

The **BOISI CENTER** *for*

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VOCATION
IN THE
AMERICAN IMAGINATION

Reading Packet 5: Good Work

Boisi Center 2018-2019 Graduate Symposium on Religion and Politics

VOCATION IN THE AMERICAN IMAGINATION

Table of Contents

Rainer Maria Rilke. *Letters of Rainer Maria Rilke, 1892-1910*. Trans. Jane Bannard Greene and M. D. Herter Norton. W. W. Norton & Company, Inc.: 1969. [Pp. 1.]

_____. *Auguste Rodin*. Trans. Jessie Lemont and Hans Trausil. New York: Sunwise Turn Inc., 1919. [Pp. 1-6.]

E. F. Schumacher. "Education for Good Work." *Good Work*. Harper: 1979. [Pp. 28-34.]

From Rilke's letter to Rodin on 22 September, 1902:

...Why do I write you these verses? Not because I dare to believe that they are good; but it is the desire to draw near to you that guides my hand. You are the only man in the world who, full of equilibrium and force, is building himself in harmony with his work. And if that work, which is so great, so just, has for me become an event which I could tell of only in a voice trembling with awe and homage, it is also, like you yourself, an example given to my life, to my art, to all that is most pure in the depths of my soul.

It was not only to do a study that I came to be with you, it was to ask you: how must one live? And you replied: by working. And I well understand. I feel that to work is to live without dying. I am full of gratitude and joy. For since my earliest youth I have wanted nothing but that. And I have tried it. But my work, because I loved it so much, has become during these years something solemn, a festival connected with rare inspirations; and there were weeks when I did nothing but wait with infinite sadness for the creative hour. It was a life full of abysses. I anxiously avoided every artificial means of evoking the inspirations, I began to abstain from wine (which I have done for several years), I tried to bring my life close to Nature itself... But in all this which was doubtless reasonable, I didn't have the courage to bring back the distant inspirations by working. Now I know that it is the only way of keeping them. And it is the great rebirth of my life and of my hope that you have given me. And that is also the case with my wife; last year we had rather serious financial worries, and they haven't yet been removed: but I think now that diligent work can disarm even the anxieties of poverty. My wife has to leave our little child, and yet she thinks more calmly and impartially of that necessity since I wrote her what you said: "Travail et patience." I am very happy that she will be near you, near your great work. One cannot lose oneself near you...

From Rilke's *Auguste Rodin*:

Rodin was solitary before fame came to him and afterward he became, perhaps, still more solitary. For fame is ultimately but the summary of all misunderstandings that crystalize about a new name.

Rodin's message and its significance are little understood by the many men who gathered about him. It would be a long and weary task to enlighten them; nor is this necessary, for they assembled about the name, not about the work,—a work that has grown far beyond this name's

sound and limitations, and that has become nameless as a plain is nameless or a sea that has a name but on the map, in books, and to men, but which is, in reality, but distance, movement and depth.

The work that is to be spoken of in these pages developed through long years. It has grown like a forest and has not lost one hour. One walks among these thousand forms overwhelmed with the imagination and the craftsmanship which they represent, and involuntarily one looks for the two hands out of which this world has risen. One thinks of how small man's hands are, how soon they tire, and how little time is given them to move. And one longs to see these hands that have lived like a hundred hands; like a nation of hands that rose before sunrise for the accomplishment of this work. One asks for the man who directs these hands. Who is this man?

He is a man rich in years; and his life is one that cannot be related. It began and still continues; stretches out deeply into a great age, and to us, it seems as though it had passed many hundreds of years ago. It perhaps had a childhood; a childhood in poverty—dark, groping and uncertain. And maybe it possesses this childhood still, for, says St. Augustine somewhere, whither should it have gone? It holds, perchance, all its past hours, the hours of expectation and abandonment, the hours of doubt and the long hours of need. It is a life that has lost nothing and has forgotten nothing; a life that has absorbed all things as it passed, for only out of such a life as this, we believe, could have risen such fullness and abundance of work; only such a life as this, in which everything is simultaneous and awake, in which nothing passes unnoticed, could remain young and strong and rise again and again to high creations. Perchance the time will come when someone will picture this life, its details, its episodes and its conflicts. Someone will tell a story of a child that often forgot to eat because it seemed more important to him to carve inferior wood with a cheap knife, and someone will relate some event of the days of early manhood that contained promise of future greatness—one of those incidents that are intimate and prophetic.

Perhaps some such thought as that which, five hundred years ago, a monk expressed to young Michel Colombe, may have suggested itself to Rodin on one of the crossways, at the beginning of his work: "Travaille, petit, regarde tout ton saoul et le clocher à jour de Saint Pol, et les belles oeuvres des compagnons, regarde, aime le bon Dieu, et tu auras la grâce des grandes choses." "And thou wilt have the grace of the great things." For it was just that which Rodin was seeking: the grace of the great things...

...His art was not built upon a great idea, but upon a minute, conscientious realization, upon the attainable, upon a craft.

There was no haughtiness in him. He pledged himself to a humble and difficult beauty that he could oversee, summon and direct. The other beauty, the great beauty, had to come when everything was prepared, as animals come to a drinking-place in the forest in the late night when nothing foreign is there.

With this awakening Rodin's most individual work began. Not until now had all the traditional conceptions of plastic art become worthless to him. Pose, grouping, composition now meant nothing to him. He saw only innumerable living surfaces, only life. The means of expression which he had formed for himself were directed to and brought forward this aliveness.

The next task was to become master of himself and of his abundance. Rodin seized upon the life that was everywhere about him. He grasped it in its smallest details; he observed it and it followed him; he awaited it at the cross-roads where it lingered; he overtook it as it ran before him, and he found it in all places equally great, equally powerful and overwhelming. There was not one part of the human body that was insignificant or unimportant: it was alive. The life that was expressed in faces was easily readable. Life manifested in bodies was more dispersed, greater, more mysterious and more eternal. Here it did not disguise itself; it carried itself carelessly where there was carelessness and proudly with the proud. Receding from the stage of the face it had taken off its mask and concealed itself behind the scenes of garments. Here in the body Rodin found the world of his time as he had recognized the world of the Middle Ages in the cathedrals. A universe gathered about this veiled mystery—a world held together by an organism was adapted to this organism and made subject to it. Man had become church and there were thousands and thousands of churches, none similar to the other and each one alive. But the problem was to show that they were all of One God.

For years Rodin walked the roads of life searchingly and humbly as one who felt himself a beginner. No one knew of his struggles; he had no confidants and few friends. Behind the work that provided him with necessities his growing work hid itself awaiting its time. He read a great deal. At this time he might have been seen in the streets of Brussels always with a book in his hand, but perhaps this book was but a pretext for the absorption in himself, in the gigantic task that lay before him. As with all creative people the feeling of having a great work before him was an incitement, something that augmented and concentrated his forces. And if doubts or uncertainties assailed him, or he was possessed of the great impatience of those who rise, or the fear of an early death, or the threat of daily want, all these influences found in him a quiet, erect resistance, a defiance, a strength and confidence—all the not-yet-unfurled flags of a great victory...

...This effect of atmosphere, which is the monumental principle of Rodin's art, is wonderfully achieved in "The Citizens of Calais." These sculptural forms seen from a distance are not only surrounded by the immediate atmosphere, but by the whole sky; they catch on their surfaces as with a mirror its moving distances so that a great gesture seems to live and to force space to participate in its movement.

This impression is conveyed also by the figure of the slender youth who kneels with outstretched, imploring arms. Rodin has called this figure "The Prodigal Son," but it has recently received the name—from whom or from whence no one knows—of "Prière". The gesture of this

figure raises it even beyond this name. This is no son kneeling before his father. A God is necessary to him who thus implores and in him are all who need this God. This Prayer in stone reaches out to such distance that the figure seems to be withdrawn into a great isolation.

Such, too, is the "Balzac" to whom Rodin has given a greatness which, perhaps, overtowers the figure of the writer. Rodin has seized upon the essence of Balzac's being, has not confined himself to the limitations of his personality, but has gone beyond into his most extreme and distant possibilities. These mighty contours might have been formed in the tombstones of by-gone nations.

For years Rodin was entirely absorbed in this figure. He visited Balzac's home, he went to the landscapes of the Touraine that rise continually in Balzac's books; he read his letters, he studied the portraits of Balzac and he read his works again and again. On all the intricate and intertwining roads of these works he was met by the people of Balzac, whole families and generations, a world that still seemed to receive life from its creator. Rodin saw that all these thousands of people, no matter what their occupation or their life, contained him who had created them. As one may perceive the character and the mood of a play through the faces of an audience, so he sought in all these faces him who still lived in them. He believed like Balzac in the reality of his world and he became for a time a part of it. He lived as though Balzac had created him also, and he dwelt unnoticed among the multitude of his people. Thus he gathered his impressions. The actual world appeared at this time vague and unimportant. The daguerreotypes of Balzac offered only general suggestions and nothing new. The face which they represented was the one he had known from boyhood days. The one that had been in the possession of Stéphan Mallarmé, which showed Balzac without coat and suspenders, was the only one which was more characteristic. Reminiscences of contemporaries helped him; the words of Théophile Gautier, the notes of the Goncourts, and the beautiful essay by Lamartine. Beside these pen portraits there was only the bust by David in the Comédie Française and a small picture by Louis Boulanger. Completely filled with the spirit of Balzac, Rodin, with the aid of these auxiliaries, began to model the figure of the writer. He used living models of similar proportions and completed seven perfectly executed portraits in different positions. The models were thick-set, medium-sized men with heavy limbs and short arms. After these studies he created a Balzac much like the one in Nadar's daguerreotype. But he felt this was not final. He returned to the description of Lamartine, to the lines: "He had the face of an element," and "he possessed so much soul that his heavy body seemed not to exist." Rodin felt that a great part of his task was suggested in these sentences. He approached nearer its solution by dothing the seven figures with monk's cowls, the kind of garment that Balzac was wont to wear while at work. He created a Balzac with a hood, a garb much too intimate, the figure much too retired into the stillness of its disguise.

