1939

326

With the compliments of the author.

EDUCATION IN THE THIRD PHASE OF THE INDUSTRIAL ERA

Applied Science versus Representative Education

1. Is it: Time and Space or: When and Where?
2. Modern Man, Inc.
3. Timeless Man.
4. The Theological Residue in Science.
5. Timely Education, or Woodrow Wilson at Dartmouth.
6. Conclusion: The staff of a college.

George, October, 1946

I was looking over
old files last weekend
and came across this.
Up your alley, methinks.

APPLIED SCIENCE VERSUS REPRESENTATIVE EDUCATION

1. Is it: Time and Space, or: When and Where?

By Mr. Karwoski's warning against an uncritical use of 'time' and 'space', the discussion of these terms is precipitated.

I said that, under the pressure of a technicalized world, man was left without an answer to his question: When shall I act, marry, travel, study? Where do I belong? Where are the boundaries for my home and my people? Industry has no answer for these questions; the whole aim of industry being the victory over time and space. When technics are perfect, we may have anything anywhere at any moment.

Now, the words "when" and "where" are by no means so general as Time or Space. "When" and "Where" are the personal and concrete starting points for a reassessment of the big words Time and Space.

It is true, the fact that there should be a distinction between the dominating scientific generalities of our industrial civilization and the new questions, this in itself, constitutes the educational dilemma, today. But ask the questions we must. And we must ask them with the naive faith that, in one way or another, the right concepts of time and space must be comphrensive enough to answer our question about time and space.

The abysmal difference between the industrial concept of time and space, and our concrete, human, time and space, may be admitted. However, since we meet here from different ways of life, from different departments and creeds, we must cling to the conviction that in any moment, a new understanding is possible. This new understanding will have to surmount the chasm between the predominant scientific usage and the common-man-usage. The scientist, the worker, the student, all in their quality as human beings-not as scientists or as workers-are compelled today to keep fit, to keep going, in a way no other generation was required to do. And nobody, in the long run, can sustain two different notions about time and space, one scientific, one for his own life. Or, he and society will disintegrate.

Now, we probably just have to put these big words into another drawer. Today, most things are known to man; but usually, they are lying in the wrong drawer. The very fact that the big problems of Einstein and Jeans about time and space, and our biographical riddles, are not immediately associated in our brain, points out that time and space are kept in a wrong drawer, in our time.

Our attempt to re-identify the two, comes as a surprise because for the last centuries, the anthropomorphic sigh of the mortal: How long may I live? Where is my home? seemed too personal, too subjective. Science was going to get rid of the anthpomorphic features

of its concepts. The subjective aspect of time and space seemed to defile the universality of the fundamental concepts of natural science. Hence the philosophy and the sciences of nature reduced space to the space of three dimensions. This is the space in which separate bodies move, a space that necessarily is bigger than any sum of things, or than objects that are found within it. Also, this space has a unity that triumphs over all inner partitions. The concept of "Nature" depends on purifying this space from witches and fairies and ghosts and transcendentalism, and of breaking down all the different qualities of a sacred and a less sacred part, a higher and a lower rank between things in this space.

Now, to the human being, this space is only one side of his space experience. And this is so because man speaks. The unconscious, not-speaking animal may or may not be, a part of nature and of the outer world. Speaking man, by speaking, establishes social relations which have the quality of inwardness and insidedness. Anybody who talks to somebody else- and we shall deal with the process at great length in the following meetings- is incorporated into an inner space. You yourself, reading this paper, are by reading it, participating in something that is definitely apart from the life of the world about which we are conversing. This inner space, existing in any living organism, is a conditio sine qua non of our concept of space. The space of physics is balanced by the inner space of the republic of physicists. Dead things are viewed in the light of the one three-dimensional space of our intuition. However, we envisualize and formulate this external space only in vertu of our living within one internal space of scientific conversation. Hence, this internal space does not coincide with our body. As Einstein has shown, it includes all those who agree to participate in the role of the scientific observer, and therewith, to become of one mind. The unity of the mind constitutes the size and intensity of this inner space. Where there is one mind, incorporation takes place. And we actually know of the three-dimensional space only by being members of the reasoning and abstracting community of scientists and scholars. Other civilizations entertain different notions of space, unscientific and therefore not three-dimensional. First of all, they do not see why all spaces should form one space. They acknowledge the plurality of worlds. And the different worlds are under different government by different powers or deities. The external space, furthermore, to them turns demonic when a man dissociates himself from it. So, they try hard to stay incorporated into one definite space, forever, perhaps one sacred country, one Roman Empire etc. etc.

