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SCIENCE WITH HUMAN ENDS

THERE are two basic ideas of Science. One is that science is the verifiable knowledge accumulated by students of the natural world. Such knowledge is held to be "objective," in the sense that it stands free of human longing, sentiment, or prejudice. It knows nothing, directly, of morality, good and evil, right and wrong, but is rather the impersonal stage-setting, the theatre, of natural reality in which all human striving takes place. So conceived, science is at once the quest for and the attainment of pure knowledge for its own sake. This is an ideal which has the capacity to generate absolute commitment in human beings and to lift its devotees above the level of ordinary motivation. It is at once the Holy Grail and the Blessed Virgin of the mind of man.

The second idea of science relates the knowledge gained to human purposes and human good. In this role, science becomes the midwife of all progress. It is held to be truly in the service of man through its unblinking acceptance of the facts of the world and all existence. Freed of the partisanships of history, tradition, politics, and any form of wishful thinking, science is the only reliable guide to human action. It is the truth which, in principle if not in practice, can make men free.

There is a clear and justifiable logic in this analysis. Science begins, is made possible, by being emancipated from the limitations of human purpose and the fallibilities of human belief. Then, when it has gained for itself a structure of independent validity, against which no rational power can contend, it may return as counselor, guide, and friend to the human enterprise. At this point, you might say, science gets "religion," or is enlisted in the service of man. Its techniques become the means of telling us what is good for man and the means of achieving what is good for man. In this way, science acquires an ethic, or becomes related to ethics. Or, perhaps we should say that the *establishment* of a science is accomplished by a search for truth which goes beyond good and evil, in a spirit uncompromised by any hope other than the hope of defining objective fact. Then, when the science has achieved its first growth, and has what scientists call its first principles, the knowledge so obtained is put into practice, and the practice has an ethical ground.

This formulation can either be accepted or challenged and rejected. Those who accept it, when confronted by the sorry condition of the world, generally say that science, like Christianity, has not yet really been tried. We need, they say, a further and more thorough-going education in the scientific spirit. The truth in this claim is so obvious that only fools will dispute it. What may be legitimately questioned, however, is the meaning of the scientific spirit. The scientific spirit is an algebraic equation filled with x's, y's and z's which represent undetermined or incommensurable values, or they have been made to represent assumptions which may or may not be faithful to the facts.

It is a great temptation to use up all our space in an examination of this problem, since so much depends upon how you interpret the x's, y's and z's, but since we ought to try to reach some sort of conclusion in this brief discussion, one illustration of the difficulty will have to do. Take the proposition that science serves the good of man. What is the good of man? Good is what fulfills man's nature. But what is man's nature? To which of the sciences shall we apply for an answer to this question?

We are going to assume, here, that we know enough about contemporary science, or about the

temper of contemporary scientists, to say that no serious practitioner in either research or applied science is now prepared to define man's nature without doubt or equivocation. The "facts," as we say, are not all in; or if we have a sufficiency of facts, they are not sufficiently ordered for a scientific interpretation to be possible. A social scientist may be able to catalogue a great many of the strivings and purposes of human beings. Physicists and engineers may be able to describe efficient means of aiding those strivings and fulfilling those purposes. Psychologists may be able to generalize concerning the conflicts which arise in both individual and social behavior. These and many other workers in specialized fields may be able to give us great masses of data concerning what man has been and done in the past, but the problem of man's nature remains so mysterious that speaking of it in these terms may seem unreal and even offensive to the scientific mind. Naturally enough, the scientist wants to divide any question of fact up into manageable parts, so that he can subject them to his techniques of discovery. So far, man's nature has resisted successful analysis by such means. We seem to gain scientific knowledge about human behavior only by sacrificing the idea of man as a unity and an individual. There are those who now declare that while this procedure may lead to success in science, it is demoralizing to man.

This is a difficult situation. It results in a direct challenge to scientific methodology. It brings a direct questioning of the x's, y's and z's that are used in defining the scientific spirit.

Men who have a great establishment going, with many high achievements to its credit, tend to resist any questioning of their first principles. The Soviet administrators, as is often pointed out, will tolerate any criticism except that directed at the first principles of their Communist society. The Fundamentalist Christian may be willing, even eager, to argue about shades of meaning in the Bible, but he will not allow investigation of the possibility that the Scripture on which he relies for primary religious truth is a compilation of fallible human tradition.

