Philosophy in Career Education

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During the last decade, American higher education has seen a dramatic rise in career education. At Harper College we clearly reflect this trend. In 1969, 18% of our students were enrolled in career programs, while 80% were in baccalaureate programs. But in 1977, 35% of Harper's student population were in career programs while only 60% were in the traditional baccalaureate ones. In absolute numbers, the rise of technical education is even more dramatic. In 1969 the equivalent of 663 full-time students were in the career programs at Harper's while in 1977, 2904 such students were on campus. This is an increase of 340%!

This same span of time, 1969-77, saw a much slower growth in the humanistic disciplines at Harper. German increased only by 7%, literature by 12%, French by 36%, and English by 40%. We philosophers, therefore, are quite content with our growth of 72%. In many other schools, however, the liberal arts are confronted with actual declines in enrollments. Moreover, a close analysis of the figures I presented will show that, even when we do experience increases in enrollment, we may expect that more and more of those students will be career students taking philosophy to meet their liberal arts distribution requirements.

What all these statistics mean is that the role of philosophy as one element in a technical education is no mere future possibility but is a present fact. But why should this be? How can we justify, if at all, our teaching philosophy as a part of a career program? To this question I intend to construct an answer on the basis of Alfred North Whitehead's theories as developed in *The Aims of Education*.[1]

I wish to make three preliminary observations. First, I am not trying to justify the value of a liberal arts education for its own sake, apart from its commercial uses. One occasionally encounters imperialistic advocates of career education who imagine that career preparation is the sole legitimate form of education. These imperialists then question the value of a major in philosophy or history or literature since one can seldom sell these skills on the open market—except of course in the field of teaching, and even that is not very likely these days. With such an attitude, I have no sympathy, and I will not try to respond to it. My task is much simpler. I will merely try to show the value of a philosophy course for career education. However, and this is my second observation, we must not be imperialistic about the merits of the liberal arts either. There is an ancient and honorable concern in Western culture for career educa-

tion, even for an education whose primary purpose is to enable the student to make money. In the days of Jesus, the Jews had a proverb which said that the father who taught his son no trade, taught him to steal. And Aristotle considered an adequate income as a prerequisite for a happy life. Even the universities have been entangled, from the very beginning, in career education. In 1928, Whitehead observed:

> At no time have universities been restricted to pure abstract learning. The University of Salerno in Italy, the earliest of European universities, was devoted to Medicine. In England, at Cambridge, in the year 1316, a college was founded for the special purpose of providing "clerks for the King's service." Universities have trained clergy, medical men, lawyers, engineers. (AE 137-38)

My third comment is this. I will not consider career education as it applies to assembly-line workers and ditch-diggers. That's a different topic. I will be concerned with those careers which require at least some college background. At Harper, we offer programs in such fields as nursing, secretarial science, real estate, hotel management, dental hygiene, medical technology, interior design, fire science, and criminal justice. It is for these students, that I will show the relevance of philosophy.

I

There are two basic types of arguments for including philosophy in a technical education. The first is that the study of philosophy will help to make the student into a well-rounded person—i.e., a more cultured person. Now, while this is undoubtedly true, there are many other subjects which also would help to produce a well-rounded individual such as the study of primitive religion, the history of painting, fencing, and the study of a non-Western culture. And to insist that philosophy be made a part of a technical education to the exclusion of these other areas is clearly a case of special pleading. Moreover, since the purpose of a technical education is to help a person get a job and to perform a set of skills, the fact that philosophy produces a well-rounded individual hardly justifies its inclusion in a technical curriculum. The second argument is more to the point: namely, that the study of philosophy will help the worker to do his job better. Thus, this second argument claims that the study of philosophy will help a nurse to be a better nurse, and a cop to be a better cop. Whitehead, I believe, can provide us with the materials for showing how this is so.