Rodin slowly developed form after form. At last he saw Balzac. He saw a mighty, striding figure that lost all its heaviness in the fall of its ample cloak. The hair brisded [sic] from

the nape of the powerful neck. And backward against the thick locks leaned the face of a visionary in the intoxication of his dream, a face flashing with creative force: the face of an element. This was Balzac in the fullness of his productivity, the founder of generations, the waster of fates. This was the man whose eyes were those of a seer, whose visions would have filled the world had it been empty. This was the Balzac that Creation itself had formed to manifest itself and who was Creation's boastfulness, vanity, ecstasy and intoxication. The thrown-back head crowned the summit of this figure as lightly as a ball is upheld by the spray of a fountain. There was no sense of weight, but a magnificent vitality in the free, strong head.

Rodin had seen in a moment of large comprehension and tragic exaggeration his Balzac and thus he created him. The vision did not fade, it only changed.

The comprehensiveness which gave breadth to Rodin's monumental works gave to the others also a new beauty; it gave them a peculiar nearness. There are among the more recent works small groups that are striking because of their concentration and the wonderful treatment of the marble. The stones preserve, even in the midst of the day, that mysterious shimmer which white things exhale in the twilight. This radiance is not the result of the vibrant quality of the points of contact alone, but is due in part to the flat ribbands of stone that lie between the figures like small bridges which connect one form with the other over the deepest clefts in the modeling. These ribband fillings are not incidental, but are placed there to prevent too sharp an outline. They preserve in the forms that otherwise would appear too clear cut an effect of roundness; they gather the light like vases that gently and continuously overflow. When Rodin seeks to condense the atmosphere about the surfaces of his works, the stone appears to almost dissolve in the air, the marble is the compact, fruitful kernel, and its last softest contour the vibrating air. The light touching the marble loses its will, it does not penetrate into the stone, but nestles close, lingers, dwells in the stone.

This closing up of unessential clefts is an approach to the relief. Rodin planned a great work in relief in which there were to be effects of light such as he achieved in the smaller groups. He constructed a column about which a broad ribband of relief winds upward. This encircling ribband conceals a staircase which ascends under arched vaultings. The figures in this ascending relief are modeled and placed so as to receive an effect of life and vibrance from the atmosphere and lighting.

A plastic art will some time rise which will disclose the secret of twilight as it is related to those sculptures that stand in the vestibules of old cathedrals.

This "Monument of Work" represents a history of work which develops upon these slowly rising reliefs. The long line begins in a lower chamber or crypt with the figures of those who have grown old in mines. The procession traces its steps through all the phases of work, from those who work in the roar and red glow of furnaces to those who work in silence in the light of a great idea: from the hammers to the brains. Two figures guard the entrance, Day and

Night, and upon the summit of this tower stand two winged forms to symbolize the Blessings descending from the luminous heights. Rodin did not conceive work as a monumental figure or a great gesture; for work is something near, it takes place in the shops, in the rooms, in the heads, in the dark.

He knows, for he, too, worked; he worked incessantly; his life passed like a single working day.

Rodin had several studios, some that are well-known in which visitors and letters found him. There were others in out-of-the-way, secluded places of which no one knew. These rooms were like cells, bare, poor and grey with dust, but their poverty was like the great, grey poverty of God out of which trees bud in March. Something of the Spring was in each of these rooms, a silent promise and a deep seriousness.

In one of these studios "The Tower of Work" has risen. Now that it is accomplished, it is time to speak of its significance. Some time after this monument has been erected it will be recognized that Rodin willed nothing that was beyond his art. The body of work here manifests itself as did formerly the body of love:—it is a new revelation of life. This creator lived so completely in his conceptions, so entirely in the depths of his work, that inspiration or revelation came to him only through the medium of his art. New life in the ultimate sense meant to him, new surfaces, new gestures. Thus to him the meaning of life became simple, he could err no more.

With his own development Rodin has given an impetus to all the arts in this confused age. Some time it will be realized what has made this great artist so supreme. He was a worker whose only desire was to penetrate with all his forces into the humble and difficult significance of his tools. Therein lay a certain renunciation of Life, but in just this renunciation lay his triumph, for Life entered into his work.



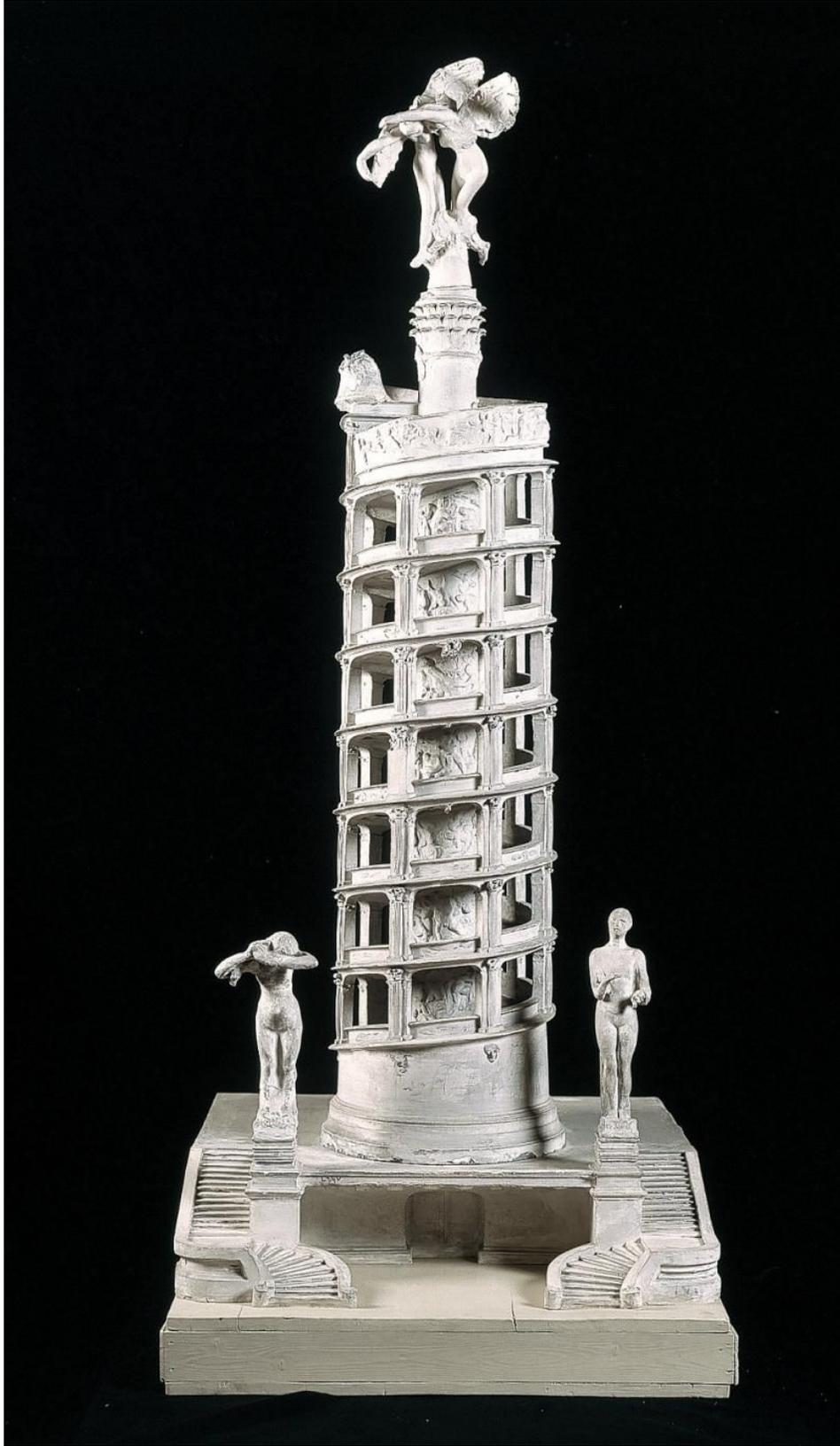
“Citizens of Calais”



“The Prodigal Son”



“Balzac”



“Tower of Work”

GOOD WORK

E. F. Schumacher

PREFACE

When E. F. Schumacher died in September 1977, his friend Barbara Ward described him as belonging to that intensely creative minority who have changed the direction of human thought. And his two books *Small is Beautiful* and *A Guide for the Perplexed* would alone ensure that his ideas will remain very much alive.