2. Modern Man Inc.

The modern concept of space, then, is the copyright of Modern Man, spelled with a capital letter and in the Singular. We constantly

confuse man and men. In this case, the concept of space as an external unified three-dimensional lawful system of objective relations between objects in motion, is the product of Modern Man, Inc. This scientific enterprise for the exploration of Nature has incorporated all of us, by merit of our education. Modren Man, Inc. is an enterprise for pushing the boundaries of objective, unified three-dimensional space further and further, as far as possible.

In doing so, it has produced, among other things, the modern system of production. The result is seen in the factory where the new concept of space is applied for the first time to a human habitation. The factory is a passing arrangement, no home. Production no longer takes place in a home in which generations are expected to succeed each other. When there is a roof over the factory it is accidental. The aim is to re-organize nature's energies so that they cooperate with man, with the greatest spontaneity possible. By technics, we create a second nature that is scientifically elucidated. We do not leave nature, we do not go inside in modern production,we enter into nature as a part of it. Among the raw materials and energies (electricity, water, coal, iron,) labor-forces are found, too.

These labour-forces,or 'labour', are not workers or labcurers, as of old. And their shortlived arrangement in the process of production impresses all of us, as the new fleeting and passing technical form of human existence. Nature, in the factory, reaches man.

What is the matter? Do we exaggerate? I think that this is as simple as an equation. Nature, by definition, has no inner partitions no inner space. Natural, by definition, is that which is experienced by our senses in the outer world. In this concept, we can never discover any privilege of an "inner realm", just as little as there is room for God.

3. Timeless Man.

In the factory, the worker is considered as energy laid upon the machinery, like water, in unending shifts. Human nature, as compared with other energies, is inefficient in duration. Thus he must be made into a worker-molecula, called labor, that is available all the twenty-four hours of the day. Most writers on the subject deal at great length with the space-aspect of modern industry, on mechanization, masses, etc. I wish to call attention to the fact that industry when demanding men, asks for a time-molecule labor, that is made up of three or four individuals, and that thereby covers up the weakness of the individual atoms by representing a twenty-four-hour-molecule. The individual worker disappears behind the abstraction of a twenty-four-hour-worker, called labor, with an objective name. Labor is a triumph of science since man is here objectified into something natural, a thing outlasting its shifting components. Only when three or four individuals

are taken together, do they become a match to the incessant industrial process. Nature has one space and no time limits. The system of Chicago to keep all the four terms of the year, is the application of industry to studies. The 'cog in the machine' is a molecule composed of more than one individual. We can become parts of the machine by becoming exchangeable and losing any uniqness in time and space. As 'labour' man is available in the space of things. The 'one man' who is the object of factory calculation and is the effective unit of production, is composed of several individuals. (In the older times, we had this idea embodied in the soldiers on guard). It is a warfare with nature, industry, and in war times, there is no difference between night and day, in our vigilance. Production is guaranteed regardless of individuals. Our labor troubles and the mysteries of collective bargaining largely depend not on the huge numbers in space but on this problem of the new abstraction of a timeless man functioning in natural space, for ever, hour after hour, and calculated by hours. Any hour, from midnight to midnight, the energies flow. And by breaking up the human energie in hours, and paying man by the hour, his work ceases to be personal. It now fits in the objective scheme of the natural processes. Since industry abolishes anthropomorphical thinking about time and space, Man's confusion about his when or where become unanswerable, within the sphere of industry and science.