II

Whitehead defines technical education as the "training in the art of utilizing knowledge for the manufacture of material products" (AE 77). In the six decades since Whitehead provided that definition, the service areas of the economy have mushroomed so that within the area of technical education, we today must add the service areas such as child care and paralegal aid. Thus, for

us, we may say that career education or technical education is the training in the performance of a set of skills where these skills result in either a material product or a service and where these skills are directly marketable. Of course much more than that is involved in technical training, but at least we have a starting point for our discussion.

Concerning such technical education, Whitehead has many kind things to say. It certainly has the advantage of technique. That is, it teaches the student to do something. And most young people are action oriented; they like to do things. Moreover, because technical education is inherently specialized, it not only teaches the student to do something, but it also shows him how to do it well. Most people want to know how to do something of practical value and to do it well. Thus a technical education is a life-affirming form of education (cf. AE 15-16).

To place technical education within a larger context, we must recognize that there is "no education which does not impart both technique and intellectual vision" (AE 74). Thus, the so-called Platonic model of education, which promotes an intellectual vision without any concern for the practical application of that vision, is a cold-blooded dragon breathing the fire of death (cf. AE 75). (Plato himself, of course, would have disowned any such educational model!) Even philosophy has its own areas of specialization and its own techniques. The philosopher must be able to give reasons to support his point of view; he must be able to state his position clearly; he must be able to follow an argument; he must be able to piece together into an organic whole the metaphysical sytem of a Plato or Augustine or Aquinas or Kant or Whitehead; and he must (I suppose) be able to give speeches defending the importance of philosophy in a technical education. Thus, the fact that technical education teaches the student how to do something, does not prove that technical education is a lesser and an unworthy form of education; it merely shows that technical education is, in this regard, remarkably similar to the classical liberal arts. Rather, technical education may even have an advantage over a liberal education in that it demonstrates, concretely and effectively, *how* a particular theory applies to the world (cf. AE 83). In short, thought and action are combined into one whole (AE 78).

Whitehead makes much of one further advantage of a technical education. Most of the students in a particular career program, say nursing, have a lively interest in that area. The interest may have many sources: perhaps the student nurse's interest stems from an appealing vision—the Florence Nightingale, Angel of Mercy sort of thing. Perhaps the nurse enjoys using the mechanical equipment to help people—starting IV's, giving shots, monitoring vital signs and symptoms, and inserting catheters. Or the fledgling nurse may badly need a job and choose nursing on the advice of friends. In any case, the student will have a strong interest in nursing, will care about nursing, and nursing will be important to her or him. And, to some degree at least, nursing will shape the student's self-understanding. Thus, Whitehead can call interest "the *sine qua non* of mental development" (AE 48). In other words, for the student nurse,

the general ideas of the field will have a practical application. And because of their practical application, the student will be interested in these ideas. And because of this interest, the student nurse will learn these ideas more rapidly and insightfully. Whitehead has only the deepest disdain for what he calls "inert ideas" and "barren knowledge"—that is, concepts which never make contact, not even by means of relevant contrast, with our experience (AE 1-2, 49-50). "A merely well-informed man is the most useless bore on God's earth" (AE 1).

We must not, however, be unrealistic about the actual situation in technical programs. Sometimes a student's understanding of the field is so limited that the student fails to grasp the potential applications of some subject area to the vocation. Or the student may be impatient when required to study subject X in order to study subject Y, where subject Y has a direct application to the career. Professor of Nursing Martha Franklin (my wife) has told me that over 50% of her students resent the requirement that they study cellular biology and elementary bio-chemistry. Yet this knowledge is essential if they are to observe intelligently the patients' reactions to various medications. The problem is that students are expected to study microbiology and bio-chemistry before they apply this knowledge to nursing situations. Even when studied concurrently with the nursing course, the students' practical experience is still so limited that they often fail to see the potential usefulness of these subjects to situations which may someday confront them. Obviously, this is not true of all nursing students, but many students cannot, in fact, connect the disciplines of microbiology and bio-chemistry with their nursing careers. They lack vision.

