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NATURE WITHOUT MAN

IN an effort to explain to scientists what their account of the world and of man leaves out, Theodore Roszak (in *Dædalus* for last summer) points to the universal hunger of human beings to "know the meaning of their existence," remarking that on those occasions when something of this longing "intrudes itself into scientific thought," there is immediate public response and gratitude.

There can be little doubt—as indeed Roszak shows from the expressions of scientists in the seventeenth and eighteenth centuries—that the investigation of the natural world began with a dual motivation: there was not only the intention to transform and make the world better in material ways, but also the desire to get at its meaning. But then there came a deliberate mutilation of purpose, Roszak says. The promise of material power could be best fulfilled by limiting science to the pursuit of manipulative power. Roszak names Boyle, Bacon, Descartes, Galileo, and Hobbes as the principal architects of this restrictive world-view; after they laid down the rules of scientific practice, he says, "it became permissible for the scientist to admire the mechanical intricacy of nature, but not to love it as a living presence endowed with soul and reflecting a higher order of reality."

Perhaps there was still another reason for the restriction of science to mechanical ends. Science was born in an age when the prevailing account of *meaning*—the account given by orthodox religion—was rapidly losing its authority. Galileo openly expressed his boredom with the scholastic works on why bodies behave as they do. Contending that "our disputes are about the sensible world, and not one of paper," he turned to experience of physical motion and to mathematics as the natural language of motion. Not only was there boredom with theological explanations—there was also the threat of the Inquisition. Only a few years before, Bruno had been burned by the Church for daring to suggest meanings alternative to the orthodox Catholic view; and, indeed, Galileo's trial for heresy was occasioned by clerical anxiety that he too was invading the domain of spiritual authority. So there was also this motive for isolating the *how* from the *why* in scientific practice.

In any event, the time came when the hunger to know the meaning of man and the world was sacrificed to a safer, more easily reached objective. Roszak describes it well:

> There is a haunting and troubling strangeness about this interval in our history. One might almost believe that perverse forces which baffle the understanding were at work beneath the surface of events, turning science into something that did not square with the personalities of its creators. What was it, for example, that inspired Descartes to regard mathematics as the new key to nature? An "angel of truth" who appeared to him in a series of numinous dreams on three successive nights. But in his writing, he never once mentions the epistemological status of dreams or visionary experience. Instead, he turns his back on all that is not strict logic, opting for a philosophy of knowledge wholly subordinated to geometrical precision. Yet that philosophy purchases its apparent simplicity by an appalling brutalization of the very existential subtleties and psychic complexities that are the living substance of Descartes' own autobiography. Newton, a man of stormy psychological depths spent a major portion of his life in theological and alchemical speculation; but all this he carefully edited from his natural philosophy and his public life. He even allowed himself to be talked out of attending the meetings of occult societies in London, lest he damage his reputation as a scientist.

Looking back over this history of science, and noticing the influences felt by its leaders in the early days, we may come to see in them not so much stubborn betrayers of future civilization as human beings much like ourselves. Only their

determination and special skills make them stand out, and only the subsequent public endorsement of what they accomplished makes them so useful as targets and object-lessons in the present. Their offense was a common human failing, and we are able now to call them to account only because their remarkable capacities gave what they thought and did such easily definable outlines.

An old story repeated by Robert Ornstein in *The Psychology of Consciousness* might sum up Roszak's charge against the scientists; put this way, we see that it applies to us all:

> A man saw Nasrudin searching for something on the ground. "What have you lost, Mulla?" he asked.
>
> "My key," said the Mulla.
>
> So the man went down on his knees too, and they both looked for it.
>
> After a time, the other man asked: "Where exactly did you drop it?"
>
> "In my own house."
>
> "Then why are you looking here?"
>
> "There is more light here than inside my house."

If we do a little revising, this was Galileo's explanation for his resort to mathematics, and for his shelving of the secondary qualities of things. The light was mathematics, and what could be seen in the light were the constant physical qualities of things which were definable by number.

Like most other men, Galileo wanted to do what he was good at, and which brought results that could be recognized and enjoyed. In time, Galileo's example and influence—he was personally very persuasive, and wrote exceptionally well—had a decisive effect on the way men thought about the world and about "reality." Edwin A. Burtt describes the cultural result:

> *Now, in the course of translating this distinction of primary and secondary into terms suited to the new mathematical interpretation of nature, we have the first stage in the reading of man quite out of the real and primary realm.* Obviously man was not a subject suited to mathematical study. His performances could not be treated by the quantitative method except in the most meagre fashion. His was a life of colours and sounds, of pleasures, of griefs, of passionate loves, of ambitions and strivings. Hence the real world must be the world outside of man; the world of astronomy and the world of resting and moving terrestrial objects. . . . Hence in the metaphysics of Galileo, space (or distance) and time become fundamental categories. *The real world is the world of bodies in mathematically reducible motions, and this means that the real world is a world of bodies moving in space and time.*

A further comment on this development, illuminating in its comprehensiveness, is made by F. A. Lange (*History of Materialism*):

> From the triumph of this purely mathematical achievement there was curiously developed a new physics. Let us carefully observe that a purely mathematical connection between two phenomena, such as the fall of bodies and the motion of the moon, could only lead to that great generalization in so far as there was presupposed a common and everywhere material cause of the phenomena. The course of history has eliminated this unknown material cause, and has placed the mathematical law itself in the rank of physical causes.