Fritz Schumacher's ideas were the product of a highly original and creative mind; they are generally radical, demanding drastic alterations in conventional ways of thinking and doing; and they have a universal quality about them, which appeals to countless people of different ages, classes, races, and shades of political and religious belief. But I think that there is an even more uncommon quality about his ideas, which is that they lend themselves to, indeed invite, action.

The most obvious example is his concept of intermediate technology. The critical role of technology in economic development was first brought into perspective by Schumacher in a report prepared in 1962 for the government of India. Three years later, a few of us helped him to start the intermediate Technology Development Group in London to implement the idea, to develop and make known technologies appropriate to the needs and resources of poor people in poor communities: tools and equipment deliberately designed to be relatively small, simple, capital-saving, and environmentally nonviolent. Today, there are more than twenty similar groups operating in as many countries, and the concept has been taken up by UN agencies, governments, and voluntary organizations throughout the world. It is now recognized as being every bit as relevant to the rich countries as to the poor.

Looking back on more than twenty years of work and friendship with Fritz Schumacher, I am struck by the consistency with which his work has changed the course of events. When he was in his thirties, while working as a farm laborer in England, he drew up a plan for a new international monetary payments clearing system, which was immediately adopted by Lord Keynes as the official U.K. government proposal on the subject. A few years later he was the principal author of the famous Beveridge report on full employment. In the 1950s and 60s as economic advisor to the British coal industry he became a persistent--and in official eyes often highly unpopular--one-man early warning system on the dangers of over dependence on oil, and the even greater dangers of nuclear power. During this time he became president of the Soil Association, a director of the Scott Bader Commonwealth, the pioneer common-ownership company in Britain, and chairman of the Intermediate Technology Group.

Once the Group was started, Schumacher continued his analysis of the impact of conventional technology and its supporting structures upon people, upon living nature, and upon nonrenewable resources. In *Small is Beautiful* he launched a powerful attack on conventional economics and technology, and the value system supporting both. But he did not stop there; he also mapped out a sane route toward a sustainable way of life. This was followed up by *Guide for the Perplexed*, which offers the individual a philosophical framework, a guide to the moral values that underpin *Small Is Beautiful*.

The present book, *Good Work*, is compiled mainly from a series of lectures he gave in the United States during the mid-1970s, a tour during which some sixty thousand people heard him speak, and which culminated in a meeting at the White House with President Carter. Three chapters are based on earlier written essays; they have been included for their relevance to the subject of good work.

In many respects the very starting point of *Good Work* is a reflection, or rather an extension, of both earlier books. At the heart of our system of work lies our system of values, and more precisely, our view of the individual and his relationships with others. By way of illustration, consider one of the current pseudo-intellectual clichés, that work is part of the Protestant ethic and that a more enlightened view of it is (presumably) that the less work you can get away with, the better. This is a cynical and degraded view of human nature (certainly not subscribed to by any religion that I know of) because it assumes that money is the sole reason for working. Set this view against Schumacher's opening remarks in this book, in which he identifies three purposes of human work: to produce necessary and useful goods and services; to enable us to use and perfect our gifts and skills; and to serve, and collaborate with, other people, so as to "liberate ourselves from our inborn egocentricity."

You do not have to prefer this interpretation of work, and of what people and life are about, to enjoy this book; but you will enjoy the book all the more if you do, because *Good Work* is an exploration of the political, managerial, social, and economic consequences of conventional technology (and therefore of conventional values), and of alternatives that are already becoming visible: alternatives that in one way or another support the three purposes of human work identified by Schumacher. Throughout the book he draws freely on his personal experience of involvement in such alternatives, whether of management, ownership, or technology: his work in the National Coal Board, with the Intermediate Technology Development Group, with Scott Bader, with the Soil Association, and in India, Zambia, and other developing countries.

Taken as a whole *Good Work* rounds off and makes explicit Schumacher's case that the choice of technology is one of the most critical choices now confronting any country, rich or poor. The poor countries must secure technologies appropriate to their needs and resources-- Intermediate technologies--if the rural masses are to be given a chance to work themselves out of poverty; but the rich countries probably stand even more in need of a new technology, smaller, capital-saving, less rapacious in its demands on raw materials, and environmentally nonviolent. The people of poor and rural countries must

be helped to raise themselves to a decent standard of living. We ourselves must also work for a more modest, nonviolent, sustainable life-style. That is surely the way toward greater equality between and within nations.

The sixty thousand people who heard Schumacher give these talks will, I am sure, be glad that the editing has been kept to a minimum; the temptation to reduce the lectures to formal essays has been resisted. The fortunate result is that here we have Fritz Schumacher at his best, on his feet, often thinking aloud, bringing his personality and creative energy, as well as his remarkable mind, to bear on what is certainly one of the most critical tasks that now confronts rich and poor societies alike: how to enable us to do creative and satisfying work, earn a decent living, live in a becoming way; and having done so, as George Kennan once put it, to leave the planet earth in a condition at least no less capable of supporting life than that in which we found it.

GEORGE MCROBIE

PROLOGUE

A recent article in the London Times began with these words: "Dante, when composing his visions of hell, might well have included the mindless, repetitive boredom of working on a factory assembly line. It destroys initiative and rots brains, yet millions of British workers are committed to it for most of their lives." The remarkable thing is that this statement, like countless similar ones made before it, aroused no interest: there were no hot denials or anguished agreements; no reactions at all. The strong and terrible words--"visions of hell," "destroys initiative and rots brains," and so on--attracted no reprimand that they were misstatements or over-statements, that they were irresponsible or hysterical exaggerations or subversive propaganda; no, people read them, sighed and nodded, I suppose, and moved on. Not even the ecologists, conservationists, and doom watchers are interested in this matter. If someone had asserted that certain man-made arrangements destroyed the initiative and rotted the brains of millions of birds or seals or wild animals in the game reserve of Africa, such an assertion would have been either refuted or accepted as a serious challenge. If someone had asserted that not the minds and brains of millions of workers were being rotted but their bodies, again there would have been considerable interest. After all, there are safety regulations, inspectors, claims for damages, and so forth. No management is unaware of its duty to avoid accidents or physical conditions which impair workers' health. But workers' brains, minds, and souls are a different matter.

A recent semiofficial report, submitted by the British government to the Stockholm Conference, bears the title "Natural Resources: Sinews for Survival." The most important of all resources are obviously the initiative, imagination, and brainpower of man himself. We all know this and are ready to devote very substantial funds to what we call

education. So, if the problem is "survival," one might fairly expect to find some discussion relating to the preservation and, if possible, the development of the most precious of all natural resources, human brains. However, such expectations are not fulfilled. "Sinews for Survival" deals with all the material factors--minerals, energy, water, etc.-but not at all with such immaterial resources as initiative, imagination, and brainpower.

Considering the centrality of work in human life, one might have expected that every textbook on economics, sociology, politics, and related subjects would present a theory of work as one of the indispensable foundation stones for all further expositions. After all, it is work which occupies most of the energies of the human race, and what people actually do is normally more important, for understanding them, than what they say, or what they spend their money on, or what they own, or how they vote. A person's work is undoubtedly one of the most decisive formative influences on his character and personality. However, the truth of the matter is that we look in vain for any presentations of theories of work in these textbooks. The question of what the work does to the worker is hardly ever asked, not to mention the question of whether the real task might not be to adapt the work to the needs of the worker rather than to demand that the worker adapt himself to the needs of the work--which means, of course, primarily to the needs of the machine.

Let us ask then: How does work relate to the end and purpose of man's being? It has been recognized in all authentic teachings of mankind that every human being born into this world has to work not merely to keep himself alive but to strive toward perfection. To keep himself alive, he needs various goods and services, which will not be forthcoming without human labor. To perfect himself, he needs purposeful activity in accordance with the injunction: "Whichever gift each of you have received, use it in service to one another, like good stewards dispensing the grace of God in its varied forms." From this, we may derive the three purposes of human work as follows:

First, to provide necessary and useful goods and services.

Second, to enable every one of us to use and thereby perfect our gifts like good stewards.

Third, to do so in service to, and in cooperation with, others, so as to liberate ourselves from our inborn egocentricity.

This threefold function makes work so central to human life that it is truly impossible to conceive of life at the human level without work. "Without work, all life goes rotten," said Albert Camus, "but when work is soulless, life stifles and dies."

2. Towards a Human-Scale Technology

What is the nature, what are the characteristics of this our actual, present-day industrial society? Everything has a many-sided nature and many characteristics; by what standards are we going to distinguish the essential from the nonessential? If I try to do this "in the light of the Gospel," I must first define how the light of the Gospel appears to me.

First of all, it seems to me, the Gospels tell us that life is a school, a training ground, and cannot therefore be understood simply in its own terms. The Great Head-master's idea seems to be that we should not merely be comfortable (although comfort as such is not to be despised) but should learn something, strive after something, and with His help become something more than we are. This something is generally called "the Kingdom of Heaven," and the method of attaining it is described as loving God and loving our neighbor as ourselves. But the whole essence of the education is that it should proceed in freedom, that the end product should be persons and not puppets.

I shall therefore try to consider the characteristics of industrial society from the point of view of this all-important task.

Before I do so, I feel I should remind myself of at least one of the great parables in the Gospels, the parable of the wheat and the tares. It suggests that it is part of the great design that they are allowed to grow up together. If we take this seriously, we must expect to encounter the coexistence, almost inextricably inter-mixed, of great good and great evil in our society. For the indications--the signs of the times--are that the season is now pretty far advanced and the time of the harvest, when the wheat will be separated from the tares, may not be far off.

