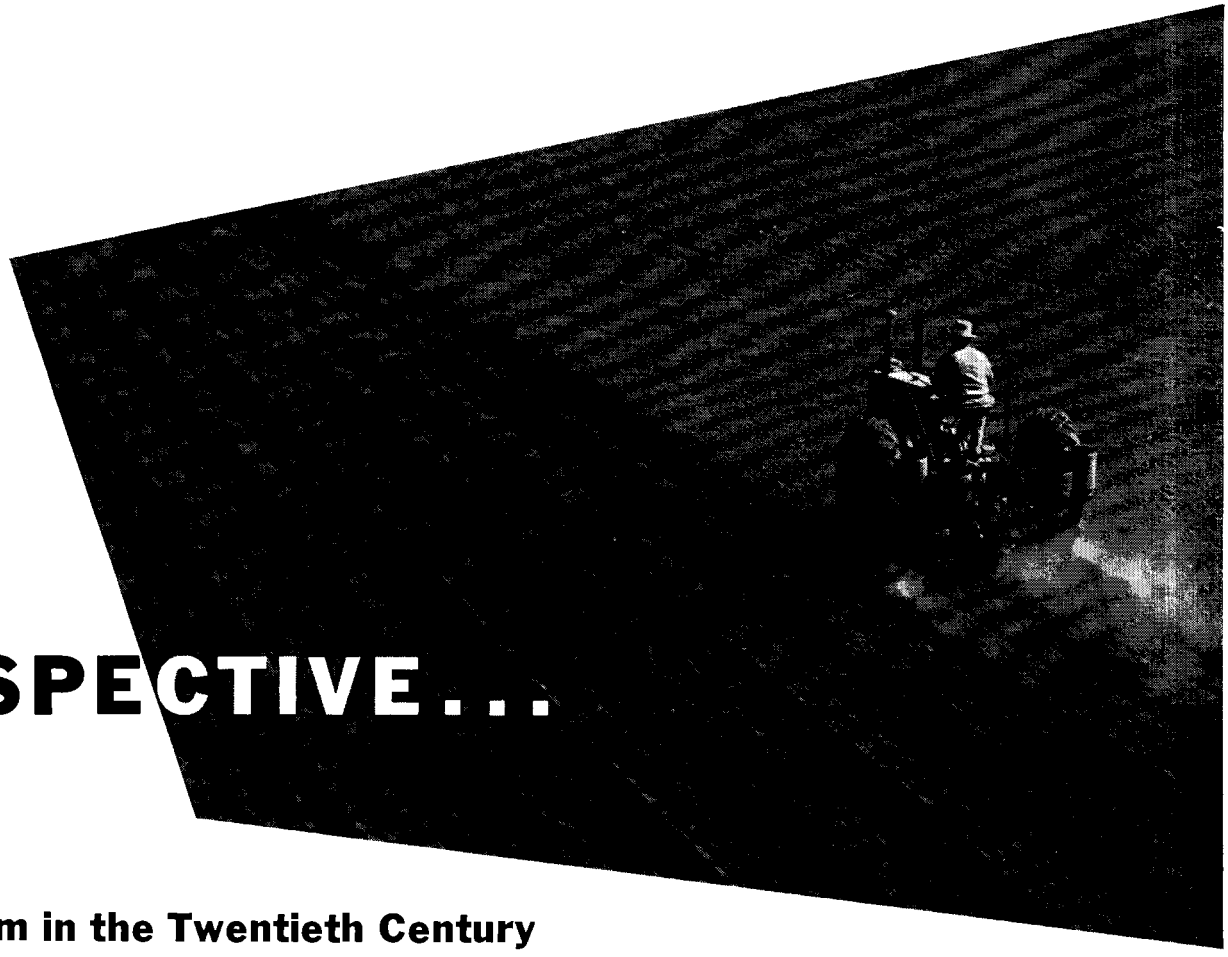

PERSPECTIVE...

Pragmatism in the Twentieth Century

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UNFORTUNATELY, NEITHER SCIENCE NOR HUMAN NATURE is as simple as we might wish it. The scientist suddenly finds himself questioning—not the validity of his profession—but, in a much larger sense, its goals. The creative researcher is learning that government, social, and economic relationships are not, as he had naively believed, systems of rational order, but a conflicting, tension-filled balancing of forces—in which the products of his creation can have tremendous consequences. Pragmatism may have disastrous consequences, unless it is fitted into a larger, more human and humane ethical framework.

The urge to creativeness motivated by social consciousness, therefore, may be suffering subconsciously from the confusion of our times. As firmly as Newton's followers believed nature to be uniform and invariable, scientists believed that human nature was uniform and unvariable: ordered by reason, controlled by intellect. It remained for the psychologists and creative thinkers in other fields to show that man is anything but simple, logical and ordered by reason. The concept of man's dependable rationality collapsed within the same quarter-century in which Newton's simple concept of matter was proved invalid. Scientists have become acutely conscious that in their "scientific progress" they are creating for the free use of human beings such humanely questionable objects as nuclear weapons and guided missiles—and in less fearsome fields, pills for the mind, antibiotics, hormones, and jet travel. Already these products of the test tube have had an incalculable impact upon our habits, customs, and traditions . . . And these revolutionary innovations, wonderful in themselves, are being accepted upon the narrow pragmatic premise: "Are they useful?—Then they are good!"

We have become most arbitrary in our definition of what is original or creative. We have identified creative with "action" and "application." With this pragmatic approach, we have come to believe that all our thoughts and study must have a utilitarian function—that all our ideas must be applied practically. On this basis, we have tended to evaluate creativity in science. In doing so, our pragmatism runs counter to both observed and subjective evidence. We have seen again and again how obscure scientific truths of no practical value at the time of their discovery have become keystones of practical application. Paradoxically, this pragmatic habit of thinking is rampant at a time when the government, the military, and industry are crying for more fundamental research, more discoveries in pure science.

Imagination, creative thinking, thrives best in an atmosphere of freedom. But industry today can only justify pure research to its stockholders on the basis of ultimate practicality, and Government can subsidize pure research with taxpayers' money only if it contributes to national defense. Both industry and government recognize these pragmatic deterrents to the complete freedom of thought which creative scientists require . . . but until investors and taxpayers understand and appreciate these intangible, but profound values in science—the dilemma will remain unsolved.

(Excerpts from the eighth annual Arthur Dehon Little Memorial Lecture at Massachusetts Institute of Technology, April 12, 1955)