When you threaten a man's premises, you threaten the validity of the entire structure of his life. It is not difficult to document this comment on the attitude of scientists toward the critics of their premises. It is well known, for example, that the facts or presumed facts of psychic research are coldly regarded by many if not most professional psychologists. The attitude behind this resistance was given a clear outline twenty-five years ago by Joseph Jastrow, an eminent psychologist, in an article in the *American Scholar* (Winter, 1938-39). Speaking of the research in extra sensory perception being carried on at Duke University, Dr. Jastrow wrote:

> In the minds of psychologists who accept a comprehensive view of their responsibilities, it is the *general objections* to ESP that weigh most heavily. . . . ESP is so contrary to the general scientific world picture, that to accept the former would compel the abandonment of the latter. I am unwilling to give up the body of scientific knowledge so painfully acquired in the Western world during the last three hundred years, on the basis of a few anecdotes and a few badly reported experiments.

That this characterization of ESP research was irresponsible and frivolous, even in 1938, did not seem to bother very many psychologists. It still remains the defense of orthodox psychology against any proposals of serious investigation of the findings of psychic researchers. What lies behind this defense? *General objections*—the desire to protect "the general scientific world picture" from the subversions of what is ostensibly a new science of subjective man with laws and principles quite alien to "the body of scientific knowledge so painfully acquired in the Western world during the last three hundred years."

Meanwhile, the questioning of the scientific methodology continues on other fronts. Some years ago an undergraduate of Yale University addressed a letter to the president of that institution, in which he discussed what seemed to him the dilemma resulting from his education:

> You learned that man is distinct from animals, and yet our biology courses now conceive of man as one species of animal. . . . A logical inference from every psychology lecture we have ever attended would be that man's least thought and act can be wholly explained in terms of cause and effect; that every choice is dictated by a million strings of deterministic factors leading back to the dawn of time. . . .
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> If men are but animals, why not treat them as such? An animal has no rights. The law among animals is the law of the strong. If man is a slave to determinism, incapable of a free choice, what is the value of the ballot, trial by jury and civil liberties in general? . . .
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> Isn't it palpably obvious to you that at the root of the trouble lies an apparent contradiction between the implications of our studies and the ideals we are expected to revere?

While the mechanistic view of man's nature may be said to be waning in influence (from a multiplicity of causes, by no means all "scientific"), as recently as 1953 the Harvard psychologist, B. F. Skinner, wrote: "The hypothesis that man is not free is essential to the application of scientific method to the study of human behavior."

We are now ready for a broad generalization concerning the scientific conception of man's nature which has dominated modern thought up to the present. We take it from Ortega y Gasset *(Toward a Philosophy of History,* 1941):

> When naturalist reason studies man it seeks, in consistence with itself, to reveal his nature. It observes that man has a body, which is a thing, and hastens to submit it to physics; and since this body is also an organism, it hands it over to biology. It observes further that in man as in animals there functions a certain mechanism, incorporeally, confusedly attached to the body, the psychic mechanism, which is also a thing, and entrusts its study to psychology, a natural science. But the fact is that this has been going on for three hundred years and that all the naturalist studies on man's body and soul put together have not been of the slightest use in throwing light on any of our most strictly human feelings, on what each individual calls his own life, that life which, intermingling with others, forms societies, that in their turn, persisting, make up human destiny The prodigious achievement of natural science in the direction of the knowledge of things contrasts brutally with the collapse of this same natural science when faced with the strictly human element. . . . Physical science can throw no clear light on the human element. Very well. This means simply that we must shake ourselves free, radically free, from the physical, the natural approach, to the human element. Let us instead accept this in all its spontaneity, just as we see it and come upon it.

Here, in simple terms, is presented the field of human phenomena as approached by the new "self" or humanistic psychologists. In time, we may obtain from psychologists such as A. H. Maslow and Carl Rogers, from psychoanalysts such as Erich Fromm, from psychiatrists such as Viktor Frankl, the foundations of a science of psychology which starts out with a unitive conception of the human being and with a conception of man's nature that is compatible with the subjective realities encountered by every one of us in daily life. Should such a science of man eventually become established, it will no longer be necessary for humanist scholars to ask pointed questions like the following, which were put by Prof. E. S. Brightman, of Boston University, in an article in *Philosophy of Science* in (January) 1941:

> Has any "human occurrence" worthy of being called historical ever been wholly lacking in "mental" (i.e., conscious) traits? In so far as the historical is reduced to what can be quantitatively measured, is not every distinctively historical attribute of it as a human occurrence stripped away from it?
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> In short, was there ever a human occurrence, or a reaction, which was not in large part mental,—conscious or purposive? If we take away the mental, what is left of the historical, except the night in which all cows, and human reactions too, are black? Is a metaphysically behavioristic definition anything more than a disregard of the most pervasive empirical facts of history—the facts of human consciousness?

The new psychology is doubtless a response to such questions.

But what about the other branches of the science of man? Are there similar developments in other fields?

