "Theory of Valuation." *International Encyclopedia of Unified Science*, vol. 2, no. 4. Chicago: University of Chicago Press, 1939.

See: George Reisch. *How the Cold War Transformed Philosophy of Science: To the Icy Slopes of Logic*. Cambridge: Cambridge University Press, 2005.

A lost opportunity

- A science-friendly anti-foundationalism.
- Socially embedded science.
- A central role for valuation in science.
- Science and its philosophy as forces for progressive social change.



See:

Don Howard. "Better Red than Dead – Putting an End to the Social Irrelevance of Postwar Philosophy of Science." *Science and Education*. (Forthcoming.)

Don Howard. "Two Left Turns Make a Right: On the Curious Political Career of North American Philosophy of Science at Mid-century." In *Logical Empiricism in North America*. Alan Richardson and Gary Hardcastle, eds. Mnnneapolis: University of Minnesota Press, 2003, 25-93.