

Philosophy and the Curriculum*

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Long conceived as primarily a professional subject, the philosophy of education has in recent years been developing closer ties with general philosophy. The latter, meanwhile, has grown increasingly aware of the significance of education as an area of reflection and inquiry. This *rapprochement* has created new opportunities but also new problems: how, fundamentally, to bring philosophical thought to bear significantly on educational practice? Many of us have for a long time been critical of the old gulf between general philosophy and philosophy of education; we have also attacked the inspirational role of the latter in teacher training and its presentation in stale typological categories that could only seem artificial in the context of the general development of our subject. Yet the old way must be conceded to have had its advantages. Though cut off from the philosophical mainstream, it was at least acknowledged on all sides as having a legitimate place in teacher training. Though oversimplified and often naive in conception, it at least addressed issues recognizable to the practitioner. Though frequently artificial in structure and treatment, it at least provided an identifiable traditional framework for course development by those assigned to teach it.

What have we, the critics, proposed to put in its place? We have urged a desegregation process, a closer connection between general and educational philosophy, in the interests of an enrichment of the former and a sounder and more sophisticated development of the latter. These motivations were, and I believe, continue to be, worthwhile. They provide challenging options for beneficial intellectual innovation in a variety of directions. Yet the very diversity of possibilities has created a diffuseness of purpose, a hesitancy or ambivalence as to the roads to be taken. The departure from tradition has exacted the usual penalty of unsettled directions, amorphous and confused strivings, threatening freedom. Moreover, in bringing educational philosophy nearer the condition of general philosophy, the desegregation process has produced a new remoteness by comparison with the older tradition. Attention has, naturally, tended to focus increasingly on issues of general interest, and the largely analytical cast of contemporary philosophy has, moreover, invited an increasingly detailed and theoretical development of issues in place of a largely practi-

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cal orientation. With the best will in the world, educational philosophers have been drawn into the delights of the maze, and the road back has seemed harder and harder to find. Without a clear channel of address to questions of the practitioner, the role of educational philosophy in teacher training has become more obscure.

No one supposes, to be sure, that the philosopher's task is practical engineering or applied science. And it should certainly be insisted that the quest for philosophical insight is generally long and circuitous, ranging far beyond local arrangements and predicaments. Yet the *linkage* of philosophical and practical concerns must nevertheless be maintained; the *continuity* of theoretical understanding and the questions of practice must still be affirmed. Even the critics aimed, after all, at a desegregation of fields, and desegregation is not achieved by swallowing one field whole. The challenge is to create a genuine communication between the methods and ideas of current philosophical work and the concerns and categories of learning and schooling. The aim is, to be sure, philosophical understanding, at the *level* achievable in contemporary inquiry generally, but the *object* of such understanding remains the educational process.

Nor should it be supposed that the current difficulties of *rapprochement* that we have been describing could somehow have been avoided by a formula, that their very existence therefore testifies to human error or blindness. On the contrary, it seems to me that such a *rapprochement* between fields is a genuinely open affair, in which the range of potentialities cannot possibly be foreseen and in which a period of exploration and experimentation is rather to be anticipated. The old barriers were, after all, limiting – they channeled intellectual effort into a relatively small set of fixed directions. Like social segregation, they provided a structured system hampering the fullest communication between separated segments. Elimination of such hampering conditions does not, in itself, provide new and richer channels: it merely sets the stage for their discovery or invention. Such discovery and invention are not automatic products of some magical routine. They depend upon exploration of objective possibilities in an experimental frame of mind. There is risk in such experimentation and there are no guaranteed successes. But there is also no turning back to the false security of limited perspectives. The opportunities need to be tried, the many pathways explored, in a pluralistic and scientific spirit. If there is current unsettlement, there is also the promise of new ideas and new understanding to be gained. To bring the rich heritage and contemporary sophistication of philosophy into significant relation with the multiple concerns of education represents a high challenge to creative effort.