Two months ago (Feb. 20) MANAS printed in Frontiers a discussion of the ideas of E. F. Schumacher, which we came across in the form of a pamphlet, *Modern Industry in the Light of the Gospel*, available from Housman's Bookshop (5 Caledonian Road, London, N.I). Our first impression was that Mr. Schumacher is a puzzling sort of moralist—in short, an extremely perceptive and stimulating critic. Well, we printed some of his observations with enthusiasm. We now have more information about Mr. Schumacher. He is an economist, the son of a German professor of economics. He was educated at Bonn, Berlin, Oxford, and Columbia University. In 1930 he was a Rhodes Scholar at Oxford, where he studied philosophy and economics. He became a British subject and served as economic adviser to the United Kingdom Control Commission in Germany (1946-50), was economic adviser to the Government of Burma for several years, and is now economic adviser to the National Coal Board of England, a post of considerable importance to the British economy.

In a collection of Mr. Schumacher's papers published last year under the title, *Roots of Economic Growth*, by the Gandhian Institute of Studies (Varanesi, India) there is one discussion directly on the question now being considered. Early in this paper he says:

> In view of the universality of the "economic aspect," it is not surprising, neither is it abnormal, that a "science," a systematic "body of thought," should have grown up, commonly called Economics. But one thing is surprising, and is indeed abnormal, that there should be only one "science," only one body of thought called Economics. Because people's ideas of the purpose and meaning of life vary very much, and when different people attach different meanings to life, this must inevitably affect also their ideas about any particular aspect of life.

This is precisely the point with which we started out. Questions having to do with the meaning of life and the nature of man are crucial in understanding the scientific spirit, and they bear directly on the practice of science for human welfare. In the case of economic science, there is the initial question of whether a science which deals with phenomena of human behavior can be isolated from issues of human nature and human good. Mr. Schumacher obviously thinks not. He shapes his criticism of prevailing economic theories as follows:

> What today is looked upon as the science of Economics is based upon one particular outlook on life, on one only, the outlook of the Materialist. Every concept of Economics is rooted in this outlook. Even where Economics admits that man does not live by bread alone, it counts as "cost" any activity that fails to cater for material wants. Economics distinguishes between "productive" and "unproductive" activities, and only those are called productive which in one way or another, directly or indirectly, cater for material wants. Not that Economics has failed to concern itself with "Welfare." But even welfare is a term completely rooted in materialism—although in a slightly more subtle fashion.
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> This one-sidedness of Economics is surprising and indeed abnormal. Yet it is all the same understandable. For two reasons: first, because up to a point, everybody is inescapably concerned with material or economic things, if, indeed, he wants to live in a becoming way. Up to a point, therefore, Economics is about life as such, irrespective of any ideas of meaning or purpose. The second reason is of an altogether different kind: Economics as a science has risen only in the West and at a time when Western Materialism ruled supreme throughout the world. Non-materialists have been too weak, so far, to think these matters out from their own point of view. And it is one aspect of their continuing weakness that they have thoughtlessly and all too easily accepted the spurious claim of Western Economics to be the only possible body of economic thought, to be final, objective, and applicable to all men at all times.

These loose statements by Mr. Schumacher, and his unacademic form of address, may make some readers wonder if he is either economist or scientist, regardless of his education and present professional status. What may be overlooked is that he is also talking like a human being, concerned with human values. And his definitions, as he proceeds, begin to sharpen up:

> Because Economics, *up to a point,* can rightly claim universal validity; it has been accepted as possessing universal validity throughout. What do I mean by *up to a point?* The essence of Materialism is not its concern with material wants, but the total absence of any idea of Limit or Measure. The materialist's idea of progress is an idea of *progress without limit.* I quote from an official report relating to Burma [This paper by Mr. Schumacher was prepared while he was serving as adviser to the Burmese government]:
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> "There is no known limit to possible improvements. . . . The standard of living increases as a result, year by year and decade by decade. Each generation is better off than the one before. Every man can look forward to the prospect that his children will live better than he did, and his grandchildren better than his children. This must come about in Burma. . . . Burma must become a progressive nation, so that her people not only live better in 1960, but look forward to continued improvement, without limit."
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> This is not progress up *to a point,* but progress *without limit.* Is this compatible with Buddhism or Christianity or with anything the Great Teachers of mankind have proclaimed? Of course not. It is compatible only with the most naked form of Materialism.

Mr. Schumacher now launches into a discussion of Gandhian economics, as wholly appropriate for the ideals and conception of man in a Buddhist country. He asks: "When will the teachers of economics begin to be at least objective enough to tell their students that the Economics of present-day teaching is the purest form of Materialism and leaves no room for any other? When will they take cognizance of and admit that other systems of Economics are possible and necessary and are even already available in rudimentary form?"