It should be noted that Newton himself clearly separated the mathematical account of motion from its physical cause—a cause he was unable to discern. Despite this admission, as Lange says, "he became, against his will, the founder of a new cosmical theory containing obvious inconsistency in its first elements." Since this lack of a basis for gravitation troubled Newton's contemporaries, who thought there might therefore be a return to "occult" causes, they ignored the need for physical explanation. Newton, however, did not. Writing to Bentley in 1693, he said:

> That gravity should be innate, inherent and essential to matter, so that one body may act upon another at a distance, through a vacuum, without the mediation of anything else by and through which their action may be conveyed from one to another, is to me so great an absurdity that I believe that no man, who has in philosophical matters a competent faculty

> of thinking, can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws; but *whether this* agent be material or immaterial I have left to the consideration of my readers.

Newton might have had his non-mechanistic scruples, but he expressed them quite rarely, and so far as his materialist followers were concerned, the battle was practically won. The Cambridge Platonists could offer their Paracelsian objections to Cartesian mechanism, but no one listened to what they said. Joseph Glanvil might present his evidence in behalf of occult causes and psychic phenomena, but the tide of the mechanical philosophy made his arguments seem without strength.

What, then, had force in arguments about "reality"? Quantitative measurements, applying mostly in physics and mechanics, which were now becoming the models of every sort of certainty. This was the real knowledge, enabling people to *do* things. There was no other regulative principle, and in areas where this sort of science could not be applied, people felt free to do what they pleased. And if they could in any way relate what they did to "science," then the resulting achievement became a species of piety, for they were then exhibiting the splendor of human progress and demonstrating the unique attainments of modern man.

We now skip to the present for some examples of what happens in human life when there are no regulative principles except the technical rules which apply to the objective physical world, and no concepts of limit except those based on galloping disaster.

The following is taken from an article by Wendell Berry appearing in the *Los Angeles Times* for Sept. 8:

> In my boyhood, Henry County, Kentucky; . . . was almost entirely a farming county. The farms were generally small. They were farmed by families who lived not only upon them but within and *from* them. They grew gardens. They produced their own meat, milk, and eggs. They were highly diversified. . . . There was still a prevalent pride in workmanship, and thrift was still a forceful social ideal. The pride of most people was still in their homes, and their homes looked like it. This was by no means a perfect society. Its people had often been violent and wasteful in their use of the land and of each other. Its present ills had already taken root in it. But I speak of its agricultural economy of a generation ago to suggest that there were also good qualities indigenous to it that might have been cultivated and built upon.

Now comes a passage we call particular attention to:

> That they [these good qualities] were not cultivated and built upon—that they were repudiated as the stuff of a hopelessly outmoded, unscientific way of life—is a tragic error on the part of the people themselves; and it is a work of monstrous ignorance and irresponsibility on the part of the experts and politicians who have prescribed, encouraged and applauded the disintegration of such farming communities all over the country into our allegedly miraculous "modern American agriculture."

The conscientious physicist of today, pondering the problem of extracting nuclear energy from fusion instead of fission, will not take kindly to being asked to shoulder the blame implied by this indictment. Biologists turned ecologists who work to protect the landscape and our waters from lethal pollution will not care for the imputation of guilt; and the hard-working agronomists who fathered the Green Revolution will argue from the threat of worldwide famine to reject this plea in behalf of the small farmer. But the rest of us, if we hear Mr. Berry out, may decide that the time has come to disregard the claim of authority which, until now, has attached to anything called "scientific."

Consider, for example, the human cost of "scientific agriculture" in Kentucky:

> In the decades since World War II the farms of Henry County have become increasingly mechanized. Though they are still comparatively diversified, they are less diversified than they used to be. The holdings are larger, the owners are fewer. The land is falling more and more into the hands of speculators and professional people who—in spite of agricultural miracles—still have much more money than farmers. There are not nearly enough people on the farms to

> maintain them properly, and they are for the most part visibly deteriorating. . . .