What indications? What signs of the times?

I think there are many, of which I shall mention only one: the extraordinary increase in the rate of change. If you would draw a curve of the rate of change, it would appear as an exponential, or logarithmic, curve of continuous acceleration. It is quite clear that no such curve can proceed for any length of time on this earth. It must come to a stop before long, and that must mean the end of an era and "the revaluation of all values" or, in the imagery of the Gospels, the separation of the wheat from the tares.

Looking at present-day industrial society I should expect therefore to find, inextricably intermixed, great good and great evil. Very likely it is mainly a matter of temperament which of the two impresses you most. But any view or description that includes only the one or the other would be likely to miss an important part of the truth.

Modern industrial society is immensely complicated, immensely involved, making immense claims on man's time and attention. This, I think, must be accounted its greatest evil. Paradoxical as it may seem, modern industrial society, in spite of an incredible proliferation of labor-saving devices, has not given people more time to devote to their all-important spiritual tasks; it has made it exceedingly difficult for anyone, except the most determined, to find any time whatever for these tasks. In fact, I think I should not go

far wrong if I asserted that the amount of genuine leisure available in a society is generally in inverse proportion to the amount of labor-saving machinery it employs. If you would travel, as I have done, from England to the United States and on to a country like Burma, you would not fail to see the truth of this assertion. What is the explanation of the paradox? It is simply that, unless there are conscious efforts to the contrary, wants will always rise faster than the ability to meet them.

The widespread substitution of mental strain for physical strain is no advantage from our point of view. Proper physical work, even if strenuous, does not absorb a great deal of the power of attention, but mental work does; so that there is no attention left over for the spiritual things that really matter. It is obviously much easier for a hard-working peasant to keep his mind attuned to the divine than for a strained office worker.

I say, therefore, that it is a great evil--perhaps the greatest evil--of modern industrial society that, through its immensely involved nature, it imposes an undue nervous strain and absorbs an undue proportion of man's attention. Of course, it might be otherwise. It is still conceivable, for instance, that hither-to undeveloped countries might pick and choose what they wish to take over from Western industrialism, adopting only those things which really facilitate and enrich life while rejecting all the frills and harmful elaborations. But there is no sign of this happening anywhere in the world. On the contrary, it is cinemas, transistor sets, airplanes and such like which catch on much more quickly than anything really worthwhile.

Whether the tendency to raise wants faster than the ability to meet them is inherent in industrialism as such or in the social form it has taken in the West may be a debatable question. It is certain that it exists and that the social forms exacerbate it. Industry declares that advertising is absolutely necessary to create a mass market, to permit efficient mass production. But what is the great bulk of advertising other than the stimulation of greed, envy, and avarice? It cannot be denied that industrialism, certainly in its capitalist form, openly employs these human failings--at least three of the seven deadly sins--as its very motive force. From the point of view of the Gospels, this must be accounted the very work of the devil. Communism, which rejects and derides the Gospels, does not appear to be bringing forth anything better; its main claim is that it will shortly "overtake" (as they say) Britain or even America. British socialism once upon a time showed an awareness of this evil, which it attributed solely to the peculiar working of the private-enterprise-and-profit system. But today, I am afraid, British socialism has lost its bearings and presents itself merely as a device to raise the standard of living of the less affluent classes faster than could be done by private enterprise. However that may be, present-day industrial society everywhere shows this evil characteristic of incessantly stimulating greed, envy, and avarice. It has produced a folklore of incentives which magnifies individual egotism in direct opposition to the teachings of the gospel.

R. H. Tawney, one of the great ethical thinkers of our time, has spoken of "the straightforward hatred of a system which stunts personality and corrupts human relations by permitting the use of man by man as an instrument of pecuniary gain." The "system" he refers to is again our modern industrial society, and again it may be a debatable issue

whether these evils are the result of industrialism as such or of the particular capitalist form in which it made its appearance in the West. I myself fear it is industrialism as such, irrespective of the social form. In what way does it stunt personality? Whatever Mr. Tawney may have had in mind, I should say: mainly by making most forms of work--manual and white-collared--utterly uninteresting and meaningless. Mechanical, artificial, divorced from nature, utilizing only the smallest part of man's potential capabilities, it sentences the great majority of workers to spending their working lives in a way which contains no worthy challenge, no stimulus to self-perfection, no chance of development, no element of Beauty, truth, or Goodness. The basic aim of modern industrialism is not to make work satisfying but to raise productivity; its proudest achievement is labor saving, whereby labor is stamped with the mark, of undesirability. But what is undesirable cannot offer dignity so the working life of a laborer is a life without dignity. The result, not surprisingly, is a spirit of sullen irresponsibility which refuses to be mollified by higher wage awards but is often only stimulated by them.

In addition, industrial society, no matter how democratic in its political institutions, is autocratic in its methods of management. If the workers themselves were given more say in the organization of their work, they might be able to restore some interest and dignity to their daily tasks--but I doubt that they would. After all, they too, like everybody else, are members of modern industrial society and conditioned by the distorted scheme of values that pervades it. How should they know how to do things differently? It is a frequent experience that as soon as a workingman finds himself saddled with managerial responsibility he begins to develop an almost uncanny understanding for and sympathy with the current preoccupations of management. How, indeed, could it be otherwise? Modern industrialism has produced its own coherent system of values, criteria, measurements, etc.; it all hangs together and cannot be tampered with except at the risk of breakdown. If anyone said: "I reject the idolatry of productivity; I am going to ensure that every job is worthy of a man," he would have reason to fear that he might be unable to pay the expected wages or, if he did, that it would land him in the bankruptcy court. All the same, autocratic management, which treats men as "factors of production" instead of responsible human persons, is a grave evil leading to innumerable stunted or even wasted lives.

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If life is a "school of becoming," a school of self-development, the ideas of personal freedom and personal responsibility must become ever more firmly established. It may be utopian to hope that they will ever gain universal mastery on this earth--because good and evil tend to grow together; but, as ideas, they can and, I am sure, will become so powerful that ever greater forces will need to be mobilized by the evil one to resist them. In the ages of slavery, serfdom, and capitalist exploitation at its worst, great masses of people never looked upon themselves as potentially free and responsible. It is different today, even in concentration camps, forced-labor camps, and the like. The average factory worker may make precious little use--or even very damaging use - of his freedom, but he is in no doubt that he has it and that it is a precious thing. No matter how much these ideas are being sinned against, there can be no doubt, I suggest, that, as ideas, they are

today more firmly established than ever before. It is ideas that matter more than facts. It is not so long ago that ideas like colonialism, imperialism, "masters and men," and the like seemed perfectly reasonable; they do not any more. Many people, indeed, still argue against the practicability of freedom, of ensuring the dignity of the person, of self-determination, and so forth, but no one argues against the ideas as such.

All this is clearly visible when we look at the modern industrial system. It is indeed authoritarian and may become more so as the size of units increases. But neither the masters nor the men are any more taken in by authoritarianism. The masters are authoritarians if with a bad conscience; the men accept them only sullenly and only when they must. There are everywhere discussions on the social obligations of business. People realize that a firm is responsible not only to its share-holders but also to its employees, its customers, and the community as a whole. In Britain, we have a substantial public sector, in which determined efforts are being made to do justice to all, and institutional means have been devised to this end. There are no shareholders; but the employees demand "accountability" through joint consultation, the customers through consumers councils, and the community through Parliament and the responsible minister.

From my point of view, it is not of decisive importance whether these arrangements work "better" or "worse" than undemocratic enterprise; they are better, because they are more in line with the meaning of human life than any wealth-producing machine--however successful--that is based upon and motivated by the acquisitive instinct.

Let us return to the thought that life is a school. As one advances in school the tasks and examinations become more difficult. But the problems set by the Great Schoolmaster also become more meaningful and more to the point. Modern industry, by producing comfort on a scale unheard of in human history yet almost destroying the real educational function of daily work, quite clearly sets the most difficult examination task: how not to lose sight of the spiritual in face of these overwhelming temptations. Many people--albeit a small minority--are rising to this task. I think we are living in an age of increasing polarization. A great mass of gray is being separated out into some very black and some very white units. As one might expect, the process seems most advanced in the United States; very great evils are coming all the time from over there (and we, in Europe, strive exceedingly hard to copy and adopt them). But make no mistake: there is also a great drive toward, and consciousness of, goodness in that turbulent society, more plain goodness, I think, than in Europe.

It is my personal belief that, speaking from a worldly point of view, industrial society, unless radically reformed, must come to a bad end. Now that it has adopted cumulative growth as its principal aim, its end cannot be far off. But that does not mean that it will have failed in its purpose from the point of view of the Gospel. Out of the tremendous examination set by this monstrous development many single individuals will emerge triumphant; uncorrupted and hence incorruptible. This is all that really matters.

This does not mean that we can wash our hands of this worldly failure; for only those can triumph who never cease for a moment, no matter what are the odds against them, to

fight evil and try to restore order. "Woe unto the world because of offenses? for it must needs be that offenses come; but woe to that man by whom the offense cometh? " (Matthew 18:7). Anyone who merely "washes his hands" is one of those by whom offense comes.