It is my conviction that no single program ought to dominate in such effort. There are many things that need doing. Continuity is not the same thing as uniformity. It is perfectly compatible with a pluralism of programs and aims; what it requires is only that there be connecting paths available for those who would travel from theory to practice and back again. These

paths may themselves be diverse; there are footpaths and highways, difficult mountain passes, sea-lanes and jet routes. Nor is the construction of a given path the work of one man or program. Work in cultivating an isolated area may become significant through the forging by others of a remote, though vital, link. The last completed link makes the chain, but its significance depends on the availability of all the others. In the linking of philosophy and education there are numerous directions to be explored – promising routes, for example, between moral philosophy and studies of character development, between epistemology and cognitive psychology, between social philosophy and the setting of educational aims, to name but three. In outlining the specific attractions of philosophies-of in the remainder of my paper, I would thus by no means be understood as denying the claims of other possibilities. Rather, my aim is to develop the indications of promise that seem to me to point in one given direction, in the hope that this direction at least will receive some attention. For though many routes are possible, a mere contemplation of their several potentialities will in itself make no new pathways. My suggestion is that we have, at least here, a worthwhile place for constructive work – work that promises, moreover, to link philosophy with educational practice in a concrete and articulate manner.

I was first led to this suggestion several years ago, through teaching certain introductory philosophy of education courses to prospective teachers, and perhaps I may therefore be pardoned for calling upon my personal experience to explain the appeal of the idea. The central themes of these courses were taken from epistemology, and touched on such topics as knowledge, belief, evidence, truth, understanding, and explanation. In elaborating these themes in lecture and discussion, an effort was made to relate them to educational notions such as learning, teaching, and curriculum organization, and illustrations were drawn from different teaching areas. Nevertheless, it seemed to me that something more was needed to tie the main thread of the course work to particular regions of teaching with which the students would be individually concerned upon graduation. For this purpose, each student was therefore requested to acquaint himself with the philosophical literature bearing on the foundations of his own teaching subject, and was further asked to write a paper relating such literature to selected aspects of teaching. To facilitate this assignment, students were given bibliographies listing recent philosophical works bearing on the several teaching areas, e.g., books treating of philosophy of mathematics, philosophy of history, philosophy of science, philosophy of language, philosophy of art, etc. It was suggested to students that they might use the assignment as an opportunity to deepen, or broaden their grasp of their subjects, and they were encouraged to integrate philosophical with any other materials they deemed relevant, in the writing of their papers.

To my great surprise, I found that the typical student had been simply unaware of the existence of a serious philosophical literature relating to

his teaching subject; if, in a rare instance, a student *had* known of such a literature, practically in no case had he himself investigated it. Moreover, although the assignment seemed generally to be undertaken with some trepidation, many students soon reported their delight at finding a new and fundamental source of insight into materials with which they would presently be working as teachers. Repeated trial over the years has led me to judge the assignment a definite success: it has again and again elicited papers worth reading, in which students reasonably well-trained in their teaching subjects were, for the first time, challenged to reflect deeply on the foundations of these subjects, and to relate their reflections to the task of teaching. Both the prior training and the imminent prospect of teaching provided concreteness and focus to the philosophical materials; conversely, these materials were immediately seen to have a significant bearing on the framing of general conceptions and selective principles required in teaching. And the initial purpose of the assignment was, moreover, also fulfilled: the general epistemological themes of the course were themselves heightened and intellectually activated by linkage with the concerns of a particular teaching subject.

I have above referred to general conceptions and selective principles required in teaching, and this is perhaps the central point in seeing the potential contribution of philosophies-of to teacher training. To appreciate the point, we may first examine the particular example of philosophy of science, and notice its complex relations with scientific practice. The time is now long past in which philosophers could pretend to a vantage point of superior certitude to that offered by the sciences themselves. They no longer construe themselves as legislating, from such a vantage point, to the scientific practitioner or as taking sides in scientific controversies, at least in their professional capacity. Their philosophical work, in so far as it is addressed to science, takes its initial departure from scientific practice itself, striving to describe and codify it, and to understand and criticize it from a general epistemological standpoint that is, however, shared by scientists as well. Philosophy of science thus springs from scientific practice, but its descriptive and explanatory effort, like all second-order reflection on practice, has the potentiality of closing the circle, of feeding back into practice and altering it. That it springs from practice does not prevent it from exercising a critical and reformative function; that it exercises such a function does not, on the other hand, mean that it is an indispensable starting point for practice. One can, and regularly does, acquire competence within a field of scientific inquiry without preliminary grounding in philosophy of science. Even the strongest proponents of the value of the latter field of study would not, I believe, wish to argue that every scientist requires prior sophistication in this field in order to do his own job ideally well. It is enough that the field itself exists and is cultivated in such a way that communication with practice is possible.