There is a direct relation, Berry implies, between the modernization of farming methods and the disintegration of the farming communities and their culture. Throughout the land, millions of people have been displaced. The change has been costly in human terms, to the delight, apparently, of the scientific authorities who think entirely in terms of quantitative measures:

> Last year in Kentucky 1,000 dairies went out of business. They were the victims of policies by which we imported dairy products to compete with our own, and exported so much grain as to cause a drastic rise in the price of feed. Typically, an agricultural expert at the University of Kentucky was willing to applaud the failure of 1,000 dairymen, whose cause he is supposedly being paid—with *their* money—to serve. They were inefficient producers, he concluded, who needed to be eliminated.
>
> He did not say—indeed, there was no indication that he had ever considered—what might be the limits of his criterion or his logic. Does he propose to applaud this same process year after year until "biggest" and "most efficient" become synonymous with "only"? This sort of brainlessness is invariably justified by pointing to the enormous productivity of American agriculture. But any abundance, in any amount, is illusory if it does not safeguard its producers—and in American agriculture abundance has tended to destroy its producers.

Men go to technical schools and are trained in the methods of applied science. The goal of their science is increased production. The "how" of things is the subject-matter of science. The meaning of the practice of the science is not inquired into—it is *given*. You don't ask how long and to what end you should use a shovel. You use it until the hole is dug. But the tools of science have no such obvious limit on their application. The goal of the application of science is more production. Specialists do not learn the art of balance in human life. That is not their department. They learn simply how to get more production, and they do get it.

Man, as E. A. Burtt said, speaking of Galileo, has been read out of the real and primary realm. What unceasingly more production does to man, to his life in community, to his society, is not a relevant consideration—not a matter with which science can concern itself. It is right and good for the dairymen to succumb to the competition of agribusiness—the law of survival prunes away the inefficient operators—that's how the world gets on.

Well, the "world" may make progress in this way, but not the human beings who are no part of the world contemplated by scientific abstractions. Meanwhile, in human terms—as Wendell Berry says—

> The results are a drastic decline in farm population and political strength; the growth of a vast, uprooted, dependent and unhappy urban population. Our rural and urban problems have largely caused each other. The result is an unimaginable waste of land, of energy, of fertility, of human beings. The result is that the life on the land, which in its native processes, is infinite, has been made totally dependent upon the finite, scarce and expensive products of industry. The result is the disuse of so-called marginal lands, potentially productive, but dependent upon intensive human care and long-term human familiarity and affection. The result is the virtual destruction of the farm culture without which farming, in any but the exploitive or extractive sense, is impossible.

Is it reasonable to blame all this on Science? Probably not. Yet science had a decisive part in determining the conception of excellence—of reality and of efficiency—on which the course which brought these results was based. What has really happened is that we have taken a partial view of the world—the matter-and-its-motions view—and made its conclusions, its perspective, and its narrow conceptions of validity the ruling authorities of general human behavior. What occurs outside that view—what cannot be comprehended in that view—we declare to be either unreal, unimportant, or merely a matter of "taste."

Roszak is a philosophic thinker. It is natural for him to think of the psycho-moral effects of scientific thinking, which means studying the

consequences of its basic assumptions, examining those assumptions critically, and showing where they lead. He looks at Science spelled with a capital S. But the individual practitioners of science, today, are nearly all small-s scientists—busy with products, not overall assumptions. They work in particular fields. Many of them are hardly aware of the assumptions Roszak holds up for inspection. They barely recognize them, much less the cause-effect chains which trace their influence to social and moral and ecological disorder in the present.

What, rather plaintively, asks George Weinberg, physicist at Harvard, does Mr. Roszak want *me* to do?

There is only one answer to such questions. If physicists accept the role of model-makers for all the sciences, it is time that they start working on some new models—inclusive instead of exclusive models. If this seems to mean Goodbye Physics, they ought to be able to risk such threats, especially since physicists are so proud of the fact that they practice the most epistemologically secure science of all. We should at once add that blaming scientists, and even physicists, is now virtually a form of rhetoric. If scientific thinking has become the foundation of our culture, and has made a mess of things, then, because *we too* have adopted this mode of thinking, we are *all* responsible. The scientists can no longer be held as scapegoats, but only as the most representative sample to show how things have gone wrong.

Meanwhile, Mr. Berry's final paragraphs may give clues to a new kind of science of which we are very much in need:

> My point is that food is a cultural, not a technological, product. A culture is not a collection of relics or ornaments, but a practical necessity, and its destruction invokes calamity. A healthy culture is a communal order of memory, insight, value, and aspiration. It would reveal the human necessities and the human limits. It would clarify our inescapable bonds to earth and to each other. It would assure that the necessary restraints be observed, that the necessary work be done, and that it be done well.
>
> But this attitude does not come from technique or technology. It does not come from education; in more than two decades in universities I have rarely seen it. It does not come even from principle. It comes from a passion that is culturally prepared—a passion for excellence and order that is handed down to young people by older people whom they respect and love. When we destroy the possibility of that succession we will have gone far toward destroying ourselves.