The very existence of an inner space is denied. The smaller bodies that testified to its existence, family, body of Christ, body politic, degenerate. The Corporations are the masterminds of our age, as everybody knows. They ascertain that minimum of concerted action and unanimity without which we would be starved. But, as we also know, their's is a precarious kind of unanimity. These huge corporations live substantially on the loyalties and reserves of pre-industrial community life.

It was our proposition that these reserves have disappeared. The exploitation of European traditions or of Puritan heritage is at an end. The Corporations, themselves, however, being projected, from outer space into the inner space of society by sheer necessity, without preparation, have no organs for the regular reproduction of human unanimity and inner space. This is not their business. Strikes without end are the natural outcome of such a situation. The very efficiency of Modern Man, Inc., in mastering external space, is making him helpless when he should have power 'to usward', the power to communicate unanimity and to incorporate people into one inner space. The body politic, including its smallest cell, Mr. Everybody, are disintegrating under the scorn heaped upon them by science. They have been told that they are irrational. Science has overlooked the difference between irrational and irreasonable. People who speak and communicate, are irrational, and not irreasonable. The outer world is rational; the inner reasonable. The inner world operates when everybody is on speaking

terms with everybody else. The outer world operates when everything is expressed in mathematical terms, like everything else. Two usages of space, one scientific, one personal, have to be accepted and have to be reconciled in the future.

4. The Theological Residue in Science.

A similar situation exists with regard to time. Modern Man, Inc., has looked upon time as though time was known best in the past, less well in the present and least well in the future. This may be true for physics. It certainly is just the opposite with you and me when we want to know what to do. The only thing we actually know is that we must die, in the future. All our knowledge about past and present is pretty uncertain, compared to this one stable certainty. Even our parents may only pretend to be our parents. Our future, however, is absolutely guaranteed.

Against this, the scientist goes back to the beginning, to causes, to origins. The present is explained by the past; the future is explained by the past plus the present. This has been formulated literally as the endeavour of science, by Laplace.

In this argument, a theological residue has perched, and has allowed the scientists to operate with a concept of time due to theology, without being found out. They live on theology, in this respect. The natural concept of time is spoiled, that way. In nature, we know nothing of a present. In nature, past and future is all that we may distinguish. For, the present is a razorblade on which it is impossible to stand or to insist. All attempts to keep, for natural time, the three dimensions past, present and future, must fail. For external processes that are verifiable through the senses, past and future alone are meaningful concepts. The loan of the scientists is quite unnecessary, it would seem. Why do they need a present? In medieval theology, the presence, the real presence, the omnipresence, were central questions. It shows the scientific continuity of our higher thinking that this achievement of the Middle Ages has been respected by nearly all scientists till today. When the concept of nature was developed, it seemed unthinkable to abandon the notion of present. And ever since, natural science, has carried with it this theological residue. However, from the scientist's point of view, the present is a specious fallacy.

And today, in the third phase of the industrial revolution, scientific thinking is discovering this its dependence on theology with regard to the concept of a present. In a special paper, I shall communicate the facts about this radical attempt of the scientists, by which they become conscious of their loan and begin to repudiate it.

At this moment, two ways are open. One is the radically scien-

tific as pursued by symbolic logic, by Joyce and Proust and Gertrude Stein, by Sorel, Pareto, Mussolini, Hitler, Here, the present explodes as a specious fallacy. The laws of Lenin, the fate of Spengler, the violence of Sorel, is all that is left to organize society. Education is propaganda. Government is power. To study, means to pass an examination, to live, means to find a job. In all these cases, the open space of the outer world, and the fleeting time of astronomical time, are made the basis for human relations. This is the last emancipation of the scientific era that now, and now only, abandons its last heritage from the Middle Ages: the existence of a present, a real present, an omnipresence. With the present, there goes direction. The most subtle psychological quality of man, the one that he loses first when intoxicated or damaged, is his orientation in time and space. He loses direction; he is dizzy, groggy; he begins to move in a vicious circle.