Contrast this situation with that of the teaching of science. The teacher of science is, of course, also a practitioner, but his practice is of a critically

different sort from that of the scientist himself. He needs to have a conception of the field of science as a whole, of its aims, methods, and standards; he needs to have principles for selecting materials and experiences suitable for inducting novices into the field, and he needs to be able to communicate both with novices and with scientific sophisticates. Whereas the particular scientific investigator need have no overall conception of science but requires only sophistication in his special subject matter, the science teacher's subject matter embraces scientific thought itself; his professional purpose, that is to say, can be articulated only in terms of some inclusive conception of scientific activity which it is his object to foster. Whereas the scientific researcher need not at all concern himself with the process of training others for research, the science teacher needs to reflect on the proper selection and organization of scientific materials for educational purposes, and so to presuppose a general perspective on those materials. Whereas, finally, the scientific worker requires only sophistication in the special jargon of his intellectual colleagues, the teacher requires something more – the ability to step out of the inner circle of specialists and to make their jargon intelligible to novices aspiring to sophistication. The teacher requires, in other words, a general conceptual grasp of science and a capacity to formulate and explain its workings to the outsider. But the scope of this requirement is, I suggest, virtually indistinguishable from that of the philosophy of science. No matter what additional resources the teacher may draw on, he needs at least to assume the standpoint of philosophy in performing his work.

Thus it appears the philosophy of science is related to two forms of practice, that of scientific investigation and that of science teaching. But these forms of practice are themselves diverse in level. If philosophy of science is a second-order reflective approach to scientific inquiry, science teaching also incorporates such a second-order reflective approach. The science teacher needs to do other things than reflect on science, to be sure, but whatever he does is likely to be qualified by his second-order reflections on the field of science. Unlike the researcher, he cannot isolate himself within the protective walls of some scientific specialty; he functions willy-nilly as a philosopher in critical aspects of his role. And his training is, correspondingly, likely to profit from the special contributions that philosophy of science offers.

Analogous considerations apply, I believe, to the other teaching subjects as well, for example, to mathematics, to history, to art, to literature, and so forth. This, it seems to me, is the reason why students found the assignment earlier described so pertinent to their work. Their reaction, if it can indeed be generalized, suggests that prevalent conceptions of teacher training are curiously restricted. For these conceptions typically emphasize three features: subject-matter competence, practice teaching, and the psychology and methodology of teaching. Since subject-matter competence is, moreover, interpreted as relating exclusively to the first-order proficiency of the practitioner, no attention is given to the need for a second-

order, or philosophical, perspective on the subject matter in question. And since, as I have argued, such a perspective is demanded by the teaching role in any event, the result is that it is gained haphazardly and inefficiently by each teacher, without guidance and without awareness of alternatives. Lacking a systematic and critical introduction of philosophical considerations, dogmatic and incoherent philosophical attitudes are enabled to grow and to proliferate.

It is perhaps worthwhile at this point to attempt a more specific characterization of the contributions that philosophies-of might be expected to make. I have already suggested that the educator, like the philosopher, seeks a general account of those fields represented by teaching subjects, that he requires some reflective grasp of the 'forms of thought' they might be said to embody. To speak of 'forms of thought' is of course a simplification, for what is in question relates not only to inference but also to categorization, perception, evaluation, decision, attitude, and expectation, as crystallized in historical traditions of a variety of sorts. The simplification nevertheless serves to illuminate a critical point, for forms may be embodied as well as articulated. And the successive embodiment of forms of thought, which constitutes their perpetuation, does not itself require an articulate grasp of their general features. To acquire the traditional mental habits of the scientist, that is to say, requires only that one learn how to deal scientifically with some range of problems, and to treat critically of the materials bearing upon them. The philosopher, on the other hand, takes these very mental habits as his object, rather than the scientific problems to which they are, or may be, applied. His task, in short, is to articulate and analyze the forms themselves, and to try to understand their point. He wants to achieve such comprehensive analytical understanding not for some ulterior practical motive, but for its own sake, although he does not, of course, deny that understanding may affect practice.

The educator, by contrast with the philosopher, is concerned with the deliberate processes through which forms of thought may be handed on; he strives not only to understand these processes but to institute or facilitate them, so that the mental habits in question may in fact be properly acquired. Although an articulate grasp of these habits is *not* required for their acquisition, it *is* involved in the task of understanding and facilitating such acquisition. To make his own objectives intelligible, the educator needs to be able to analyze and describe those habits which it is his purpose to hand on to the next generation. An articulate grasp of such habits does not, in general, itself figure as part of the content he transmits to students; it does not therefore follow that it is of no use to the educator. A parent's sophisticated understanding of sexuality is of the utmost usefulness in helping him to discuss the issue with his children though he would generally be ill advised simply to recount such understanding to them.