An older civilization than ours, abler than we to track principles to their origin, has spoken of this attitude as embodied in *Dharma*, meaning duty fulfilled according to the nature of things. When the nature of things is regarded with indifference, the idea of duty loses strength. It is then that the study of wise custom and of illustrious example should become the rule.

REVIEW
RELATIVE OR ABSOLUTE MORALITY?

WHY do men kill one another in war? Only one answer to this question is worth discussing—the answer which says: They do it because they believe it is right to do it. This is a problem of value, of deciding what is good. We commonly recognize that problems of value must be solved by reflection, by self-questioning, while issues of fact call for research. When only facts are in question, science is required. After we assemble the relevant facts, the problem dissolves, or the question answers itself.

Issues of value, however, bring to the fore who and what we think we are. We find ourselves deeply *sensitive* to such questions. As we say, our "identity" is at stake. Declarations of value imply self-definition.

From this comparison one might conclude that only issues of value are of lasting importance to human beings. Why should this be? Because only through changes in self-definition do we grow. Skills, powers, possessions, may be increased by the accumulation of facts, but what we do with these acquisitions, and why, results from what we value. Conceivably, the Biblical injunction, "Seek ye first the kingdom of God, and all things will be added unto you," means precisely this.

But all issues of value emerge in our experience within a framework of facts. It is natural, therefore, that ideas or feelings about value may be overwhelmed by the weight of facts. Deciding whether or not it is right to allow values to give way to facts—which involves distinguishing between values and facts—may be the central task of human life. Quite possibly, there is a level of awareness where values define facts and facts define values—where these two orders are interchangeable—but we do not now *live* at that level. It seems evident that interchangeability between facts and values would put an end to moral decision—or an end, as Roderick Seidenberg suggested, to history. Yet the attempt or tendency to make facts define values, or values facts, seems ineradicable in human beings. Quite possibly, if we could understand the meaning of that tendency—and if we could know why we need to *wait* until we have another kind of knowledge, or another kind of awareness, before we dare to say that values can be deduced from facts, or facts from values—our human evolution would be much further along.

These are thoughts and questions provoked by Ronald V. Sampson's new book, *The Discovery of Peace* (Pantheon, $6.95). The mind of Leo Tolstoy is the theater of the book's action. Four writers whom Tolstoy read—Joseph de Maistre, Stendhal, Alexander Herzen, and Proudhon—are the players who wrestled with the tensions between fact and value. Tolstoy's central contention—and Sampson's—is briefly put in the Preface:

> However difficult it is to act it out under all circumstances it is not impossibly difficult to admit that Christ's injunction to *resist not evil* and the conviction that God's Word (if we honour it by giving it utterance) will of itself defend us from evil is the Truth. If it is not the Truth, why is it that after two millennia no one has ever succeeded in demonstrating the invalidity of the proposition?

The proposition, of course, is older than two millennia. It was maintained in other language by the Buddha, and in almost the same words by Socrates. At the outset Mr. Sampson shows the respect paid to this moral principle by a great many Western thinkers, through their effort to infect the political state with some of its spirit. We must, we declare, persuade our leaders to behave non-violently, or less violently. We speak hopefully of altering the purposes of governments, so that wars do not result from their activity. Sampson sees in these efforts little more than futile self-deception. The purposes of governments cannot be altered, he says, and he quotes from Thucydides the words of the

Athenian envoy to the beleaguered Melians, intended to put an end to all such pretense:

> . . . you and we should say what we really think, and aim only at what is possible, for we both alike know that into the discussion of human affairs the question of justice only enters where there is equal power to enforce it, and that the powerful exact what they can, and the weak grant what they must.

What then of Christ's injunction? The conclusion of the acceptable moralists is that, while abstractly admirable, it won't work in the world. It must be qualified by hard facts. In a just war, Martin Luther said, the Christian, as "an act of love," will "kill, rob, and pillage the enemy," and "do everything that can injure him until one has conquered him according to the methods of war." Sin, of course, should be avoided, and wives and virgins not violated. Augustine and Erasmus, and even Goethe, say much the same thing. Mr. Sampson challenges the counsels of the acceptable moralists:

> With virtual unanimity all the great thinkers of the Western world from the classical Greeks right down to our own immediate contemporaries, although claiming to be seriously concerned about war and its cause, do not appear to consider their own ignoring or rejection of the principle that it is wrong to *resist* evil to be at all relevant. Why is this? Why, since no one can refute this principle, should people not concede that it is both true and crucially important, and then go on to analyse as realistically as they wish the actual behavior of errant men? Why can people not be morally honest and at least preserve their intellectual self-respect? The reason is that the injunction to *resist not evil* cuts the ground away from under the legitimacy of the human will to power. So much so that anyone wishing to discuss the principle *resist not evil*, seriously is at best relegated to the monastic cloister, metaphorically speaking. Such a person, it is implied, cannot on that account alone have anything responsible to offer to men of responsible judgment who have to take the affairs of the real world seriously. Religion is all very fine but politics have to go on, and they cannot be left to purists who lack judgment. This is of course a convenient dichotomy; but it is not one we are prepared to concede. Because my position is a religious position, that does not mean that I am willing to acquiesce in my excommunication from the realm of political analysis and criticism. There are not two separate realms wherein dwell politicians, soldiers, men of affairs on the one hand, and on the other the religieux, the moralists, the pietists, the monastics. There is one realm only—the one in which we must perforce dwell, and where every single individual's contribution adds to the true welfare of men or inflicts injury on that welfare, according to his values and the direction of his striving.

This is the crux of Mr. Sampson's argument—"There are not two separate realms"—by which he means that right and wrong ought to be determined by timeless principles which do not alter with facts or circumstances. Ultimately, no doubt, he is right. But let us recall a similar discussion by Hannah Arendt of the same principle in its Platonic version:

> The Socratic proposition "It is better to suffer than to do wrong" is not an opinion but claims to be truth, and though one may doubt whether it ever had a direct political consequence, its impact on practical conduct as an ethical precept is undeniable. . . .
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> To the philosopher—or rather, to man insofar as he is a thinking being—this ethical proposition about doing and suffering wrong is no less compelling than mathematical truth. But to man insofar as he is citizen, and an acting being concerned with the world and the public welfare rather than with his own well-being—including, for instance, his "immortal soul" whose "health" should have precedence over the needs of a perishable body—the Socratic statement is not true at all.

Mr. Sampson says there are not two realms, but one; however, Hannah Arendt has in a sense established the existence of two realms—that is, the outlook of the philosopher, and the attitude of the man in the street. We may agree that the philosopher has the truth of the matter, but there remains the question: Is there a relative morality which has relative validity for the man in the street, since, indeed, there are so many of him?

This is obviously dangerous doctrine, since the moment we admit a comparative "morality" for the man in the street, we establish practical ground for all the compromises which deny Christ's counsel of perfection, and which reap, in

historical terms, all the horrors of the wars of modern times.

Yet can we say that the common man is without moral perception? Gandhi, who, as we know, regarded the *Bhagavad-Gita* as a treatise on non-violence, made this interesting comment:

> In the age when the *Gita* was composed, the men who influenced its thought did not raise the question whether the violence committed in war was right or not. That question seems to have been raised only in modern times. . . . Our descendants may see violence in many things in which we do not see it today. . . . In exactly the same manner, war was regarded such a normal thing in the age of the *Gita* that people did not feel that they violated the principle of non-violence by engaging in it. The illustration of the war in the *Gita*, therefore, seems to me perfectly innocent. If, however, we reflect over the teaching of the *Gita* as a whole and examine the characteristics of the . . . yogi, we can come to only one conclusion, namely, that the Shri Krishna who taught the path of the *Gita* was literally an avatar of ahimsa and his exhortation to fight does not in the least detract from the purity of his ahimsa.

What this suggests is that so long as there are nations or national groupings, and armies to defend their interests, so long will there remain a partisan idea of selfhood, or identity. Only a limited—a perhaps innocent but limited—morality can result from this outlook. It is indeed a second realm, but one now increasingly doomed to disaster through war. Moreover, this realm is beset by varying determinations of right and wrong—varying almost from day to day—since in circumstances involving national loyalties morality changes with national policy.

One might deduce from Mr. Sampson's arguments that, given such personages as Gandhi and Tolstoy, the time has come for a great step fonvard in morality—from one realm to the other—since the claims justifying violence have been so decisively challenged by these pioneers. Mr. Sampson also shows that underlying the challenge to the morality of war, for any cause, is the deeper challenge to the idea of *power*. While limited moral ideas may be associated with the use of power, power is not and cannot be a tool for moral objectives. Conceivably, such books as *The Discovery of Peace* have a fundamental role in the present development of mankind. They point to the foundation in ethical intuition, and then in reason, of a spiritual conception of the human being.

COMMENTARY
WHAT THE FUTURE WILL REQUIRE

IN this week's "Children" a writer remarks that obvious didactic purpose in education "prevents all possibility of dramatization."

The importance of drama is obvious enough. Drama arises out of human unpredictability, the mystery of character. Choices are always involved in a drama, and a story which presents no dilemmas of decision is dull indeed.