III

Our discussion of vision brings us to one of the most fundamental themes in Whitehead's philosophy: The intelligent person will attempt to develop the most general possible ideas with the most detailed and the most precise possible applications to concrete fact. For example, a law of science, such as Newton's law of gravity, is highly general. It applies, except for the case of miracles. to all physical objects, at all times, and in all places—at least this is the intention. And yet this law can be applied to the most detailed and precisely measured occurrences. If I drop a penny one inch, and I carefully measure the penny's rate of fall and its projectory, I will find that the rate of fall and the projectory perfectly illustrate Newton's law. It is this interplay of high generalizations with numerous and precisely measured details that gives science its fundamental power. Whitehead's first book, published in 1898, *Universal Algebra*, attempted to discover a single mathematical system in terms of which the established algebraic systems would serve as particular cases. As the title of his book indicates, Whitehead was trying to find a *universal* algebra which could integrate and explain the specialized algebras.[2] Years later, when giving his definition of metaphysics, we find the same theme.

Speculative philosophy [i.e., metaphysics] is the endeavor to frame a

coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. (PR 4)

In *The Aims of Education* Whitehead does not speak of advanced algebra nor of metaphysics. But the theme of general ideas illuminating the various particulars permeates the entire book. For example, at one point, Whitehead remarks that mental power stems from the "comprehension of a few general principles with a thorough grounding in the way they apply to a variety of concrete details" (AE 42). In fact, he goes so far as to connect reason itself with the capacity to see the general concepts within the welter of particulars and the capacity to see the various particulars in the light of the general concepts.

> The art of reasoning consists in getting hold of the subject at the right end, of seizing on the few general ideas which illuminate the whole, and of persistently marshalling all subsidiary facts round them. Nobody can be a good reasoner unless by constant practice he has realized the importance of getting hold of the big ideas and of hanging onto them like grim death. (AE 128)

The application of this theme to technical education may be summed up by a Whiteheadian epigram. "When ideals have sunk to the level of practice, the result is stagnation" (AE 45). In other words, the mere repetition of technical skills can become terribly boring, even after a relatively short time. The bored hotel manager is a burden to the owner, the bored nurse may become lethal, and the bored police officer may become a terror to fellow citizens. In short, hotel managers, nurses, and police must not be bored with work if they are to be good hotel managers, good nurses and good police.

This brings us back to a previous observation: All education involves both a general vision and a technique. As we have noted, the exclusive attention to technique, even in a technical education, will result in a disaster. Therefore, "the essential ideal remains, that work should be transfused with intellectual and moral vision and thereby turned into a joy, triumphing over its weariness and its pain" (AE 67). (Note that by "moral vision" Whitehead does not mean an ethical insight; rather he has in mind an insight into the value and importance of one's work.) We may conclude, therefore, that technical education cannot avoid the theoretical, the visionary, and the realm of general ideas, if it is to succeed in its own aim of producing worthy hotel managers, nurses, and police.

> The conclusion to be drawn from this discussion is, that alike for masters and for men a technical or technological education, which is to have any chance of satisfying the practical needs of the nation, must be conceived in a liberal spirit as a real intellectual enlightenment in regard to principles applied and services rendered. In such an education geometry and poetry are as essential as turning laths (AE 70).

IV

I am convinced that there is no better way to develop this vision than through

the study of philosophy. Of course, we must not be imperialistic about this. The outstanding master teacher in any technical field will, almost inevitably, have some important insights into how that field is serving the larger community, and he will have ideas for increasing the services of that field to the community. There is no secret about this, For example, when my wife was in graduate school, her teachers constantly demanded that she reflect on the relation of nursing to other areas such as medicine, the ministry, education, and science. And they encouraged her to speculate—even day-dream—about the future roles of the nurse.