Why should industrial society fail? Why should the spiritual evils it produces lead to worldly failure~ From a severely practical point of view, I should say this:

1. It has disrupted, and continues to disrupt, certain organic relationships in such a manner that world population is growing, apparently irresistibly, beyond the means of subsistence.
2. It is disrupting certain other organic relationships in such a manner as to threaten those means of subsistence themselves, spreading poison, adulterating food, etc.
3. It is rapidly depleting the earth's nonrenewable stocks of scarce mineral resources--mainly fuels and metals.
4. It is degrading the moral and intellectual qualities of man while further developing a highly complicated way of life the smooth continuance of which requires ever-increasing moral and intellectual qualities.
5. It breeds violence--a violence against nature which at any moment can turn into violence against one's fellow men, when there are weapons around which make nonviolence a condition of survival.

It is no longer possible to believe that any political or economic reform, or scientific advance, or technological progress could solve the life-and-death problems of industrial society. They lie too deep, in the heart and soul of every one of us. It is there that the main work of reform has to be done--secretly, unobtrusively. I think we must study nonviolence deep down in our own hearts. It may or may not be right to "ban the bomb." It is more important to overcome the roots out of which the bomb has grown. I think these roots are a violent attitude to God's handiwork instead of a reverent one. The unsurpassable ugliness of industrial society--the mother of the bomb - is a sure sign of its violence. "Blessed are the patient; they shall inherit the land," and "Blessed are the peacemakers; they shall be counted the children of God." (Matthew 5:5,9, Knox translation.)

I shall be asked to declare what any one of us can do in this very difficult situation. What did Christians do during the breakdown of the Roman Empire? They did not run away but went to work cheerfully among the apparent doom. The degeneration of the industrial system--that is, its ever-intensified idolatry of getting rich quickly--offers everywhere ample opportunities for bringing light into dark places. Everywhere the values of freedom, responsibility, and human dignity have to be openly affirmed, even where a neglect of these values would appear to allow the big industrial machine to run more smoothly and more efficiently. It may not be possible to do this without causing

offense. To tell a young person that his personal integrity is more important than his career may sound almost like sabotage in the ears of the efficiency experts. To insist that the reckless waste of natural resources is a crime does not sound cooperative to those who think that the highest possible rate of consumption is the only worth-while pursuit for mortal man.

It is the individual, personal example that counts. The greatest "doing" that is open to every one of us, now as always, is to foster and develop within oneself a genuine understanding of the situation which confronts us, and to build conviction, determination, and persuasiveness upon such understanding. Let us face it, to look at modern industry in the light of the Gospels is not the fashion of the day, and the diagnosis I have given here is not acceptable, at this point in time, to the great majority of our contemporaries. What, then, is the use of asking for a "program of action"? Those who have understood know what to do. They also know that, although in a minority, they do not stand alone.

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With a name like mine, I find it easy to understand that to be a good shoemaker it is not enough to know a lot about making shoes; you also have to know about feet. The shoe made for the big fellow does not fit the foot of the little fellow. The small foot needs a different shoe, not an inferior one but one of the right size. Modern technology, generally speaking, makes good shoes only for big fellows. It is geared to mass production; it is highly sophisticated and enormously capital-costly. Of course it does not fit anywhere but in or near the biggest cities or megalopolitan areas.

The simple answer to this problem does not seem to have occurred to many people. It is: let us mobilize at least a small part of our intellectual and other resources to create a technology that does fit the smaller places.

Incredible amounts of money are being spent in trying to cope with the relentless growth of megalopolitan areas and in trying to infuse new life into "development areas." But if you say, Spend a little bit of money on the creation of technologies that fit the given conditions of development areas, people accuse you of wanting to take them back into the Middle Ages.

One thing, however, can be asserted with confidence: unless suitable, appropriate technologies for efficient production outside the main conurbations are created, the destructive tendencies of megalopolitanization will continue to operate with all that this implies socially, politically, morally, environmentally, and resource-wise.

Having traced the effect of modern technology upon the nature of work and the pattern of human settlement, let us now consider a third example, a highly political one, its effect on human freedom. This is undoubtedly a tricky subject. What is freedom? Instead of going into long philosophical disquisitions, let us ask the more or less rebellious young what they are looking for.

Their negations are such as these: I don't want to join the rat race. Not be enslaved by machines, bureaucracies, boredom, ugliness.

I don't want to become a moron, robot, commuter.

I don't want to become a fragment of a person.

I want to do my own thing.

I want to live (relatively) simply.

I want to deal with people, not masks.

People matter. Nature matters. Beauty matters. Wholeness matters.

I want to be able to care.

All this I call a longing for freedom.

Why has so much freedom been lost? Some people say, Nothing has been lost; but people are asking for more than before. Whichever way it is: there is a gap between supply and demand of this most precious thing--freedom. Has technology anything to do with this? The size and complexity of organizations certainly has a great deal to do with it. Why is the trend of the last hundred years toward bigger and bigger units? Nobody, except a few monomaniac tycoons, likes them. Why do we have to have them? The invariable answer is: Because of technological progress.

What we have to do now is not abandon technology, but become conscious of somewhere having taken a wrong turn. Under the influence of fossil fuel at throwaway prices, technology has taken the wrong turn, I suggest, in four directions.

First of all, there is a trend for everything to become bigger and bigger. (We call this quality "economies of scale.") This applies of course on the organizational level, but also on the purely technical level the units become bigger and bigger. The normal and standard size of brickworks in the nineteenth century produced ten thousand bricks a week. By the turn of the century it had risen to a hundred thousand bricks a week; today the standard size is between one and two million bricks a week. And now the Shah of Iran wants a five-million-bricks-a-week brickworks. That is one tendency, toward what I call gigantism.

The second tendency is that things are becoming, are made, ever more complex. The complexity of equipment, the ingenuity that is invested in quite humble things, is fantastic. I haven't seen it with my own eyes, but I was told that if you really want to be "with it" you should go and buy a tube of toothpaste--you squeeze it, and the toothpaste comes out in three different luscious colors. And it's so clever they don't even get mixed up; it's like a flag coming out in three colors. But also, the other day I traveled in a car,

and of course the boy who still survives in every man rejoices, because I was not subjected to the indignity of having to turn a handle to wind the window up or down, but I had to press a button. And I had a job to find the other button to get the thing down again?

Why this complexity? This complexity is a kind of disease. Even if it's not a question of cost, you can avoid its being immensely costly only by handing this production over to mindless machines, and mass-production machines. And also, of course, the more complex a thing is the more it tends to break down, and then where are you headed? You can't possibly repair it yourself, it's too complex. So you take it to a garage, and it costs you \$150, not to mention how long the car might be immobilized.

I traveled in the winter in Germany with a friend who had a splendid Mercedes, but the electrical system had developed a small fault and all the windows were stuck in different positions. He drove from garage to garage but there was no one who could penetrate the system, and all winter he drove in an icy blast. Finally in the spring he found someone to repair it for \$300. Is that a price worth paying so you don't have to turn the handle?

We joke about this but it is an extremely serious matter--that technology, although it was created by man, has become a force of its own; it has shaped man, a vast number of men, into little parrots that twitter and push and scrape to make things more and more complicated. And when they have found something that can actually be done, no matter how futile or dangerous it may be, such as Concorde or nuclear power, then they create a kind of Mafia to see that it gets done.

The third point is connected with the first and second. Things have become so capital-costly that you have to be already rich and powerful before you can really do anything. This is a very serious matter: for instance, to give only one example and not the prime example, take agriculture. You have highly scientific, highly chemicalized farming in very large units, and it is an outstanding fact that, if one wants to live off the land, supplying himself and his family with the wherewithal, he needs to be of quite exceptional industry and intelligence to make a very humble living. All the research has gone in the opposite direction, to ever-greater capital requirements. To start a farm on the established system, even if you believe in the established system, is so capital-intensive that you have to be rich to do it. So more and more people get excluded. This of course hits most massively the poor countries, who find that they can't do most of the things because they are so capital-intensive. An intermediate technology that would not require this capital is not readily available; so they are excluded. Then they are told just to go on buying it from the rich countries. And the fact is, with their developing they are becoming not more independent but more dependent.

The fourth criterion of this technological development I would call violence. When you look at it from this point of view, and widen the concept of violence beyond human warfare, you find--and ecologists have confirmed it--an ever-increasing warfare against nature, and violent attitudes: the belief that science can do everything, and so you can go bullheadedly along, dumping poisons in ever-increasing quantities on this thin film

around the globe, on which all life depends. If there are any unwanted side effects, science will deal with them. Or take medicine: the whole direction has been one to increasing violence. I know even from very sad family experience that the number of people who are the victims not of their diseases but of the cures prescribed for them is very great, and the damage done is often totally irreparable. Whereas preventive medicine is still virtually totally neglected. A very clever chap once said that if an ancestor of long ago would visit us today, what would he become astonished at: the skill of our dentists or the rottenness of our teeth? This is a very neat way of putting it; it shows we cannot reject, we have to be grateful for the skill of our dentists, because of the rottenness of our teeth. This is a mutual escalation: our teeth are still more rotten, and we are still more grateful for the dentists. A nonviolent approach to it would put the best of human intelligence into resolving the question Why are our teeth so rotten?