Apparently, the nineteenth-century educators this writer is castigating had decided that they couldn't risk any drama, any decisions on the part of the children. The moral side of education was intended to resemble "the successful outcome of a scientific experiment."

But since no one is able to predict how moral decisions will work out, education which pretends to do this is a species of fraud. Yet we have to tell the children *something,* don't we?

There is really no hope in discussion at this level. Talk and indoctrination are by far the most ineffectual means of teaching, and the endless arguments about curricula are sufficient evidence of this. We know that children will absorb the moral ideas held in solution by the community in which they live; they always have and they always will. No matter what we "tell" them.

So the thing to do is to find teachers who are able to create a better community spirit and in this way, little by little, raise the common level. A good teacher chooses materials which honor the ambiguities that life presents, the dramas we are playing out in our lives, and the hard decisions we all have to make. It is difficult to imagine a state legislature being of any help to teachers in a task of this sort, except by learning to leave the teachers completely alone. At present this seems unlikely.

Speaking of nineteenth-century education, the writer quoted in "Children" says: "line image of society emerging from these texts can only paralyze the child and turn him away from any initiative that may lie outside the beaten path." Well, that's about what John Holt says of the schools of today.

We suggested that the best thing to do is to find the right teachers. This may not be possible. We may have to become them ourselves, along with doing a lot of other unaccustomed things that the future will require of us.

CHILDREN
. . . and Ourselves
THE STORY AS EMANCIPATOR

WE don't quite know who *The Child's Part* (Beacon, 1972), a collection of essays on children's literature edited by Peter Brooks, was put together for. It isn't for children, it isn't for parents, and it doesn't seem especially important for teachers. The book is apparently classified as either literature or sociology, which may mean that it is for "scholars." We take notice of it here simply for the pleasure it may give some readers, and for odd bits of interesting information. We learn, for example, that the career of Charles Dodgson, who wrote under the name of Lewis Carroll, "can best be understood as a quest for order, in some ways not unlike that of the White Knight in *Through the Looking Glass."* The writer, Michael Holquist, continues:

> He [Dodgson] began his career as a student of mathematics, and was for many years a teacher of the subject in Christ Church College, Oxford. In his later years even the precision of Euclidian geometry failed to satisfy his lust for order, and he turned to symbolic logic. There are many anecdotes which further point up his compulsive orderliness: when he had packages to be wrapped, he drew diagrams so precise that they showed to a fraction of an inch just where the knots should be tied; he kept congeries of thermometers in his apartments and never let the temperature rise above or fall below a specific point. He worked out a system for betting on the horses which eliminated disorderly chance. He wrote the director of Covent Garden telling him how to clear up the traffic jams which plagued the theater to the post office on how to make its regulations more efficient. And after writing all these letters (more than 98,000 before he died), he then made an abstract of each, and entered it into a register with notes and cross-references. When he saw the first proofs of *Alice in Wonderland*, he refused to accept them because, as his illustrator Tenniell had pointed out, they were not clear enough, a scruple which, however, did not keep him from selling the 2000 copies of this rejected printing to an American publisher, for whose colonial audience he felt the plates were adequate.

Queen Victoria was delighted by *Alice* and placed a standing order for the author's next book. But she was "not amused" when it turned out to be Dodgson's "formidably technical *Condensation of Determinants."*

Apparently, Dodgson was very much against having his books interpreted as didactic allegories. Mr. Holquist finds several internal reasons in *The Hunting of the Snark* for rejecting all such pieties. Carroll was writing nonsense. It might be orderly nonsense, but it was still nonsense:

> For the moral of the *Snark* is that it has no moral. It is a fiction, a thing which does not seek to be "real" or "true." The nineteenth century was a great age of system-building and myth-makers. We are the heirs of Marx and Freud, and many other prophets as well, all of whom seek to explain *everything*, to make sense out of *everything* in terms of one system or another. In the homogenized world which resulted, it could be seen that art was nothing more than another—and not necessarily privileged—way for economic or psychological forces to express themselves. . . .
>
> Aware of this danger, authors have fought back, experimenting with new ways to insure the inviolability of their own systems, to invite abrasion, insist on strangeness, create fictions. Lewis Carroll is in some small degree a forerunner of this saving eRort. To see his nonsense as a logic is thus far from being an exercise in bloodless formalism. That logic insures the fictionality of his art, and as human beings we need fictions. As is so often the case, Nietzsche said it best: "We have art in order not to die of the truth."

In another of the essays, Jacqueline Flescher speaks of various attempts by interpreters to give exact meanings to the words in "Jabberwocky," remarking, "The variety of their conclusions perhaps indicates the futility of the enterprise":

> What critical analysis can stand the challenge of the following interpretation, which was made by a child: "It means a bug that comes out at night with a light on its tail and a sword between its beak. That's what a jabberwalkie is." Another child gave a valuable key to the relationship between form and meaning: "He wrote it in a language that almost makes sense when you read it. The words sound and

> are spelt like normal words in English but the poem is imaginary in its physical language."