The chief point that Mr. Schumacher seeks to get across is that Economics depends for its root principles on general philosophical ideas:

> The science of economics does not stand on its own feet, it is derived from a view of the meaning and purpose of life whether the economist himself knows this or not. And as I have said, the only fully developed system of economic thought that exists at present is derived from a purely materialist point of view.
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> Let me give one or two examples. If you ask an economic expert to advise you on the structure of freight rates—the charges to be levied by the railways, inland water transport, and so forth—he may be inclined to advise that the per ton/mile should "taper off," so that they are lower, the longer the haul. He may suggest that this is simply the "right" system because it encourages long-distance transport, promotes large-scale, specialized production, and thus leads to "an optimum use of resources." He may point to the experience of the United States, the United Kingdom, Germany, etc.—all "advanced" countries employing just that "tapering device." Do you see that in doing so he would be recommending *one particular way of life.* . . . An "economic expert" steeped in Gandhian Economics would undoubtedly give very different advice; he might say: "Local, short-distance transportation should receive every encouragement; but long hauls should be discouraged because they would promote urbanization, specialization beyond the point of human integrity, the growth of a rootless proletariat, in short, a most undesirable and uneconomic way of life." Do you see that "Economics does not stand on its own feet"?

So here is another science on the way to rebirth as humanistic science, concerned with immediate human values instead of growing out of spuriously objective criteria of fact and the good of man.

It is natural to wonder how or why science became separated from human values. All significant human activity is motivated by values of some sort. Why should science be an exception? Or rather, why does science stand alone as related, in its formation, only to the "meta"-ethic of objective truth?

The history of science will probably throw some light on this question. In the pre-scientific past, there was little if any separation between religion, as knowledge of meaning, and science, as knowledge of fact and process. And since religion, either truly or falsely, dealt with invisible realities as well as moral issues of life, the science of antiquity was generally some form of magic. All histories of science begin with an examination of ancient ideas about magic.

In the West, science as we know it came to birth in mortal combat with religious imperialism. Conceptions of value and human good were so closely identified with the dominant authoritarian religion that science developed its doctrine of "objective," morally neutral truth as a base of independence from religion and a means of survival in the face of angry condemnation by the religious establishment of the seventeenth, eighteenth, and nineteenth centuries. Here, at least, is one explanation for the separation of science from values at the primary level of its establishment as a science. For the early scientists who sought an identity for their labors, the idea of truth that would be without dogmatic moralizing had its own unique morality—that of free spirits searching nature and experience for the image of the real. What need had they, in the hours of intellectual liberation, for any greater values or more explicit ethic than this? Their materialism was at once the sign-manual, the tool, and the defensive weapon of their independent minds. Yet today we are able to realize that the materialism of those days was no more than a tract for the times—a doctrine which, however useful as a bludgeon in the conflict with theology, has now outlived its usefulness and become an atavistic carry-over from the past.

We need today a science that cherishes from start to finish high human ends and which acknowledges no conception as "scientific" which in its primary assumptions has nothing to say about the good of man. This may be difficult for a while—difficult at any rate in physics, until the discovery of some kind of pan-psychism which unites man and matter with greater understanding—but not so difficult in any of the sciences of man. We already have substantial evidence that such sciences are now being born.

REVIEW
PEACE SPECTRUM

THOSE who imagine that they are able to tell what the contemporary "peace movement" is about have an obligation to read *Changeover—the Drive for Peace,* a new paperback collection of recent essays, reports, poems, and specialized articles on peace activities and ways of waging peace. The editor of this volume, Virginia Naeve, is a New England artist and designer who a few years ago found herself unable to resist the call to devote much of her time and energy to working for peace. She began as an amateur, she remains an amateur, and in this book she makes it plain that peace, when it comes, will have been the creation of amateurs—people who make peace in response to the demand of their hearts. Virginia Naeve is the wife of Lowell Naeve, a conscientious objector to World War II who spent time in prison and turned this experience into the raw material of two remarkable books. One of these is *A Field of Broken Stones,* an account of how one violator of the Selective Service Act was treated, in and out of prison, and how he behaved and why, during this ordeal. The other book, *The Phantasies of a Prisoner,* is made up of strong, beautiful, and touching pen and ink drawings which represent the subjective life of a man who is kept behind bars by his society. Alan Swallow, 2679 South York Street, Denver, Colorado, is the publisher of all these books.

Changeover (282 pages, paper, $1.85; cloth, $3.75) comes the closest of any published work we have seen to suggesting the rich diversity and extraordinary depth of the modern peace movement. Reading it, you get the feeling that you are just possibly in at the beginning of a new epoch of history. In one place, the editor quotes from Robert M. Hutchins: "It seems likely that this age will be one either of innovation or extinction." This book is the start of an inventory of the forces moving toward innovation. It has twelve sections, covering the thinking of scientists, economists, editors, semantics experts, psychologists, liberal ministers, writers, the demonstrations of strikers, women's groups, peace walkers, and students. There are letters from people working for peace in many parts of the world, and a large picture section showing people picketing for peace, walking for peace, being arrested for peace, and speaking and talking for peace.