If this is a correct diagnosis of the development of the last hundred years--ever-bigger size, ever-bigger complexity, ever-bigger capital intensity, and ever-bigger violence then it would seem to follow that the cure must be sought in the opposite direction. But the cure is not found necessarily by going back, because in a hundred years, in the only knowledge that can accumulate, namely scientific knowledge, knowledge of dead matter really--there will be a great deal of progress. And things that were not possible to do very easily on a small scale in the nineteenth century we can do on a small scale now. But not when the engineers have been brainwashed and educated all their lives in the opposite direction, so they don't believe it. It is possible to make things smaller--I'm not saying in every instance, but as regards all basic human requirements.

Second, it is possible to do many things in a much simpler way. Any third-rate engineer can make a complicated apparatus more complicated, but it takes a touch of genius to find one's way back to the basic principles, which are normally fairly simple. I'm not saying that the good Lord has arranged the world everywhere in a simple manner. No, no, He has distributed quite nicely to keep us alert. We have to use our brains.....But certainly not in the way we are doing now. Once we go and get down to work, we find we learn to distinguish what is essential and what are sort of almost cancerous growths, almost cancerous. If you think in these terms, and look at modern machine tools, you then learn to distinguish between the tool and the machine tool. That, of course, should be the best that human ingenuity can make, and normally it is a very simple thing.

And third, if one realizes that the immense capital requirements are a principle of exclusion, are totally incompatible with any ideas of justice or equality, then one will systematically search for cheaper ways of doing things. I mentioned before the little boy in every man; I suppose there is a little boy even in every woman, not only a little girl. There is nothing more beautiful to me than tools; in fact, I always have to restrain myself from buying any number of tools, and have to remind myself that I wouldn't be able to find the time to use them. But I like the feeling of having good tools around--my tools are all kept in my study. ...That is really intelligence, a tool. A machine? It is perhaps a tool, but it's not a tool operated by man; it's a tool operated by a mindless mechanism. And

these mechanisms become bigger and more complex, and more and more attuned to mass production, and then they become immensely expensive.

Henry Ford started the Ford Motor Company with a capital of \$30,000. The dollar has gone down in purchasing value, mark it down by whatever you like-- mark it down by three, or four, or five, you have \$100,000. At a cost of \$ 100,000 you cannot change one screw in a modern motorcar. To have a new model now costs \$300,000,000 and takes four years of preparation. Who can afford it? I can't.

But, when Ford started, it was uncertain whether the steam engine wasn't better than the petrol engine: he could have switched from a petrol engine to a steam engine in the shortest possible time without disturbing anybody, and for very little money. Can't we look back in that direction? Can't we think more in terms of tools and learn to distinguish tools from machines, create facilities for people to become productive who have got it in them to do that which may then turn out to be extremely viable.

And fourth, if the thing has gone in the direction of violence, let's look in the direction of nonviolence. Nonviolence, in this context, refers to modes of production which respect ecological principles and strive to work with nature instead of attempting to force their way through natural systems, in the conviction that unintended damage and unforeseen side effects can always be undone by the further application of violence. All too often one problem is "solved" by creating several new ones. Poor societies cannot afford this kind of violence, and it may indeed be doubted whether the rich societies (or "sectors") can afford it much longer.

These four criteria or "guidelines" for new technological research and development may not appeal to everyone; all that can be said in their favor is that they have arisen out of actual work, not simply out of theorizing. Experience shows that whenever you can achieve smallness, simplicity, capital cheapness, and nonviolence, or, indeed, any one of these objectives, new possibilities are created for people, singly or collectively, to help themselves, and that the patterns that result from such technologies are more humane, more ecological, less dependent on fossil fuels, and closer to real human needs than the patterns (or life-styles) created by technologies that go for gigantism, complexity, capital intensity, and violence. It is incumbent on those who reject these criteria or guidelines to come forward with another set; because as long as there are no guidelines the search for alternatives cannot even begin.

Now this is real work. And the sooner we start this work on a systematic basis, the better. I rejoice in the fact that many people are starting, or have been active even for a number of years. But what now needs to be done is to make sure that we, whose strength is very small, don't all reinvent the wheel, that we get into such relationships that we can learn from one another and benefit from each other's experience.

I'll give you an example of real work, of nonviolent technology. I was asked by the President of Zambia to visit his country, and he received me at the state house. There he was sitting with his cabinet and he was holding a sheaf of papers in his hand and

introduced me quickly and said, "This is why we have asked you to come, what do we do? I have been stumping the country with our Five Year Plan, I have told everybody this is now the Bible'-and then with a grand gesture he threw the papers on the floor and said, "I now realize it was the wrong Bible."

What is wrong with it? It applies only to the cities around the Copper Belt, and to Lusaka, the capital, while wide rural areas are totally left out. One of the things the Zambian government was particularly interested in was improving nutrition: they don't starve there, but there is a lot of malnutrition because of what they call the "protein gap." To fill the protein gap, they had a slogan: "One egg a day for every Zambian." And they were building up egg production quite successfully. I visited a lot of these farmers, and I found them weeping over their eggs, which were covering the floors of their sheds. "What are you doing with them, are you hatching them, or what?" "No, we haven't got any packaging material to send them to market. The supply of egg trays--which used to come from South Africa, from Britain, from America--has somehow stopped, and we have nothing to do with these eggs. We can't take them to market in our trouser pockets. What are we to do? They are just rotting."

Lighthearted as I normally am, I said, "Well, why don't you make egg trays in Zambia?" "Of course, nobody in Zambia knew how to do it, nor did I. Coming back to London, we investigated. We found that virtually all the egg trays in the world are made by one multinational company. We contacted the European branch of this multinational company, and they said, "No problem? I mean, we'll build a factory in Lusaka-- how many do they want~" "Well, a rough calculation suggests about a million a year. It's a very small population, right in the beginning of development."

Long pause "Forget it. The smallest machine makes a million a month. So, unless you can somehow organize an All-Africa Common Market for Egg Trays, and build the roads for the lorries all coming out of Lusaka, to distribute the egg trays to the rural areas . " I said, "But this is the very opposite of helping people, the opposite of development, just to refer them to foreign trade, to importing stuff. Why don't you make a small plant? " "Oh no, we get many requests for small units, but our engineers say it would be totally uneconomic."

It was no go with them. We got a young fellow and gave him two jobs: first of all to redesign the egg tray,

which we considered very badly designed. (The multinational company does big business, but they don't seem to have a very good designer: when you fill the egg trays and put one on top of the other, the whole thing wobbles, and you still have to crate it to ship it, and crating is very expensive.) This job was taken to the Royal College of Art in London and within six weeks we had the perfect design, a perfectly stable assembly--tie it together with a string, ship it like that, not a single egg gets broken.

The second assignment was more difficult: to create a mini-plant. We did this with the Engineering Department of the University of Reading. It was going back to first

principles, the sort of work that any think tank does, not to start from where others have got to. The prototype was built and we found a small manufacturer. That plant has 2 percent of the capacity of the hitherto smallest plant, and 2 percent of the capital cost; and it's totally compatible. And now, what was the reaction of the formidable dinosaur, the multinational company, of whom so many of my young colleagues are terrified? They said, "Well, you know, we want to remain the kings of egg trays-that is our ambition in life. We have agreed that the small scale requirements we cannot meet--couldn't we come to some agreement? " They said, below this line of size it's yours, above that, it's ours. And in return for the privilege that they can remain the kings of egg trays, and not be disturbed by the little princes like myself, they gave us access to some of their know how at the most ticklish points in the works, namely the mold which forms the egg tray. A healthy cooperation has developed between the whale and the sardine.

I mention only this case but I could go on for a long time. Nobody should think this is a dream; this is an activity. This is possible. And while I am not suggesting that we could have a simplified technology to land people on the moon, I am suggesting that our experience implies that on all real human requirements that can be the case. And if we don't land people on the moon, I don't think the loss will be overwhelming. (I myself was initially quite in favor of the program and had quite a list of people. But when I found they all had to come back again I couldn't see the point of it.)

These are just a few indications of what I know can be done and needs to be done now. It requires systematic work. I don't think it requires a large part of the resources of a rich society. I would say 95 percent of the research and development people can play their games as before, but 5 percent should be diverted relevant to the future. Not that I would limit it to that, I would be happier if the percentage was greater; I just want to indicate how modest my proposals are. Small amounts are normally more difficult to mobilize than large.

All this is not just a spinning of theories, although everything has to begin by theories. This is now backed up by work, work that has been carried on over ten years and has spread to many places in the world. It has spread also inside the U.K.? where people say we need a different technology. This is not a recession. This is an end of an era. There's rising unemployment. These unemployed will not be automatically reabsorbed into these highly capitalized jobs. What is to become of them~ While the unemployment rises, the budgetary allocations are cut down. All sorts of needful things are not done. We are not going to go on waiting for Godot, and Godot never comes. In other words, we are not going to go on waiting for the central government. We are going to stand on our own two feet and do within the context of our community what needs doing. This sort of self-remembering is now coming, and people are realizing that in order to make what needs doing efficient and effective one must engage intellectual resources to create an appropriate, suitable technology. Recently I saw a film of Gandhi when he came to England in 1930. He disembarked in Southampton and on the gangway he was already overwhelmed by journalists asking questions. One of them asked, "Mr. Gandhi, what do you think of modern civilization? " And Mr. Gandhi said, "That would be a good idea." I think now the time has come when we can implement this good idea.