Another ally is mathematics. Arithmetic is the first truly general system of ideas which most children meet. And the study of mathematics is a powerful engineer for implanting the generality of idea (AE 82). Again, it is usually mathematics which first teaches the student that there are purely conceptual relations among ideas which are not reducible to physical relations among concrete objects. For example, in geometry the student must not only learn the relationship between the concept of triangularity and the concept of 180°, but must also learn that no physical triangle will perfectly reflect all the characteristics of the ideal trangle. It is illuminating to remember how many outstanding philosophers were also first-rate mathematicians or logicians: Aristotle, Scotus, Descartes, Leibniz, Russell, and, of course, Whitehead.

The nursing curriculum requires students to convert metric and apothecaries' measurements back and forth. The arithmetic merely involves the ability to multiply and divide fractions and decimals. This is skill which ought to have been mastered in junior high school, and yet a substantial number of students find this very difficult and need remedial work in arithmetic. Of course, these students had managed to pass high school algebra and geometry, but still they could not do the arithmetic in college. The moral tag to my story about nursing students and their arithemtic is that the very students who had the most difficulty with the arithmetic were also the students who had the most difficulty seeing the relationship of the material in cellular biology and biochemistry to their nursing careers. In short, the inability to handle the generalities of mathematics correlated directly with the inability to grasp a vision of their chosen profession.

Nevertheless, mathematics, however useful, is not enough. There is one fundamental reason that mathematics could never substitute for philosophy in a technical curriculum: We must, ultimately, use language and not arithmetic to express our visions of our trades and professions. Even the mathematician, when thinking about the importance of his discipline, uses words and not merely equations. Philosophy precisely is the discipline which deals with generalized visions of the world and with the applications of those visions to the concrete details of our experience, and it does so by means of words. Metaphysics is, says Whitehead, "the endeavor to frame a...system of general ideas in terms of which every element of our experience can be interpreted."

V

I mentioned two benefits as flowing from the study of mathematics. These same two benefits also flow from the study of philosophy—except in philosophy, they come in a more useful form. Mathematics forces the student to grasp the relationships among ideas as being something other than the relationships among concrete objects. Philosophy does the same thing, except that it uses language and not merely mathematical symbols. Thus, the general ideas of philosophy are not limited to number or space. For example, in the study of the mind-body problem, the student is required to deal with the notions, among others, of mind, of body, of space, and of causality. Now, it is not sufficient for the student merely to be acquainted with the fact of causality; he must be able to comprehend several different explications of causality, and he must be able to perceive the purely conceptual relations between those definitions of causality and the other definitions of mind and of body. And finally the student must be able to test the application of the various conceptual schemes which emerge in the course of the discussion to the concrete and lived world. The task is made more difficult—not less—by the fact that the students have had much experience with minds, bodies, and causal interactions, and by the fact that they have had much experience using the words "mind," "body," and "cause." This very familiarity will make it hard to grasp the purely conceptual relations involved. Yet this capacity to discern the conceptual relationships among ideas, expressed in familiar words and dealing with familiar experience, is the very essence of educated intelligence. But it is philosophy alone which explicitly endeavors to teach the student to discern these sorts of conceptual relations in these sorts of situations. And, while these skills may be taught most explicitly by philosophy, yet they are necessary not merely for professional philosophers, but also for hotel managers, nurses, and police if they are to develop that required sense of vision.

The sense of vision is the key to the value of philosophic education within a technical curriculum. The nurse, to be a good nurse it is recalled, needed vision wherein she could see the importance of her work—a vision in terms of which she could connect her work with other important areas of human activity. But philosophy, at its very heart, is the attempt, using words, giving reasons, and stressing logical interconnections, to build visions of the very highest generality. If we remember Whitehead's definition of reason, we will see that such visions are the very essence of human reason. It is these visions which, ultimately, are the justification for the pursuit of philosophy. It is such visions which allow us to understand the particular value of our profession; it is such visions which allow us to create an integrated view of the world in which the various sections of our daily lives—politics, religion, and science—all cohere. Such a vision may have to leave room for the irrational *surd* we find in existence; it may have to leave room for mystical experiences which transcend the domain of reason; and it may even have to leave room for a divine revelation which results in a reorganization of the entire vision. Nevertheless, here is the real reason for studying philosophy.