Thus, let us look into the other direction. Here, it is resolutely necessary to emancipate education from science. Education must give direction, or it is superfluous and, being costly and misleading, directly harmful. Without direction, education begets soft decadents. When we allow everybody to work out his own salvation, and still insist that he should go to college, we conjure up the hell of boredom, waste, and disintegration of the man who has no future.

The educator is faced by the fact that whenever human beings talk and converse seriously together, they insist on something. They assert a part of reality. By insisting, and by insisting only, do we create a present that stands out between the future and the past. And by doing so, we transform the future and the past as well. We have a very different past, compared to our ancestors not only, but compared to the Russians or the Germans of today, and, if so, we shall have a different future, too. The present is the common time between people who insist on the same things. Man's power to insist wrestles a present from the flux of time.

Without insistance, we all are shadows of the underworld, never filled with the full blood of life. Living beings, whenever they begin to speak find themselves in a present between a prospective future and a respected past. Outside industry, man meets man as a being that has respect and prospects, that looks backward and forward, and as far as we can do so, we live in the present. The present is the creature that results from our insisting that the past should be transformed into the future. We would not do so if we were not, at every moment influenced as much by future as by past. Science, however, only mentions 'perspective' when talking of man's education. Without respect and prospects, perspective has neither place nor hours in our lives.

The very success of industry forbids educators today to use the phrases of the 18th century any longer, about the nature of man. Men live in an inner space and a present time. Both things do not

exist in nature. Otherwise, the students, by their belief in automatic evolution, will cease to insist on anything, on any value. And this sell-out is well under way.

5. Timely Education, or Woodrow Wilson at Dartmouth.

For a long time, Time and Space have been lying in the drawer labelled natural philosophy, natural science. As mentioned before, we moderns know all things, but mostly we keep them in the wrong drawer, and do not use them in the right place or at the right moment. However, we must take time and space out of their drawer. Nothing is known, from one drawer, or one department. And so it is with time and space. They are, for a college, by no means, natural, external, or pointing in one direction without the educators doing something about it.

Scientific time and space and human time and space have been confused too long by the scientists. The educator can understand what Modern Man, Inc., has tried to achieve, but the scientist qua scientist has no means of understanding what education is up against. How can he understand that our task is the creation of an inner space in an enduring present to be squeezed in between the imminent future and the dead past, and that human beings cannot live by doing everything everywhere at every moment.

Technics, being applied ~~to~~ science, are useless for our main task of education. Yet the relation between science and technics is valuable for explaining our own function. We see that technics represents science in nature. Education represents creation in society. The technicians are not scientists; and educators are not creators. Still we represent creation. This power of representing creation can never occur in nature. As much as representative government presupposes an inner life of the community that defies all laws of natural space, so representative education is unknown in the open space of physics or in the time pattern of thermodynamics. No representation in nature, no representation in a world of physical mechanisms. We represent each other in one body politic, one fellowship only if that inner circle is excluded from the concept of nature. We only may be represented by somebody else because we share the same future with him. This is the reason for our right at present to represent him. We represent to the student his own future. We insist on it today. The only situation in which representation is effective at present is among the scientists themselves; their own education is representative. They identify themselves with each other, for scientific purposes. Only, they do not know that their education is peculiar and specialized , and that they have done little, during the last centuries, to allow any other type of man, except the scientist, to be educated, or what amounts to the same, to grow.

By the idee fixe of educating scientists, we have been prevent-

ed from educating fathers, mothers, ancestors, founders, artists, priests, grandparents. The education of scientists seemed a byproduct of science; it was done like a simple expansion or application of science. The education of scientists, however, is based on princiles unknown to science; it proceeds in a space unknown to science; it anticipates a future unknown to science. It creates a present, by insistance unknown in nature. In as far as scientists are educated, we already have the right kind of education, that is to say, an education representative not of science but of creation.

Only, society would have neither children, nor parents, neither wisdom nor genius, when we concentrate on scientists and athletes, on mind and body, brain and muscles, in education. The education of scientists and athletes is representative of a society in which space is externalized and the community minimized.

