

JOHN DEWEY
ON EDUCATION

Selected Writings

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excuse is no longer available. We now know the enemy; it is out in the open. Unless the schools of the world can engage in a common effort to rebuild the spirit of common understanding, of mutual sympathy and goodwill among all peoples and races, to exercise the demon of prejudice, isolation and hatred, the schools themselves are likely to be submerged by the general return to barbarism, which is the sure outcome of present tendencies if they go on unchecked by the forces which education alone can evoke and fortify.

THE RELATION OF SCIENCE AND PHILOSOPHY AS THE BASIS OF EDUCATION *

Empirical and experimental philosophy has no quarrel with science, either in itself or in its application to education. On the contrary, scientific conclusions and methods are the chief ally of an empirical philosophy of education. For according to empirical philosophy, science provides the only means we have for learning about man and the world in which he lives. Some have thought that this fact makes philosophy unnecessary. They have supposed that the admission that science is supreme in the field of knowledge covers the whole ground of human experience. The elimination does rule out *one* kind of philosophy, namely, that which held that philosophy is a higher form of knowledge than the scientific kind, one which furnishes knowledge of ultimate higher reality. But it does not follow from the elimination of this particular type of philosophy that philosophy itself must go.

It would follow if man were simply and only a knowing being. But he is not. He is also an acting being, a creature with desires, hopes, fears, purposes and habits. To the aver-

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age person knowledge itself is of importance because of its bearing upon what he needs to do and to make. It helps him in clarifying his wants, in constructing his ends and in finding means for realizing them. There exist, in other words, values as well as known facts and principles, and philosophy is concerned primarily with values—with the ends for the sake of which man acts. Given the most extensive and accurate system of knowledge, and man is still faced with the question of what he is going to do about it and what he is going to do with the knowledge in his possession.

In this matter of the connection of what is known with values, science is an ally of an empirical philosophy against absolute philosophies which pretend that fixed and eternal truths are known by means of organs and methods that are independent of science. The objection to this position is not merely theoretical. The practical objections to it are that it strengthens appeal to authority and promotes controversies which cannot be settled by the use of the methods of inquiry and proof that have been worked out in the sciences. The only remaining alternative is the use of coercion and force, either openly or covertly through falling back on customs and institutions as they happen to exist. There is no great danger that the present-day revival in some quarters of Greek and medieval philosophies of eternal first principles will make much headway as a theoretical philosophy. There is always danger that such philosophies will have practical influence in reinforcing established social authority that is exercised in behalf of maintenance of the *status quo*. Against this danger, an experimental philosophy stands in firm alliance with the methods by which the natural sciences arrive at warranted truths.

The philosophy of education is not a poor relation of general philosophy even though it is often so treated even by philosophers. It is ultimately the most significant phase of philosophy. For it is through the processes of education that knowledge is obtained, while these educational processes do not terminate in mere acquisition of knowledge and related forms of skill. They attempt to integrate the knowledge gained into enduring dispositions and attitudes. It is not

too much to say that education is *the* outstanding means by which union of knowledge and the values that actually work in actual conduct is brought about. The difference between educational practices that are influenced by a well-thought-out philosophy, and practices that are not so influenced is that between education conducted with some clear idea of the ends in the way of ruling attitudes of desire and purpose that are to be created, and an education that is conducted blindly, under the control of customs and traditions that have not been examined or in response to immediate social pressures. This difference does not come about because of any inherent sacredness in what is called philosophy, but because any effort to clarify the ends to be attained is, as far as it goes, philosophical.

The need for such systematic clarification is especially urgent at the present time. Applications of natural science have made an enormous difference in human relations. They have revolutionized the means of production and distribution of commodities and services. They have effected an equally great change in communication and all the means for influencing the public opinion upon which political action depends. These applications decide, more than any other force or set of forces, the conditions under which human beings live together and under which they act, enjoy and suffer. Moreover, they have produced communities that are in a state of rapid change. Wherever the effect of the applications of science has been felt, human relations have ceased to be static. Old forms have been invaded and often undermined, in the family, in politics and even in moral and religious habits as well as in the narrower field of economic arrangements. Almost all current social problems have their source here. Finally, ends and values that were formed in the pre-scientific period and the institutions of great power that were formed in the same period retain their influence. Human life, both individually and collectively, is disturbed, confused and conflicting.

Either the instrumentalities of education will ignore this state of affairs and the schools will go their own way, confining themselves for the most part to providing standardized

knowledge and forms of skill as ends in themselves, modified only by concessions to temporary social pressures, or they will face the question of the relation of school-education to the needs and possibilities of the social situation. If the latter problem is faced, then there arise problems of the re-adaptation of materials of the curriculum, methods of instruction and the social organization of the school. A philosophy of education can not settle once for all how these problems shall be resolved. But it can enforce perception of the nature of these problems, and can give suggestions of value as to the only ways in which they can satisfactorily be dealt with. Administrators and teachers who are imbued with the ideas can test and develop them in their actual work so that, through union of theory and practice, the philosophy of education will be a living, growing thing.

I come back, then, to the question of the alliance of empirical pragmatic philosophy with science against both a philosophy of truths and principles that are alleged to be superior to any that can be ascertained by empirical methods of science, and also against dogmatic authority, custom, routine and the pressure of immediate circumstances. Science used in the educational field can ascertain the actual facts, and can generalize them on the basis of relations of cause and effect. It can not itself settle the value of the consequences that result from even the best use of more economical and effective methods as causes of effects produced. The consequences have to be evaluated in the light of what is known about social problems, evils and needs. But without the knowledge of actual conditions and of relations of cause and effect, any values that are set up as ends are bare ideals in the sense in which "ideal" means utopian, without means for its realization.

I shall mention two or three matters in which the need for cooperation between philosophy and science is especially intimate. Since scientific method depends upon first-hand experimentally controlled experiences, any philosophic application of the scientific point of view will emphasize the need of such experiences in the school, as over against mere acquisition of ready-made information that is supplied in isolation

from the students' own experience. So far, it will be in line with what is called the "progressive" movement in education. But it will be an influence in counteracting any tendencies that may exist in progressive education to slur the importance of continuity in the experiences that are had and the importance of organization. Unless the science of education on its own ground and behalf emphasizes *subject-matters* which contain within themselves the promise and power of continuous growth in the direction of organization, it is false to its own position as scientific. In cooperation with a philosophy of education, it can lend invaluable aid in seeing to it that the chosen subject-matters are also such that they progressively develop toward formation of attitudes of understanding the world in which students and teachers live and towards forming the attitudes of purpose, desire and action which will make pupils effective in dealing with social conditions.

Another point of common interest concerns the place in the schools of the sciences, especially the place of the habits which form scientific attitude and method. The sciences had to battle against entrenched foes to obtain recognition in the curriculum. In a formal sense, the battle has been won, but not yet in a substantial sense. For scientific subject-matter is still more or less segregated as a special body of facts and truths. The full victory will not be won until every subject and lesson is taught in connection with its bearing upon creation and growth of the kind of power of observation, inquiry, reflection and testing that are the heart of scientific intelligence. Experimental philosophy is at one with the genuine spirit of a scientific attitude in the endeavor to obtain for scientific method this central place in education.

Finally, the science and philosophy of education can and should work together in overcoming the split between knowledge and action, between theory and practice, which now affects both education and society so seriously and harmfully. Indeed, it is not too much to say that institution of a happy marriage between theory and practice is in the end the chief meaning of a science and a philosophy of education that work together for common ends.