Richard Gregg, who has probably done more than any other writer to bring an understanding to the West of Gandhian non-violence, is represented with some remarks that we quote in part:

> The realities that we need are intangibles—things like mutual trust, honesty, full truth. Somehow the prevailing blind hatreds, fears and suspicions must be abandoned. They lead only to destruction of everything fine.
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> It will take quite a wrench, some hardship, considerable deep thinking and effort to get out of the jam we are all in right now.
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> I have been observing and thinking about these problems ever since 1915 and my own belief is that the only way to solve conflicts without violence is Gandhi's method of non-violent resistance. It demonstrated its power in freeing India and left both sides friendly toward each other. That struggle took 27 years but it did not kill a single Englishman. Extremely little property was damaged during the struggle. Many tens of thousands of Indians were jailed, thousands physically injured, but few killed. Violent war between British and Indians would have resulted in far heavier losses of all kinds on both sides. Again, in the non-violent struggle of the Norwegians against the Nazi invaders in the Second World War the Norwegians suffered but they were not defeated. They endured the pressure and kept their ways and values till the end of the war.
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> The question of whether to use violence or non-violent resistance in international conflicts goes to the very root of our Western civilization. It is a very deep and wide-spreading question. There is not room here to go into all the ins and outs of it. I tried to do this in a book called *The Power of Non-Violence.* There are many others, if you want to learn more about the idea. If you can think up a way better than that of Gandhi's, I have no objections. But you cannot keep on with violence. . . .

Two more quotations from this book should follow here. The first is from Jerome D. Frank, a Johns Hopkins psychiatrist:

> The first step in solving a problem is to assume it has a solution. If political and intellectual leaders continue to operate on the assumption that war cannot be eliminated then it won't be, even if the assumption is wrong, and the end of the human adventure is in sight. The assumption that war can be abolished frees the imagination to try and achieve this goal. If it is wrong, humanity is no worse off than before, but if it proves to be right, mankind will be freed to achieve its full potentialities.

The second quotation is from General Douglas MacArthur:

> In the evolution of civilization, if it is to survive, all men cannot fail eventually to adopt Gandhi's belief that the process of mass application of force to resolve contentious issues is fundamentally not only wrong but contains within itself the germs of self-destruction.

No one, it may be, is changed in his thinking by reading a number of "impressive quotations." But these quotations and the rest of the material in Virginia Naeve's book certainly accomplish another objective: they show the extent to which thinking about non-violent action instead of war is held "in solution" in the serious thought of our time. By no means all of the material in *Changeover* has a Gandhian inspiration, however. It contains a number of discussions which show the folly of the present policy of the nuclear powers. One of these, a reprint of an article by Theodore Roszak for the *Nation,* is concerned with the vulgarization of American culture at a high intellectual level. The arms race has brought a fantastic degree of pretense to the practice of military technology. Mr. Roszak writes:

> The extent to which the weapons industry has obscured the nature of science in order to lend glamor to the work of its engineers is sometimes astounding. An advertisement for Westinghouse's atomic power division makes it very clear that "abstract thinking" is really valueless if it does not lead to "concrete results." . . . The advertisement then defines the "creative person" as one who can "communicate his ideas into practical application." And then, becoming truly metaphysical: "The same basic phenomenon conceives an idea and carries it through to a benefiting conclusion whether the individual is composing a symphony, writing a sonnet, or designing a nuclear reactor." . . .
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> To be sure, words like "creativity" can be played with. They can be squeezed and twisted until they are limp enough to suit all occasions. "Creative" is a plus word. It is something everybody in our violence-bent society wants desperately to be. Even barbers today offer us "creative haircuts."
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> Yet there is a limit. Surely there is at least one thing that ought never to be considered creative. And that is the designing of weapons capable of obliterating the entire race. If this is creativity, then 1984 is upon us, and its watchword is a contradiction truly Orwellian: "Destruction is Creation."
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> And here is surely the greatest evil of all, an evil far worse than any confusion of terms or misuse of language involved in these Madison Avenue rhapsodies on the nobility of science and the wonders of technology. Behind a smoke screen of colorful jargon, the moral implications of dedicating one's abilities to the making of weapons become hopelessly obscured.