If one actually, consciously engages in work in these four directions-not all four may be feasible all at once one can also mobilize support from people who are going hell for leather in the opposite direction, because they are all a bit rattled. Of course if one simply says, What you are doing is terrible and you are this or that, and denounces it, then one doesn't get the best cooperation. But one can convince, if not the organizations, at least people in the organizations, that some- thing, some reorientation, is necessary and that they have the resources and they can do it without any strain.

My formula for this is a lifeboat. I have persuaded some big farmers in England to have a lifeboat, to separate out a bit of their land, which they don't need for making a living--they make their living on 95 percent of their land, and take 5 percent and run this as an organic unit or experimental unit to try to minimize their dependence on a very sophisticated and vulnerable industrial system. Well, after some persuasion this is actually happening. They are hard up as to who is going to manage this, because we haven't trained any people in non-chemical methods of farming. And of course it is harder now than it was fifty years ago, because the standardized farming, the chemicals, virtually irrespective of the quality of the soil, has lost us the traditional knowledge. Oh no, for this spot of land you take this and for that you take that, otherwise you get infestation. Why worry about infestation? You've got insecticides. Otherwise you get overrun with weeds. . Why worry about that~ We've got herbicides, etc. Or this is a poor soil and that is a rich soil--well, why make a distinction' We have chemicals; we don't grow plants out of the soil, we grow them out of chemicals.

With this attitude, this standardization, this unification, the knowledge of how really to cooperate with the soil is very largely lost. It has to be regained. It's much more difficult now but still it can be done.

If we engage in this work and do it intelligently, and are clever enough to engage people who at first sight might be our enemies, then I find it's not going to be very difficult and not going to be all that lengthy. If there were enough people, I think we could have an alternative technology, alternative possibilities, absolutely established over the whole range of basic human requirements. This is a finite job.

But people say, That's all very nice, but really technology, that has nothing to do with it, that's just tinkering. You have to change the system, or you have to change the philosophy, or how do you change human nature, or how do you stop the population growth? There are all sorts of things we can do, I mean we, now, not in the abstract, as we are also sitting here--and there are other things we can't do. One of the greatest confusions, in most discussions, is the term "we." You know, people say, We ought to decentralize General Motors. I look at them--I couldn't decentralize the drugstore on the corner? Or we ought really to change human nature--they couldn't even change their own nature? When I say "we" I am asking what can actual people, small as they are, what can they do?

If you look at it this way, you find that if one could make visible the possibility of alternatives, viable alternatives, make a viable future already visible in the present, no matter on how small a scale, even if it's only with a Scott Nearing--then at least there is something, and if that something fits, it will be taken. Suddenly there will be demand. If one establishes something, then one gets the benefit that this technology is not simply made by man but it also makes men. A type of technology that is not born out of the system we deplore will create a system we can approve of. If little people can do their own thing again, then perhaps they can do something to defend themselves against the overbearing, big ones.

So I certainly never feel discouraged. I can't myself raise the winds that might blow us, or this ship, into a better world. But I can at least put up the sail so that, when the wind comes, I can catch it.

5. Education for Good Work

It is possible to discuss meaningfully the subject of good work (or education for it) only by first clarifying the questions What is man? Where does he come from? What is the purpose of his life?

I know, of course, that such questions are called "pre-scientific": There is nothing like them in modern physics and most of biology, says the modern scientist, and he is quite right. Maybe he thinks the question What is man? should be answered: Nothing but physics and biology. If this were true there would be no point in discussing "education." If the question "What is man~" is called pre-scientific, this can mean only that science is not of essential importance for the conduct of human life: good answers to pre-scientific questions are infinitely more important.

What can be the meaning of "education" or of "good work" when nothing counts except that which can be precisely stated, measured, counted, or weighed? Neither mathematics nor geometry, neither physics nor chemistry can entertain qualitative notions like good or bad, higher or lower. They can entertain only quantitative notions of more or less. It is easy, therefore, to distinguish between less education and more education, and between less work and more work, but a qualitative evaluation of education or of work . . . ; How could that be possible~ This, we are told, would be purely subjective; it could not be proved; it would be anybody's guess since it cannot be measured and thus be made objective.

The Cartesian Revolution has removed the vertical dimension from our "map of knowledge"; only the horizontal dimensions are left. To proceed in this flatland, science provides excellent guidance: it can do everything except lead us out of the dark wood of a meaningless, purposeless, "accidental" existence. Modern science answers the question What is man? with such inspiring phrases as "a cosmic accident" or "a rather unsuccessful product of mindless evolution or natural selection" or "a naked ape," and it is not surprising that it has no answer to the question of what this absurd, accidental

product of mindless forces is supposed to do with itself, that is to say; what it should do with its mind. (Modern science has much to say about what to do with the body of the unfortunate being: "Survive as best you can?")

What, in these circumstances, can be the purpose of educational In our own Western civilization--as in all other great civilizations-purpose used to be to lead people out of the dark wood of meaninglessness, purposelessness, drift, and indulgence, up a mountain where there can be gained the truth that makes you free. This was the traditional wisdom of all peoples in all parts of the world. We modern people, who reject traditional wisdom and deny the existence of the vertical dimension of the spirit, like our forefathers desire nothing more than somehow to be able to rise above the humdrum state of our present life. We hope to do so by growing rich, moving around at ever-increasing speed, traveling to the moon and into space; but whatever we do in these respects, we cannot rise above our own humdrum, petty, egotistical selves. Education may help us to become richer quicker and to travel further faster, but everything remains as meaningless as before. As long as we remain entrapped in the metaphysics represented by the Cartesian Revolution, education can be nothing but a training which, we hope, may enable people to establish themselves more comfortably--the body, not the soul? --in the dark wood of meaningless existence.

In other words, as long as we persist in our arrogance, which dismisses the entirety of traditional wisdom as "pre-scientific" and therefore not to be taken seriously, fit only for the museum, there is no basis for any education other than training for worldly success. Education for good work is quite impossible; how could we possibly distinguish good work from bad work if human life on earth has no meaning or purpose? The word "good" presupposes an aim; good for what? Good for making money; good for promotion; good for fame or power? All this may also be attained by work which, from another point of view, would be considered very bad work. Without traditional wisdom, no answer can be found.

What, then, would traditional wisdom have to say? It would derive all answers from its knowledge of the task and purpose of human life on earth.

The human being's first task is to learn from society and "tradition" and to find his temporary happiness in receiving directions from outside.

His second task is to interiorize the knowledge he has gained, sift it, sort it out, keep the good and jettison the bad. This process may be called "individuation," becoming self-directed.

The third task is one which he cannot tackle until he has accomplished the first two, and for which he needs the very best help he can possibly find. It is dying to oneself, to one's likes and dislikes, to all one's egocentric preoccupations. To the extent that a person succeeds in this, he ceases to be directed from outside, and he also ceases to be self-directed. He, has gained freedom or, one might say, he is then God-directed. (If he is a Christian, that is precisely what he would hope to be able to say.)

If this is the task before each human being, we can say that "good" is what helps me and others along on this journey of liberation. I am called upon to "love my neighbor as myself," but I cannot love him at all--except sensually or sentimentally--unless I have loved myself sufficiently to embark on this good work of development.

How could I love and help my neighbor as long as I have to say, with St. Paul: "My own liberation baffles me. For I find myself not doing what I really want to do but doing what I really loathe"? In order to become capable of doing good work for my neighbor as well as for myself, I am called upon to love God, that is, strenuously and patiently to keep my mind straining and stretching toward the highest things, to levels of being above my own: only there is goodness to be found.

This is the answer given by traditional wisdom, that is to say, by the metaphysics that has given rise to all the great civilizations. From it we can derive all the guidance we need. What are a human being's greatest needs? As a spiritual being, he is primarily and inescapably concerned with values; as a social being, he is primarily and inescapably concerned with other people and also with other sentient creatures; as a person, he is primarily and inescapably concerned with developing himself.

Accordingly--as, I suggest, anyone can confirm from his own experience--there are three things healthy people most need to do and education ought to prepare them for these things:

To act as spiritual beings, that is to say, to act in accordance with their moral impulses--Man as a divine being.

To act as neighbors, to render service to his fellows--Man as a social being.

To act as persons, as autonomous centers of power and responsibility, that is, to be creatively engaged, using and developing the gifts that we have been blessed with--Man himself and herself. In the fulfillment of the human being's three fundamental needs lies happiness. In their unfulfillment, their frustration, lies unhappiness.

In a subtle way, modern society has made it increasingly difficult or even impossible for most of the people most of the time to meet these needs. And "education," including "higher education," seems to know little about them. Strange to say, most people do not even know what these needs are. For reasons well known to traditional wisdom, human beings are insufficiently "programmed." Even when fully grown, they do not move and act with the sure-footedness of animals. They hesitate, doubt, change their minds, run hither and thither, uncertain not simply of how to get what they want, but uncertain, above all, of what they want.

If education is unable to teach them what they want, is it of any use? Questions like What shall I do with my life? or What must I do to be saved? relate to ends, not merely to means. No technical answer, such as Tell me precisely what you want, and I shall

teach you how to get it, will do. The whole point is that I do not know what I want. Maybe all I want is to be happy. But the answer, Tell me what you need for happiness, and I shall then be able to advise you what to do, again will not do, because I do not know what I need for happiness. Perhaps someone says, For happiness you need the truth that makes you free--but can the educator tell me what is the truth that makes us free) Can he tell me where to find it, guide me to it, or at least point out the direction in which I have to proceed? Maybe I feel that good work is what I am really longing for. Who can tell me what good work is and when work is good?