We need only to conceive of education as representative of creation, and our mind is freed from the fetters of superstition, again. The superstitions of the modern era are its concepts of time and space. Now, we may begin to educate a generation that is able again to be sons and daughters first, men and brides second, fathers mothers, parents, third, instead of making the child prodigy into a man and thereby compelling this man to remain childish all his life. They will not produce incidentally scientists and athletes only. Centering on the question of the right thing at the right time, they will develop for the sake of the future of society, an education that is timely, presenting the student with the fact that they must make the right sacrifice at the right moment, and grow the right roots, at the right place. And the student presented with this anticipation of the future of the community, will no longer limit his services to the college by playing football for the sake of the college. He will realize that he serves the college by establishing the model relations, here, for the sake of the future.

All that we have tried to say here methodically, has been said eloquently by Woodrow Wilson, in his address at Dartmouth, 1909. Before drawing our conclusions, I am inserting the quotation from Woodrow Wilson. It may help to show that for the last thirty years, the task has been delayed. It may seem tragic today that Wilson made this speech at the very moment when he abandoned his hope of reforming the college, and entered politics. His clairvoyance, his challenge, his idea that the student <u>serves</u>, that education can't be a science, that the college body is in danger of disintegration daily, have not been taken up, for a whole generation of teachers.

"What we mean I can illustrate in this way. It seems to me that we have been very much mistaken in thinking that the thing upon which our criticism should center is the athletic enthusiasm of our undergraduates, and of our graduates, as they come back to the college contests. It is a very interesting fact to me that the game of foot-

ball, for example, has ceased to be a pleasure to those who play it. Almost any frank member of a college football team will tell you that in one sense it is a punishment to play the game. He does not play it because of the physical pleasure and zest he finds in it, which is another way of saying that he does not play it spontaneously and for its own sake. He plays it for the sake of the college, and one of the things that constitutes the best evidence of what we could make of the college is the spirit in which men go into the football game, because their comrades expect them to go in and because they must advance the banner of their college at the cost of infinite sacrifice. Why does the average man play football? Because he is big, strong and active, and his comrades expect it of him. They expect him to make that use of his physical powers; they expect him to represent them in an arena of considerable dignity and of very great strategic significance.

But when we turn to the field of scholarship, all that we say to the man is, "Make the most of yourself," and the contrast makes scholarship mean as compared to football. The football is for the sake of the college and the scholarship is for the sake of the individual. When shall we get the conception that a college is a brotherhood in which every man is expected to do for the sake of the college the thing which alone can make the college a distinguished and abiding force in the history of men? When shall we bring it about that men shall be ashamed to look their fellows in the face if it is known that they have great faculties and do not use them for the glory of their alma mater, when it is known that they avoid those nights of self denial which are necessary for intellectual mastery, deny themselves pleasures, deny themselves leisure, deny themselves every natural indulgence in order that in future years it may be said that that place served the country by increasing its power and enlightement?

But at present what do we do to accomplish that? We very complacently separate the men who have that passion from the men who have it not,- I don't mean in the class room, but I mean in the life of the college itself.

I was confessing to President Schurman tonight that, as I looked back to my experience in the class rooms of many eminent masters I remembered very little that I had brought away from them. The contacts of knowledge are not vital; the contacts of information are barren. If I tell you too many things that you don't know, I merely make myself hateful to you. If I am constantly in the attitude toward you of instructing you, you may regard me as a very well informed and superior person, but you have no affection for me whatever; whereas if I have the privilege of coming into your life, if I live with you and can touch you with something of the scorn that I feel for a man who does not use his faculties at their best, and can be touched by you with some keen and inspiring touch of energy that lies in you and that I have not learned to imitate, then fire calls to fire and real life be-

gins, the life that generates, the life that generates power, the life that generates those lasting fires of friendship which in too many college connections are lost altogether, for many college comradeships are based upon taste and not upon community of intellectual interests.