Unlike conventional symposia on war and peace, this book has in it a number of contributions which reveal the human texture of grass-roots efforts to bring reconciliation to the nations. Mrs. Naeve reports at length on the activities of women working for peace. She tells of trips to Geneva with the Women's Strike for Peace, and of work done with neighbors in her New England home community of South Woodstock, Vermont. In a long and intensely interesting report, Lowell Naeve tells how he was prevailed upon to go to Washington during February of last year to film a documentary movie of student action for peace (now available for local showings). Naeve set up his camera in front of the White House and shot sequence after sequence of the demonstration. He describes in detail his encounter with a team of FBI agents who were attempting to photograph the "leaders" of the protesting students. The participation was massive. On the last day, in the natural amphitheatre behind the Washington monument,

students gathered from the White House and downtown Washington to hear the atomic scientist, Leo Szilard, and Norman Thomas speak. A student before the microphone announced: "The students that have participated yesterday and today in this Turn Toward Peace Demonstration number a little over eight thousand."

The peculiar importance of Virginia Naeve's *Changeover* is that it gives the reader a sense of the enormous vitality and deep personal concern that exists in countless workers for peace. Mr. Swallow has done a public service by putting this work into print.

COMMENTARY
PROFILES OF CERTAINTY

No one who has studied the emergence of modern civilization can be anything but grateful to the founders, the developers, and the contemporary practitioners of science. These men, whatever their practical accomplishments, did one thing which throws all the achievements of technology into shadow—they established the ideal of impersonal authority created by impartial search. A scholar of science might say that the various sciences have established for modern man certain profiles of certainty, certain indisputable facts and truths which all rational individuals must acknowledge, within the area and the definitions of scientific investigation.

You could then argue, if you wanted to make some comparison with human thought in the pre-scientific period, that these profiles of certainty have displaced other images of reality that, carried by the vehicle of myth, once served mankind in another way.

We are thinking of the Hero and his various roles. These finite gods were another sort of profile of certainty. They held up to man an ideal which he knew would be difficult to reach, yet somehow he tried. A host of Arhats, for example, followed in the footsteps of Buddha. At the end of the Middle Ages, in the faint pre-dawn of the Reformation, a book called *The Imitation of Christ* raised the Christian vision of the nature of man from misery and failure to dignity and promise.

Those profiles of the good and the great, made remote by abstraction, but enormously moving by the unqualified simplicity which resulted, were indeed springs of human behavior. It is as though, in the role of these conceptions, the Platonic doctrine of archetypes of the Good was vindicated and made to be a substantial reality in human aspiration.

The Platonists generalized on the basis of a vision of the Good, holding out the idea of a human reaching to it by *participation.* There was no question of nailing down the Good in some system of social management, Plato's Republic to the contrary. You could say that the good that came about was fractionally achieved, but the strivings of many men, however imperfect, created a temper of high culture that cannot be obtained in any other way.

The trouble with the scientific profiles, when you come to the sciences which deal with men, is that they are the statistics of compromise and failure. This, we say, is the "real" picture; this is how men really behave. Hearing our scientific authorities who have been right in so many ways, we are reluctant to contradict or resist. There is a sense in which the scientists made us free. But now what are they doing? The profiles of scientific certainty are concerned with what is. But the profiles of the myths deal with what might be—with *becoming.*

And now another question comes: What is the order and process of human becoming? Must we begin with the scientific profiles of social certainty, telling the individuals to wait until the proper environment is devised to improve their lives? Or is this a fraud upon the authentic human spirit? Is there any way in which the profile of the myth can be combined—compatibly combined—with the image of the mass status quo? These are truly the great questions of the age.

CHILDREN
. . . and Ourselves
COMPETITION AND LEARNING

A FEW years ago we described the tribal attitudes of the Hopi Indians toward "competition." The young traditional Hopi, when exposed to the public school system, refuses to try to surpass other children in the matter of grades, because he believes that competition in *learning* is wrong. Physical competition is another thing entirely and tribal honors are considerable for the athlete who wins a long-distance race. There seems to be an important perception involved here. We suspect many educators realize that competition for grades turns the classroom into a kind of arena, encouraging scheming rather than thinking.

We have at hand a book by Irving D. Harris, M.D., entitled *Emotional Blocks to Learning.* In a chapter titled "Parental Ambition," Dr. Harris writes:

> A land in which birth in a log cabin is traditionally considered to be an aid to becoming president must be considered a land of opportunity for achievement and status change. The competitive struggle for status achievement is most marked in the middle-class, the class that wishes to be distinguished from the lower-class and that is striving for the apparently more secure self-esteem of the upper-class. Fearing the disgrace of being left behind in the status race, many members of this class exert ambitious pressure on themselves, their spouses and their children. This pressure frequently finds its focus in the area of learning—inasmuch as education is the "royal road" to higher status. But, as we shall find, ambition has paradoxical effects. Under its demands that one be *more* "equal" than anyone else, some can rise to dizzying heights in learning; while others self-protectively remain at dismal depths.