Apart from the fun, what's the good of it? Well, it makes you think about language, its conjuring power, and about "logic."

Jules Verne was another emancipator of the young. Children's literature in the eighteenth century, remarks Isabelle Jan, and even more so in the nineteenth, was intended "to educate the child according to the dictates of good behavior as instituted by a rising, voracious bourgeoisie, nostalgic for aristocracy and forgetful of the common people from which it had sprung." It follows that—

> the didactic purpose is foremost and is so apparent that it prevents all possibility of dramatization. No ambiguity, not the slightest questioning is to be found in these playlets and anecdotes. Frozen in their roles, the characters are entirely positive. They unite all their efforts toward the successful outcome of a scientific experiment: to prove that everything is to be gained through good behavior and all to be lost otherwise. Nothing of this hodgepodge has survived, which is as it should be; for this was what we would call today propaganda material, without the slightest transposition, and in no wise a literary phenomenon. . . . The image of society emerging from these texts can only paralyze the child and turn him away from any initiative that may lie outside the beaten path.

Verne, perhaps without knowing it, was an innovator and a rebel. He broke with the literary tradition by writing *for children*, and while the didactic intention was present, it has, Miss Jan says, "second place." Andre Winandy suggests that Verne's stories are sheer adventure, and that he created a new realm of fiction—a "twilight zone" in which the imaginary is fused with the real. This author plays fair with his young readers:

> If Jules Verne's adventurer explores the known and the unknown of his planet, it is in order to dominate it and to make it serve him better. From the twilight zone the traveler always comes back into the dimension of fictional reality which parallels that of the imaginative reader. Thus imagination serves the real. Verne, perpetually fascinated with the underlying explanation of all phenomena, transforms the imaginary into the plausible and blends basic plot, imagination and reality in the charismatic formula of his *Journeys*. No factor ever remains to puzzle the imagination or to destroy thus the illusion of the fictional reality. This illusion is always kept alive and the explanation becomes dynamic didacticism within the realms of the imaginary, the fictive and the real.

In his earlier works, America was for Verne a symbol of the progressive, humanitarian, and scientific spirit. This is shown in a chapter by Jean Chesneaux. Americans were the world's technicians, as Italians are musicians, and Germans metaphysicians, by birth. The Yankee temperament appealed to him. The Yankee is a man of action who solves mechanical problems before they arise. The United States is also the land of freedom. Verne looked at America much as de Tocqueville saw it—as giving hope to all the world.

But America, alas, let him down. He lived until 1905, seeing the ugly aftermath of the Civil War and the Big Stick policy come into play. When the reign of the dollar established itself and as technology replaced humanism, biting comment about America appears in his books. In a posthumously published collection of his stories, *Yesterday and Tomorrow*, the United States has become inordinately powerful, annexing not only all the New World, but England, too. Science is no longer the key to a benign future. Verne notes that because of color photography, Millet's *Angelus* sells for only fifteen francs. Angry images now replace his earlier admiration, a change of view which nonetheless reminds us that "there was a time—somewhere in the past—when the hopes of forward-looking men and educators of youth tended to crystallize around a vision of the United States."

FRONTIERS

Trigant Burrow—Pioneer Psychologist

MORE than fifty years ago, Trigant Burrow—one of the first American psychoanalysts—had an experience which altered the direction of his life. Burrow had trained with Adolf Meyer and Carl Jung, and for some years followed the teachings of Freud. Born in 1875, he entered practice in 1910, and within ten years had begun to speak of "factors in society at large which parallel and foster individual neurosis." Then, in 1920 or 1921, during a teaching session which involved analysis of the students, a youthful member of the group reacted hostilely, demanding that their positions be reversed—that he, the student, be given opportunity to analyze Burrow, the teacher.

Burrow agreed, but soon realized that his personal resistance to the student's questions was making the session intolerable. He noted in himself the feeling that the student's assumption of "authority" was unforgivably offensive, concluding that the "chair" of the analyst gave an authority to which he had no real claim. Status, he decided, was the source of a delusive eminence which was mistaken for knowledge and blocked the way to admission of real ignorance. After recording this incident in *The Social Basis of Consciousness* (1927), Burrow commented: "It has not yet been recognized . . . that we who are psychoanalysts are ourselves theorists, that we also are very largely misled by an unconscious that is social, that we too are neurotic."