The only lasting stuff for friendship is community of conviction; the only lasting basis is that moral basis to which President Lowell has referred, in which all true intellectual has its rootage and sustenance, and those are the rootages of character, not the rootages of knowledge. Knowledge is merely, in its uses, the evidence of character, it does not produce character. Some of the most learned of men have been among the meanest of men, and some of the noblest of men have been illiterate, but have nevertheless shown their nobility by using such powers as they had for high purposes.

We shall never succeed in creating this organic passion, this great use of the mind, which is fundamental, until we have made real communities of our colleges and have utterly destroyed the practice of a merely formal contact, however intimate, between the teacher and the pupil. Until we live together in a common community and expose each other to the general infection, there will be no infection. You cannot make learned men of undergraduates by associating them intimately with each other, because they are too young to be learned men yet themselves; but you can create the infection of learning by associating undergraduates with men who are learned.

How much do you know of the character of the average college professor whom you have heard lecture? Of some professors, if you had known more you would have believed more of what they said. One of the driest lecturers on American history I ever heard in my life was also a man more learned than any other I ever knew in American history, and out of the class room, in conversation, one of the juiciest, most delightful, most informing, most stimulating men I ever had the pleasure of associating with. The man in the class room was useless, out of the class room he fertilized every mind that he touched. And most of us are really found out in the informal contacts of life. If you want to know what I know about a subject, don't set me up to make a speech about it, because I have the floor and you cannot interrupt me, and I can leave out the things I want to leave out and bring in the things I want to bring in. If you really want to know what I know, sit down and ask me questions, interrupt me, contradict me, and see how I hold my ground. Probably on some subjects you will not do it; but if you want to find me out, that is the only way. If that method were followed, the undergraduate might make many a consoling discovery of how ignorant his professor was, as well as many a stimulating discovery of how well informed he was.

The thing that it seems to me absolutely necessary we should address ourselves to now is this -- forget absolutely all our troubles about what we ought to teach and ask ourselves how we ought to live in college communities, in order that the fire and infection may spread;

for the only conducting media of life are the social media, and if you want to make a conducting medium you have got to compound your elements in the college, - not only ally them, not put them in mere diplomatic relations with each other, not have a formal visiting system among them, but unite them, merge them. The teacher must live with the pupil and the pupil with the teacher, and then there will begin to be a renaissance, a new American college, and not until then. You may have the most eminent teachers and may have the best pedagogical methods, and find that, after all, your methods have been barren and your teachings futile, unless these unions of life have been accomplished.

I think that one of the saddest things that has ever happened to us is that we have studied pedagogical methods. It is as if we had deliberately gone about to make ourselves pedants. There is something offensive in the word "pedagogy." A certain distaste has always gone along with the word "pedagogue." A man who is an eminent teacher feels insulted if he is called a pedagogue; and yet we make a science of being a pedagogue, and in proportion as we make it a science we separate ourselves from the vital processes of life.

I suppose a great many dull men must try to teach, and if dull men have to teach, they have to teach by method that dull men can follow. But they never teach anybody anything. It is merely that the university, in order to have a large corps, must go through the motions; but the real vital processes are in spots, in such circumstances, and only in spots, and you must hope that the spots will spread. You must hope that there will enter in or go out from these little nuclei the real juices of life.

What we mean, then, by criticising the American college is not to discredit what we are doing or have done, but to cry ourselves awake with regard to the proper processes.

....I have been thinking,as I sat here tonight, how little, except in coloring and superficial lines, a body of men like this differs from a body of undergraduates. You have only to look at a body of men like this long enough to see the mask of years fall off and the spirit of the younger days show forth, and the spirit which lies behind the mask is not an intellectual spirit: it is an emotional spirit.

It seems to me that the great power of the world - namely, its emotional power - is better expressed in a college gathering than in any other gathering. We speak of this as an age in which mind is monarch, but I take it for granted that, if that is true, mind is one of those modern monarchs who reign but do not govern. As a matter of fact, the world is governed in every generation by a great House of Commons made up of the passions; and we can only be careful to see to it that the handsome passions are in the majority.