If the philosophy-of a given subject is, thus, directed toward the analysis and understanding of the form of thought embodied by the subject, it is

of potential use to the educator in clarifying his own objectives. The educator is not, to be sure, necessarily concerned with such understanding for its own sake – he needs it in order to facilitate the acquisition of the mental habits in question. Certainly, for this larger practical goal, he needs more than clarity of objectives. Equally, however, no amount of educational experimentation or psychological information can substitute for such clarity.

Insofar as the analytical understanding of a form of thought is the task of the philosophy-of that form, it has, then, a contribution to make to education. But such contribution does not exhaust its role. Understanding merges with criticism and evaluation, with issues of justification and appraisal. The philosophy of science, for example, is traditionally concerned not only to define inductive methods, but to evaluate their epistemological warrant, not only to describe forms of probabilistic inference, but to inquire into their justification. Analogously, questions of aesthetic value, of mathematical certainty, of the reliability of historical reasoning, of the function of literature, all relate closely to the question of defining correlated forms and fall within the philosophies-of those forms.

For the educator, surely, such questions are inescapable. He cannot define his role simply as it is given by received traditions; he must be prepared to justify his perpetuation or alteration of them as a consequence of his efforts. This means that the process of clarifying his objectives has a critical and normative aspect to it. He needs, of course, to strive for a clear grasp of the form of thought embodied in the tradition to which he is heir. But in taking on the responsibility of educational transmission, he assumes the obligation of evaluating whatever it is in that tradition he elects to perpetuate. At the risk of oversimplification, we may say that he requires not only a descriptive but a critical clarification of the forms of thought represented by his subject. It goes without saying that philosophies-of do not provide the educator with firmly established views of justification; on the contrary, they present him with an array of controversial positions. But this array, although it does not fix his direction, liberates him from the dogmatism of ignorance, gives him a realistic apprehension of alternatives, and outlines relevant considerations that have been elaborated in the history of the problem.

The analytical understanding and critical appraisal of the form of thought that the educator takes as his objective provide him with some help in curriculum formation. With a general notion of the form in question, he has some idea of exemplifications in concrete materials to be employed in teaching. To complete his task, he certainly needs to call upon elements outside philosophy; he needs independent acquaintance with materials, and information or hypotheses as to the educational effectiveness of various selections and sequences. But the latter alone are also, in themselves, insufficient. For he is concerned to hand on materials, not just as materials, but as embodiments or exemplifications of form, that is to say, of method, style, aim, approach, and standards. Having a general

view of the latter, and an independent knowledge of received materials, he can strive to select, shape, and order exemplifications so as to satisfy the further demands of educational efficiency and comprehensiveness.

In the very process of shaping, philosophies-of make a further contribution, which once more may be illustrated by the philosophy of science. It is clearly a mistake to suppose that the latter field is limited to general accounts of scientific method, or of inductive reasoning, etc. On the contrary, it embraces also the analytical description of historical cases or systematic branches of scientific endeavor in such a way as to bring out their methodological or inferential characteristics. Such analytical description typically proceeds in two phases: first, a refined articulation of the content of the historical inquiry or branch of science in question; and second, a systematic account of the elements of the articulation and their relations, designed primarily to exhibit their methodological or epistemological linkages. Philosophy of science is thus capable of aiding the educator not only in formulating a general conception of scientific method, but also in processing scientific materials so as to display them as embodiments of that method.

Philosophers have traditionally undertaken a further task of significance to education: the tracing of connections between specialized exemplifications of forms of thought and common sense conceptions. They have, that is to say, been concerned to interpret, translate, or explicate the content of such exemplifications in terms that are intelligible to the non-specialist. To make science generally understandable, they have, for example, tried not only to specify the forms of reasoning implicit in scientific argumentation, but also to translate or reduce particular scientific concepts and theories to those familiar, or at least accessible, to common sense. Although the ways they have construed common sense have varied radically, the function fulfilled by their efforts is nevertheless, I believe, of great significance from an educational point of view. For the educator is constantly in the position not only of representing and advancing specialized exemplifications of thought but also of explaining and interpreting such exemplifications to the outsider, that is, the novice. In this translational or explanatory role, he has in the philosopher an experienced ally.