This diagnosis of the distortions in our common psychological life led Burrow to research human behavior in groups. As Alfreda Galt reports in *Group Process* (Vol. 5, 1973):

> The two men [Burrow and the student] decided to follow up on this observation of the impasse; they called in others—friends, associates, patients, and family. With the enthusiasm of neophytes, they set to work to establish a "consensual laboratory" for the study of normal interaction. In 1921 Burrow withdrew from practice to devote full time to this new field of investigation, and in 1923 he organized the first summer session at his camp in the Adirondacks. In a primitive and rather isolated setting some twenty persons came together for the purpose of analyzing their own behavior and interrelations. In the words of E. James Anthony (1971) the intensive inquiry that resulted "almost amounted to prolonged sensitivity training groups conducted over many years . . . a precursor of the National Training Laboratories at Bethel except for the fact that [the] frame of reference was radically different."

What was this radical difference? Therapy, you might say, was only incidental to the research program. These devoted individuals pursued psychological disorders to their source in stereotyped social attitudes. Hearing of Burrow's work, Freud asked: "Does Burrow think he is going to cure the world?" Burrow's answer was "yes"—for the reason that, as he said: "Only the phylic neurosis, only the neurosis of man can be cured, and it can be cured only through scientific research." If we can find the cause of the neurosis of society—the phylum—then "the individual neurosis will be reached and remedied."

We may have here the explanation of why Burrow has been so much neglected in the development of psychoanalytical theory, through the years. He maintained that man is a social being, whose ills have a social origin, and whose health can be gained only as a social achievement. In his foreword to Burrow's posthumously published book, *The Preconscious Foundations of Human Experience* (1964), Nathan Ackerman muses:

> How could this giant figure have remained so obscure, and for so many years? . . . Burrow, dismissed from his university appointment, excommunicated from the American Psychoanalytical Association, and then a virtual taboo placed on his name? Burrow, a dedicated researcher in human behavior, tossed into scientific exile! Was this some peculiar quirk, an odd accident of history? This could hardly be. I could explain it in only one way.
>
> A generation ago, Burrow's theories were far in advance of his time. They were too radical, too threatening to conventional systems of thought. By Burrow's own admission, even he felt inwardly threatened by his discoveries concerning the

> pathology of normality—his ideas must have been felt a danger to the then-popular concepts of psychiatry and psychoanalysis. . . . the implications of his theories for a revolution in established social forms were possibly such as to impel what amounted to mass avoidance, an unconscious complicity in protest and denial.

Discussion of Burrow's theoretical basis lies outside the scope of this brief review. More important are what seem the effects of the distinctive motivation of Burrow's research. Alfreda Galt writes in her paper:

> . . . there is a notable difference, in my experience, between meetings of peer groups for purposes of "personal growth," and a procedure that involves a more or less continuous study of individual and group reactions along with significant figures in one's own life setting. The latter group may enter directly into consensual observation—and perhaps modification—of highly charged situations involving, for instance, attitudes toward one's home, toward money, work, or one's children. In these circumstances, the nature and intensity of feeling responses can reveal much about human motivation. This clarification of basic incentives was in fact a more important aim for Burrow and his associates than the comfort or improvement of the participants.

Burrow's work sought general enlightenment. Was this the reason why the participants experienced "ease, quiet, clarity and preparedness in both feeling and in thoughts"? One could say that there was growth, but that it was impersonal—virtually a by-product of the research. Alfreda Galt continues:

> Another difference relates to postulates about feeling and emotion. In training and encounter groups, "emotion," as it is experienced and expressed by members of the group, is generally regarded as basic, that is, as irreducible. "Acceptance" of one's feelings is highly valued and a premium is placed on their expression. Recently various therapeutic efforts have focused on progressive excitation of emotion by group encouragement and on catharsis through exaggerated expressions of rage, fear, etc. . . . in Burrow's experimental groups, emotions and their catharsis were not sacrosanct; instead emphasis was placed on immediate observation of affect within oneself and the group. . . .

In *The Sword of the Gnosis* Jacob Needleman speaks of the coarsening effect of equating "violence of emotion with depth and subtlety of feeling." He adds: "In attempting to free us of neurotic guilt, psychology only helped us for a time to feel comfortable about ourselves, but never to discover the struggle for greater being."

A partial confirmation of Burrow's views is found in Herbert Kohl's reflective comments in *Half the House:*

> The sustained and responsible attempt to change aspects of this culture leads us into inconsistencies, into supporting what we want to destroy, in many subtle and unexpected ways. However, assuming responsibility for this complicity and our own failures is the only way I know to develop sustained action that might eventually lead to a humane society. . . . There is a danger in looking solely outside oneself for an understanding of our pathological society, just as there is a danger in looking solely within. The internal and external worlds must change simultaneously if a reconstituted society is to develop.

Simultaneity may be important at the mass level, but Burrow's work seems to indicate the first step—individual recognition of the egocentric emotional responses we make to one another.