A college body represents a passion, a very handsome passion, to which we should seek to give greater and greater force as the generations go by - a passion not so much individual as social, a passion

for the things which live, for the things which enlighten, for the things which bind men together in unselfish companies."

So far, we are quoting words spoken thirty years ago; it is not my intention to disobey Wilson; he himself asks for contradiction. And I think that I should like to contradict his vision of all of us living together. We would all go to pieces in such an undertaking. However, taking issue with his too simple conclusion, I greatly rejoice in his description of what is actually going on in a college. That we, the professors and the students, render a service to the community. And that the students in our class rooms should not be told that they get their money's worth, whereas, they should experience that learning is as representative of the life of society as football where they do make sacrifices so gladly.

When a boy is allowed to read Shakespeare, we ask him to keep Shakespeare alive. When we ask him to learn mathematics, we ask him to support the scientific spirit. Without millions of people able to follow, willing to participate, ready to listen, not one of the subjects which we teach may survive. Our poems, our books, our problems shout into the ears of youth: Listen lest we die. And education is representative of creation because it calls in generation after generation to keep alive the creations of the universe. This is service.

In the second phase of the industrial era, the phase of mass production, men forgot the frailty of all human creations. They saw the millions rush for an education just the same as for a toothpaste, and so, they began to recommend their goods and ideas like the producers of toothpaste. Looking around in this Western World, we may well realize again how imperilled the future life of man on this planet is. How many regimes teach their people more how to die and how to destroy than how to keep the spirit of creation alive.

And I feel great admiration for the President of Princeton who gave up his Presidency in disappointment and mourning because the second phase of the industrial era condemned his plans for the future college to fail. Also, we may now draw a clear and distinct line between instruction and education. In every process of teaching, the two things are together: instruction and education. Instruction is supplying a thing in demand: French, Philosophy, Music. Education is asking for a man that is willing to listen lest we die. When we instruct, we sell our knowledge as hired men. When we educate, we take our students into our confidence as responsible for the survival of the things we ourselves stand for. No instructor who is in love with his subject matter, can fail to look for allies in his struggle to let that part of creation of which he is the trustee, by virtue of his knowledge, survive beyond his own span of life. And so every generation, in educating the next, selects the important truth which compells us to insist, "Listen, lest it die."

6. Conclusion: The staff of a college.

We may summarize the situation as it exists, in the third phase of the industrial revolution, with the college still spell bound by giving in to the first and second phase.

1. In society, the scientific notions of time and space have penetrated. These notions, however, do not apply to living beings, but to nature only. Living beings thrive only on a balance between inner and outer space, forward perspective and backward respect.

2. The insistance on this balance creates the present, and this insistance is performed by speech, in all its variety, including science. All speech is representative of creation, especially the most carefully organised process of people speaking together: education.

3. Education is neither scientific nor technical. That is instruction. Education represents creation. For that reason, its language never is scientific. It is more than scientific, more than idiomatic, more than conventional: it represents to the student the power to re-establish the right relations between the scientific, the idiomatic and the conventional, under the pressure from the future.

4. A staff of a college is compelled to develop a common language, beyond the languages of its specialists, again and again. This language must be anthropomorphic. We do not ask the scientific question about time and space but our question about our place and date in time and space. The question and the answer result from our having to overcome our idiomatic and scientific particularities. Hence, the question can only be asked by all of us together; the answer can only be given by all of us together. In other words, the common language of a staff of a college, must be the result of a daily new effort as we go along. The destruction of our common language is in process constantly. We have to insist on a special effort to offset this perpetual decay, by re-establishing our direction into the future.

5. As long as we feign that the students may work out their own salvation and that we are facilities, for them, we deprive them of the process of education; we merely instruct. Teachers are difficulties. They have to insist. They may insist on petty things like marks or examinations or on important things; insist they must. Otherwise, the student mistakes the college as an opportunity for social climbing. He must be made to realize that education is a service rendered to the community by representing the future relations of the community. We shall see that the staff of the liberal arts college is not prepared today to insist successfully.

F. Rosenstock Huessy