To summarize, I have outlined four main efforts through which philosophies-of might contribute to education: (1) the analytical description of forms of thought represented by teaching subjects; (2) the evaluation and criticism of such forms of thought, (3) the analysis of specific materials so as to systematize and exhibit them as exemplifications of forms of thought; and (4) the interpretation of particular exemplifications in terms accessible to the novice.

My suggestion has been that philosophies-of constitute a desirable additional input in teacher preparation beyond subject-matter competence, practice in teaching, and educational methodology. If the advantages of such an input are to be fully realized, it is, moreover, desirable that the philosophical dimension be introduced into the training of all those in-

volved in the process of teacher preparation, inclusive of educational administrators, psychologists, methodologists, and curriculum workers. The present suggestion, further, requires more than simply a reorganization of teacher training. On the contrary, if the contributions of philosophies-of for teacher training are to be made practically available, independent scholarly thought needs to be given to the general prospects of relating such philosophies to education, and I believe that this effort may provide an important focus for educational philosophy. A rich body of materials relative to each teaching subject lies ready for such effort, structured in such a way as to make it naturally amenable to educational interests, and inviting to philosophical analysis pointed toward teaching practice.

I am, of course, not advocating that educational philosophy should be *wholly* confined to the direction I have outlined. There is certainly, in my view, a role for more general conceptions, even from the standpoint of a special interest in teacher training. To mention one consideration, the contributions of philosophies-of that are outlined above are altogether internal: they relate, for any given philosophy-of, to the particular teaching area that is its object. But the educator's scope cannot in general be thus confined, even in the case of the teacher whose teaching responsibility is limited to one given subject. For even he must concern himself also with external relations: how, for example, if he is a science teacher, does his subject relate to mathematics or to the arts, or to literature? How is it linked to technology? What are its bearings on human values and the enlightenment of human perception and choice? Analogous questions arise for each teaching subject and they require an attempt to deal with relational issues which outstrip the scope of any particular philosophy-of. Here is the continuing significance of general philosophy – of epistemology, logic, ethics, and aesthetics, for example. If such general considerations are relevant, even in the teaching of a given subject, they bear directly on the explicit question of curriculum integration and constitute therefore a desirable element in the training of curriculum workers as well.

Consider, finally, the fact that teaching subjects cannot be taken without question as exclusive and fixed points of the educational process. The educator needs to consider the possibility of new classifications and interrelations among the subjects not only for educational but also for general intellectual purposes. He must, further, devote his attention to aspects of human development that are too elusive or too central to be encompassed within the framework of subjects; for example, the growth of character and the refinement of the emotions. He ought, moreover, to reflect on schooling as an institution, its organization within society, and its consequences for the career of values. Philosophies-of represent, I believe, a very promising focus for educational philosophy, both with respect to its theoretical development and its potential applications to the training of educators. But this focus should not preclude an insistent and continuing

recognition of the significance of general studies, both philosophical and other.

POSTSCRIPT TO 'PHILOSOPHY AND THE CURRICULUM'

This article was originally presented at a meeting of the Center for Philosophic Exchange of The State University of New York at Brockport in 1970. In a slightly altered version, it was given at The Working Conference in the Philosophy of Education sponsored by the Council for Philosophical Studies in 1971.

In substance, it grew out of my teaching experience from the early sixties onward, in which I required students to explore the relations between the philosophy of their subjects and the teaching of these subjects, in term papers for their courses with me in philosophy of education. The results were very fruitful, the students delighted to find new sources of insight into the nature and meaning of their subjects. Since I was also teaching courses in philosophy of science, extended reflection on the connection between science and education was natural for me.

The article was favorably received and, after its publication, I received several inquiries, some from distant places, about the general idea, and also about the experience I had with the course assignment, bibliographies etc. I have no way of knowing what other influence the article may have had.

As to why there has been only minimal success in integrating history and philosophy of science into science teaching, I can offer only speculation. Perhaps it is the unfamiliarity of philosophy and philosophical writings in our general culture that plays a decisive role. Most secondary schools do not introduce philosophy to their students, nor do programs of teacher preparation offer an education in philosophical modes of thinking and writing. Thus, for both aspiring teachers and for *their* teachers as well philosophy is unknown territory. The popular image of philosophy – as an abstruse subject of no practical use – works to produce further estrangement. I believe that earlier introduction of philosophy into the educational experience of our youth, and a massive strengthening of the philosophical components of our teacher education programs would be likely to improve the situation.