Dr. Harris speaks of case histories which illustrate how easily the status-preoccupied parent can "freeze" his child's natural capacities—so that a bright boy may get very poor grades. He quotes Arnold Toynbee on the cultural effects of prolonged external challenges: "If we increase the severity of the challenge ad infinitum . . . we reach a point beyond which increasing severity produces diminishing results . . . and the possibility of successfully responding to the challenge disappears." Dr. Harris continues:

> Some civilizations have succumbed early to too much adversity. Others, like the Eskimo and Polynesian societies, responded energetically to an excessive challenge, coped with it for a long period of time in a tour de force, and then, exhausted, came to a stage of arrested development.
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> The parallels we draw between the growth of civilization and the intellectual growth of the boy suggest that we are dealing with a very common and basic ingredient of the human personality.

We have heard a good deal during the past few years of proposals for "an enriched curriculum" which would teach more things in less time—and also, presumably, do something for the "gifted child." Dr. Harris is concerned with one aspect of this development, and concludes his volume with some pertinent criticisms:

> Our American culture—already enamored of speed and short-cuts—does not need additional stimulation. If we are not on guard, our tempo—conditioned by the instantaneous communication of television and the great velocities of jet planes—might become even more unbearably quick. If the Olympic games can be taken as a guide, we are already specialists in the dashes and the relay races, the Europeans do much better in the distance events. Our fortes, then, are short distances and fragments which can be mastered quickly. We lack the patient endurance needed for the broader, long-range synthesis.
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> The pertinence of this to our main thesis is that the learning process is characterized by frequent plateaus, by phases of consolidation and integration on which no discernible forward movement is seen. Such plateaus are intolerable to those in our socially mobile culture who are ambitiously driving toward greater status. For them, educational results must occur quickly and visibly. If there were such a thing as "instant learning" they would be the first to embrace it. These people as citizens do have some voice and influence in general educational policy. We believe that this influence should be countered by the educators who are more knowledgeable about the way learning actually takes place.

> The matters of proper tempo and integration are prime distinguishing features of living organisms rather than of machines. Organisms require periods of rest, of incubation and gestation, during which fatigue products are eliminated and integration takes place. Machines require much less of this. Yet, as others have pointed out, we are in danger of taking the machine for our life model rather than the organism. It is not just a coincidence that our mechanistic age has also been described as an age of speed, of anxiety, of loss of personal identity, or of fragmentation. To counter these trends we must reaffirm that no matter how attractively time-saving the jet and the automatic computer may be, it is the mysteriously complex human mind with its own integrating tempo upon which we must place our hopes—and trust that its potentiality for error will be outweighed by that for truth.

We have, in short, to choose between two definitions of culture. The first finds measurable promise in an increase of observable literacy, while the other is concerned with *philosophical* literacy. Just as children who are "pressured" by status-seeking parents to race through school at the top of the class often develop character deficiencies, so it may be with an entire civilization.

It was the premonitory symptoms of this kind of civilization which troubled Lao-tse fifty years before the time of Confucius. The sage, according to Lao-tse, refrains from using his "sagacity" to "enlighten the people." Lao-tse opposed the "managing" proclivities of would-be educators because he knew that wisdom cannot be promoted, that people cannot be manipulated into being wise. He says in the *Tao Te King:*

> Gentleness brings victory to him who attacks, and safety to him who defends. Those whom Heaven would save, it fences round with gentleness.
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> The best soldiers are not warlike; the best fighters do not lose their temper. The greatest conquerors are those who overcome their enemies without strife.
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> I have three precious things, which I hold fast and prize. The first is gentleness; the second is frugality; the third is humility, which keeps me from putting myself before others. Be gentle, and you can be bold; be frugal, and you can be liberal; avoid putting yourself before others, and you can become a leader among men.
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> But in the present day men cast off gentleness, and are all for being bold; they spurn frugality, and retain only extravagance; they discard humility, and aim only at being first. Therefore they shall surely perish.

Perhaps the Hopis long ago discovered some way of "reading" Lao-tse without needing to possess the book.

FRONTIERS

Behavioral Science

PSYCHOLOGIST Carl Rogers, in discussing "The Place of the Person" in relation to the many opportunities of the psychologist-sociologist to manipulate people, continues to stress the need for abstracting the person from "the personality of the future." Dr. Rogers writes:

> It seems likely that behavioral scientists, holding their present attitudes, will be in the position of the German rocket scientists specializing in guided missiles. First they worked devotedly for Hitler to destroy Russia and the United States. Now, depending on who captured them, they work devotedly for Russia in the interest of destroying the United States, or devotedly for the United States in the interest of destroying Russia. If behavioral scientists are concerned solely with advancing their science, it seems most probable that they will serve the purpose of whatever individual or group has the power.