Traditional wisdom teaches that the function of work is at heart threefold: (1) to give a person a chance to utilize and develop his faculties; (2) to enable him to overcome his inborn egocentricity by joining with other people in a common task; and (3) to bring forth the goods and services needed by all of us for a decent existence.

I think all this needs to be taught.

What is the current teaching with regard to work? I do not quite know, but, at least until quite recently, I heard it said everywhere that the real task of education was not education for work, but education for leisure. Maybe this extraordinary idea has now been abandoned. Fancy telling young and eager souls, "Now, what I really want you to envisage is how to kill time when you have nothing useful to do."

As our ancestors have known (it has been expressed by Thomas Aquinas), there can be no joy of life without joy of work. This is a statement worth pondering. Laziness, they also know, is sadness of the soul. This, too, is worth pondering. A nineteenth-century thinker said something like this: Just watch it a bit. If you get too many useful machines you will get too many useless people. Another statement worth pondering.

The question is raised: How do we prepare young people for the future world of work~ and the first answer, I think, must be: We should prepare them to be able to distinguish between good work and bad work and encourage them not to accept the latter. That is to say, they should be encouraged to reject meaningless, boring, stultifying, or nerve-racking work in which a man (or woman) is made the servant of a machine or a system. They should be taught that work is the joy of life and is needed for our development, but that meaningless work is an abomination.

A sensitive British worker wrote this:

It probably wrong to expect factories to be other than they are. - After all, they are built to house machines, not men. Inside a factory it soon becomes obvious that steel brought to life by electricity takes precedence over flesh and blood. The onus is on the machines to such an extent that they appear to assume human attributes of those who work them. Machines have become as much like people as people have become like machines. They pulsate with life, while man becomes a robot. There is a premonition of man losing control, an awareness of doom.

It is probably wrong to expect, he says, good work. He has been conditioned not even to expect it? He has been conditioned to believe that man himself is nothing but a somewhat complex physico-chemical system, nothing but a product of mindless evolution--so he may suffer when machines become like men and men become like machines, but he cannot really be surprised or expect anything else.

It is interesting to note that the modern world takes a lot of care that the worker's body should not accidentally or otherwise be damaged. If it is damaged, the worker may claim compensation. But his soul and his spirit? If his work damages him, by reducing him to a robot--that is just too bad. Here we can see very clearly the crucial importance of metaphysics. Materialistic metaphysics, or the metaphysics of the doctrine of mindless evolution, does not attribute reality to anything but the physical body: why then bother about safety or health when it comes to such nebulous, unreal things as soul or spirit? We acknowledge, and understand the need for, the development of a person's body; but the development of his soul or spirit? Yes, education for the sake of enabling a man or woman to make a living; but education for the sake of leading them out of the dark wood of egocentricity, pettiness, and worldly ignorance--at the most, this would be a purely private affair: does it not smack of "copping out" and "turning one's back on reality"? Materialistic metaphysics, therefore, leaves no room for the idea of good work, that work is good for the worker. Anyone who says, "The worker needs work for the development and perfection of his soul," sounds like a fanciful dreamer, because materialistic metaphysics does not recognize any such need. It recognizes the needs of the body; that they can be met only by somebody's work is an unpleasant fact and perhaps automation will soon abolish it. Meanwhile, the work needs to be done. Let's get on with it, but make sure the body doesn't get hurt.

If we see work as nothing but an unpleasant necessity, it is no use talking about good work, unless we mean less work. Why put any goodness into our work beyond the absolute minimum? Who could afford to do good work? What would be the point of making something perfect when something imperfect would do as well? Ananda Coomaraswamy used to say: "Industry without art is brutality." Why? Because it damages the soul and spirit of the worker. He could say this only because his metaphysics is very different from that of the modern world. He also said: "It is not as if the artist were a special kind of man; every man is a special kind of artist." This is the metaphysics of good work.

How, then, could there be education for good work?

First of all, we should have to alter the metaphysical basis from which we proceed. If we continue to teach that the human being is nothing but the outcome of a mindless, meaningless, and purposeless process of evolution, a process of "selection" for survival, that is to say, the outcome of nothing but utilitarian--we only come to a utilitarian idea of work: that work is nothing but a more or less unpleasant necessity, and the less there is of it the better. Our ancestors knew about good work, but we cannot learn from them if we continue to treat them with friendly contempt--as pathetic illusionists who wasted their time worshipping non existing deities; and if we continue to treat traditional wisdom as a

tissue of superstitious poetry, not to be taken seriously; and if we continue to take materialistic scientism as the one and only measure of progress. The best scientists know that science deals only with small isolated systems, showing how they work, and provides no basis whatsoever for comprehensive metaphysical doctrines like the doctrine of mindless evolution. But we nevertheless still teach the young that the modern theory of evolution is part of science and that it leaves no room for divine guidance or design, thus wantonly creating an apparent conflict between science and religion and causing untold confusion.

Education for good work could then begin with a systematic study of traditional wisdom, where answers are to be found to the questions 'What is man? Where does he come from? What is the purpose of his life?' It would then emerge that there is indeed a goal to be reached and that there is also a path to the goal--in fact, that there are many paths to the same summit. The goal can be described as "perfection"--be ye therefore as perfect as your father in heaven is perfect--or as "the kingdom," "salvation," "nirvana," "liberation," "enlightenment," and so forth. And the path to the goal? *Good work*. "Work out your salvation with diligence." Don't bury your talents and don't let anybody else bury them. He who has been given much, of him much will be demanded. In short, life is some sort of school, and in this school nothing counts but good work, work that ennobles the product as it ennobles the producer.

In the process of doing good work the ego of the worker disappears. He frees himself from his ego, so that the divine element in him can become active. Of course, none of this makes sense if we proceed from the basic presuppositions of materialistic scientism. How could the product of mindless evolution, whose abilities are only those selected by blind nature for their utilitarian value in the universal struggle for survival--how could such a product of chance and necessity free itself from its ego, the center of its will to survive? What a nonsensical proposition? And the assumption of the existence of a divine element in man is, of course,

"The world of work," as seen and indeed created by this modern metaphysics, is--alas?--a dreary place. Can higher education prepare people for it? How do you prepare people for a kind of serfdom? What human qualities are required for becoming efficient servants, machines, "systems," and bureaucracies? The world of work of today is the product of a hundred years of "deskilling"--why take the trouble and incur the cost of letting people acquire the skills of a craftsman, when all that is wanted is a machine winder? The only skills worth acquiring are those which the system demands, and they are worthless outside the system. They have no survival value outside the system and therefore do not even confer the spirit of self-reliance. What does a machine winder do when (let us say) energy shortage stops his machine~ Or a computer programmer without a computer?

Maybe higher education could be designed to lead to a different world of work--different from the one we have today. This, indeed, would be my most sincere hope. But how could this be as long as higher education clings to the metaphysics of materialistic scientism and its doctrine of mindless evolution? It cannot be. Figs cannot grow on

thistles. Good work cannot grow out of such metaphysics. To try to make it grow from such a base can do nothing but increase the prevailing confusion. The most urgent need of our time is and remains the need for metaphysical reconstruction, a supreme effort to bring clarity into our deepest convictions with regard to the questions 'What is man? Where does he come from?' and 'What is the purpose of his life?'

Excerpt from "The Party is Over"

I will tell you a moment in my life when I almost missed learning something. It was during the war and I was a farm laborer and my task was before breakfast to go to yonder hill and to a field there and count the cattle. I went and I counted the cattle--there were always thirty-two--and then I went back to the bailiff, touched my cap, and said, "Thirty-two, sir," and went and had my breakfast. One day when I arrived at the field an old farmer was standing at the gate, and he said, "Young man, what do you do here every morning?" I said, "Nothing much. I just count the cattle." He shook his head and said, "If you count them every day they won't flourish." I went back, I reported thirty-two, and on the way back I thought, Well, after all, I am a professional statistician, this is only a country yokel, how stupid can he get. One day I went back, I counted and counted again, there were only thirty-one. Well, I didn't want to spend all day there so I went back and reported thirty-one. The bailiff was very angry. He said, "Have your breakfast and then we'll go up there together. And we went together and we searched the place and indeed, under a bush, was a dead beast. I thought to myself, Why have I been counting them all the time? I haven't prevented this beast dying. Perhaps that's what the farmer meant. They won't flourish if you don't look and watch the quality of each individual beast. Look him in the eye. Study the sheen on his coat. Then I might have gone back and said, "Well, I don't know how many I saw but one looks mimsey." Then they would have saved the life of this beast.

There I learned something. I then also found that in all human traditions there has been a very great antagonism against all this counting business. I don't know how many of you still know your Bible, but you can find it in two places, in Chronicles and Kings. The first chap who arranged the census was King David, and when he arranged the census the Lord was utterly furious. He gave him a choice between three penance punishments. And David, said, Yes, yes, I know I have sinned. He didn't argue back. You know, those old Jews used to argue back very freely. He immediately understood there was something wrong in having a census which treats people as if they were units, whereas they are not. Each is a universe.

End of book