One of Whitehead's more famous educational maxims is that the student goes through three stages: romance, precision, and generalization. In the stage of romance, the student begins to dabble here and there in an area. Many interesting facts are discovered, and important general themes which permeate that area are dimly perceived. In the stage of precision, the student finds it important to master certain techniques and to acquire, systematically, an organized store of facts concerning that field. But finally, the student wants to know what it all means. This is the stage of generalization. At this stage, the student returns to the romance of the field, but with an array of pertinent techniques and a warehouse of organized information. Thus disciplined, the student's romance becomes powerful and mature (AE 27ff).

Towards the end of a program the technical and career student will have passed through the stages of romance and precision, and is now ready for the stage of generalization. This is where philosophers come in. At Harper we offer a course in medical ethics. It is open to anyone, but it is primarily designed for nurses, dental hygienists, medical technicians, etc. Such a course should start with a straightforward discussion of a limited number of key moral issues in medicine: abortion, euthanasia, genetic engineering, or the like. The discussion should be kept quite concrete, drawing upon the students' romantic concern for the area and upon their disciplined knowledge of the field. Then, as the need emerges to clarify the discussion, the course should introduce philosophical theories of ethics such as the teleological, deontological, and utilitarian. In order to give the course a wider generality, some of the definitions of health which responsible groups and thinkers have proposed should be discussed. This will clearly elicit issues on the relationship of medicine to politics and issues on the distribution of medical services. But the course would not have really served its purpose of helping the student to generalize and create a vision of his medical field, unless there were some relevant contrast with other areas of human activity. I think I would start this process by asking about the role of the hospital chaplain. This would lead to discussion of the relations between religion and science, and would help the student to examine the value-commitments presupposed in modern science. Lastly, I would raise this question: Why should the student be committed to the science of their discipline and not to alternative forms of medicine and science such as non-Western medical practices, or even those religious medical cures (faith healing) we find in the Western tradition. At this point, we have genuinely helped the student to pass into the stage of generalization *vis-à-vis* that field. In a few cases, we may have also introduced the student to the stage of romance concerning the discipline of philosophy.

Thus the spirit of generalization ought to pervade a college level education, whether in the career and technical areas or in the traditional liberal arts. Whitehead saw it as the very aim of higher education:

> For those whose formal education is prolonged beyond the school age, the University course or its equivalent is the great period of generalization. The spirit of generalization should dominate a University. The lectures should

be addressed to those to whom details and procedure are familiar; that is to say, familiar at least in the sense of being so congruous to preexisting training as to be easily acquirable. During the school period the student has been mentally bending over his desk; at the University he should stand up and look around.... A well-planned University course is a study of the wide sweep of generality. I do not mean that it should be abstract in the sense of divorce from concrete fact, but that concrete fact should be studied as illustrating the scope of general ideas. (AE 25-26)

While Whitehead may have underestimated the continued need in higher education for the stage of discipline and even the stage of romance, he is totally correct in emphasizing the need for generalization and vision in education at higher levels. This is why philosophy ought to be at the core of all adult education, for this spirit of generalization, or vision, is nothing else than the philosophic spirit and explains the importance of philosophy in higher education of all sorts.

Notes

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[1]Alfred North Whitehead, *The Aims of Education* (New York: Macmillan Publishing Co., Inc.) Hereafter, we will abbreviate this work as AE. Following the tradition of articles on Whitehead, and out of concern for the reader's convenience, we will place further references to this book within the body of the paper.

[2]Actually, Whitehead's *Universal Algebra* deals with geometry as much as with algebra—despite the book's name. However, our point remains. Whitehead is trying to find a general theory where particular algebras as well as particular geometries would serve as specifications of that theory.