On the other hand, Dr. Rogers also speaks of a "range of choice which will lie before us and our children in regard to the behavioral sciences." He concludes:

> We can choose to use our growing knowledge to enslave people in ways never dreamed of before, depersonalizing them, controlling them by means so carefully selected that they will perhaps never be aware of their loss of personhood. We can choose to utilize our scientific knowledge to make men necessarily happy, well-behaved, and productive, as Dr. Skinner suggests. We can, if we wish, choose to make men submissive, conforming, docile. Or at the other end of the spectrum of choice we can choose to use the behavioral sciences in ways which will free, not control, which will bring about constructive variability, not conformity; which will develop creativity, not contentment; which will facilitate each person in his self-directed process of becoming; which will aid individuals, groups, and even the concept of science to become self-transcending in freshly adaptive ways of meeting life and Its problems.
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> If we choose to utilize our scientific knowledge to free men, then it will demand that we live openly and frankly with the great paradox of the behavioral sciences. We will recognize that behavior, when examined scientifically, is surely best understood as determined by prior causation. This is the great fact of science. But responsible personal choice, which is the most essential element in being a person, which is the core experience in psychotherapy, which exists prior to any scientific endeavor, is an equally prominent fact in our lives. That these two important elements of our experience appear to be in contradiction has perhaps the same significance as the contradiction between the wave theory and the corpuscular theory of light, both of which can be shown to be true, even though incompatible. We cannot profitably deny the freedom which exists in our subjective life, any more than we can deny the determinism which is evident in the objective description of that life. We will have to live with that paradox.

The foregoing serves as an excellent introduction to Bruno Bettelheim's latest volume, *Dialogues With Mothers* (Free Press, 1962). In his informal discussions with young mothers in the Chicago area, Dr. Bettelheim observed again and again that "scientific findings" regarding the relationship between parents and children can lead to anxiety and parental impotence. When the experts apparently know so much, the parent, especially the young parent, may come to feel that here ignorance makes decisive action in a child-parent situation impossible. Dr. Bettelheim tried to awaken in such parents what Carl Rogers calls "responsible personal choice." But the imposing structure of child psychology and sociology loomed large in the background of most discussions—as if God or Big Brother were always peering over the young parent's shoulder. Dr. Bettelheim says:

> There is nothing new, of course, about parents wanting to do right by their child. What is new is that we have grown very afraid of doing wrong by our children. Yet, strange as it sounds, I have more often seen things go very wrong because of a parent's fear of erring than because he did the wrong thing out of honest conviction. I have also seen parents who would not follow their correct instincts because they feared it would be bad for the child.
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> In response to their anxiety, they are swamped with literature in which they are sometimes made out to be saints, sometimes vipers, but always persons bearing vast responsibility. This alone is unnerving

to a woman who knows she is only an average human being.

In contrast with the mass of material available on child psychology and training, group discussions among untutored parents may seem ineffectual, but Dr. Bettelheim endeavored to establish a situation in which such parents would realize that their interchanges of ideas may be very important. For it is from one's own thinking, not from the advice of an expert, that "responsible personal choice" takes place. And it is precisely such choice, as Rogers shows, "which is the most essential element in being a person, which is the core experience in psychotherapy, which exists prior to any scientific endeavor."

Two paragraphs from the Manwell-Fahs volume, *Consider the Children—How They Grow* (Beacon) exhibit the difficulties which confront the modern parent who wishes to practice self-reliance in child-rearing:

> Some parents still have not completely resolved their intellectual point o£ view into a unity. Some mothers, for instance feel like giving their babies more attention than they give, but refrain because of their outdated psychological concepts or because their physician advises them otherwise. They say "It hurts me to hear him crying like that, but I don't want him to get spoiled." Other parents unconsciously fall back upon concepts of strictness and discipline when they say, "I spank my child only as a last resort, or when it is a question of danger"—as if the theory worked better when the situation was more dangerous, or when used as a last escape instead of a first approach. Doubts will arise when a choice has to be made between the urge to begin "habit training" and the new idea of responding sympathetically to the child's expression of his immediate needs and desires.
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> The pressures of long-accepted customs and ideologies are still strong. Parents attempting to follow the newer methods of education will have to face a constant stream of comments from well-meaning relatives, neighbors, and friends, such as:
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> "What! You pick up your baby every time he cries? You'll certainly spoil him!" "A child of his age still drinking out of a bottle? Why, it's the silliest thing I ever heard!" "Wearing diapers at two? He ought to be ashamed." Parents will have to develop a conviction strong enough to withstand considerable social pressure and criticism, and be able and willing to uphold their point of view.

The summation of all this is that the academic means of transmitting information about parent-child relationships can actually stop growth in those relationships—unless parents melt all the theories down in the crucible of individual experience and learn to be "creative" in their unique personal relationships. Dr. Bettelheim has become a persuasive influence in this direction.