

## IMAGES, POLLS, AND "REALITY"

THE people of the United States are fortunate in the presence among them of John Kenneth Galbraith. He is held to be an economist, but he is not that—at least, not any more. Or, if he is still an economist, he is changing the content of his discipline. Economics used to be the systematic study of how to get the things we want—of how to organize human energy and to direct this energy as a natural phenomenon, in order to bring about optimum material conditions for the common good. This enterprise was once conditioned by what is now spoken of as the "scarcity" of the goods and other desirable things sought by economic means. The condition has changed. The title of Mr. Galbraith's earlier book, *The Affluent Society*, called attention to this change and discussed its implications for the dynamics of a society now abundantly supplied—in measurable volume, if not in savor—with the things its members have wanted for so long, or believed that they wanted.

Well, if Mr. Galbraith is no longer an economist, what is he now? He is a social psychologist. That is, since the basic problem of our society is no longer a matter of getting "things," but has become the difficult project of understanding why the "abundance" achieved is so unsatisfactory in so many ways, he has turned to the study of human behavior. Why are we in so many messes? Why do people who have been so successful in terms of the old "scarcity" economics have so many plaguing new problems? What are the desirable forms of human behavior at the levels involved?

An article in the July *Progressive*, adapted from his forthcoming book, *The New Industrial State* (Houghton, Mifflin), illustrates the themes with which Mr. Galbraith is now occupied. Here, we plan an attempt to do three things: To identify what he is doing; to show how it is useful; and to

point to what stands in the way of a greater usefulness of such work.

First, Mr. Galbraith examines the provocatives of buying and selling in the industrial state. Goods are sold, he says, mainly because of the *imagery* that is circulated concerning what those goods will do for people. The creation of this imagery is the dynamic cause lying behind marketing. A pun was not intended, but it serves: the imagery is mostly little lies. The products fulfill routine functions—satisfying hunger, placating alcohol or nicotine addiction, moving the body's wastes more rapidly through the intestinal tract—but the fact is:

Little or nothing of importance can be truthfully said about the way a product performs these routine functions. Flat lies as to their performance are generally impermissible. But a surrogate for the truth, in which minor or even imaginary qualities confer great benefits, is essential.

People are conditioned to discount the wilder claims of advertising, but it influences them sufficiently nonetheless:

Failure to win belief does not impair the effectiveness of the management of the demand for consumer products. Management involves the creation of a compelling image of the product in the mind of the consumer. To this he responds more or less automatically under circumstances where the purchase does not merit a great deal of thought. For building this image, palpable fantasy may be more valuable than circumstantial evidence.

Mr. Galbraith concedes that in themselves these goings-on may be a comparatively harmless affair. But what about the wider government of human behavior by imagery, in more important areas of decision? "If the image is of a nation beset by enemies, there will be responding investment in weapons." The discounts in respect to such imagery are much more limited, and are taken only by people who have independent

knowledge of foreign affairs and whose opinions are shaped by reflection. The images constructed of the national state and its good "are taken very seriously" by most people. They expect a little bamboozlement about soap and cigarettes, but not about the national security. Moreover, the makers of the national image do their work "with the utmost seriousness." As Mr. Galbraith says,

They persuade themselves. They see the result not as the image of reality but as the reality. To suggest that it is imagery is to be irresponsible, eccentric, or, conceivably, subversive.

Mr. Galbraith's analysis of this sort of image-making is searching and dispassionate. With language that is not in the least "incendiary" he shows how the industrialist system depends and finds it convenient to depend upon military expenditure, making it necessary "that there be an image of the world which justifies or rationalizes the military expenditures that the arrangement requires." Then he says:

For nearly twenty years, the requisite image has been that of the Cold War. That this image owes its existence only to the needs of the industrial system is not suggested for a second. The revolutionary and national aspirations of the Soviets, and more recently of the Chinese, and the compulsive vigor of their assertion, were the undoubted historical source. But history must be separated from result.

This paragraph sets the mood and displays the integrity of Mr. Galbraith's inquiry. He is not eager to cash in on his analysis with a quick we-must-do-this-now conclusion. There is careful comparison of fabricated imagery with what he tries to show or hopes is "reality." There is also sage observation on how fabricated imagery displaces other views, hiding their potentiality:

Disarmament is regarded as a serious threat to a balanced prospect for reciprocal destruction. For, since ambitions are unrelenting and good faith lacking, there is danger of being tricked by negotiations into concessions which would allow the other side to destroy with impunity. The competition (in weaponry) is held to be safer, so, although it is discussed, few associated with these matters take seriously the possibility of disarmament. Rather, the discussion is an act of obeisance. It makes clear that

the arms competition is being undertaken in lieu of successful disarmament instead of for its own sake.

Mr. Galbraith does not even cash in with moralizing value judgment. He simply shows how these processes of persuasion work through the fixing of images. In the following he indicates how "absolutes" enter the picture:

Even a calculation that the competition may, at some point, lead to total destruction of all life is not a definitive objection. Liberty, not material well-being, is involved. This is an ultimate value that cannot be compromised in the face of any threat. Thus the competition is protected from even the most adverse estimates of its outcome.

Mr. Galbraith's article is a really impressive example of how a man may use his subjective awareness to observe and describe the psychological confinements of social life. Speaking critically, he shows that the problem is to find ways to discount the distorting imagery created by the industrial system in behalf of existing national policy; and speaking positively, he offers some more constructive images—and more faithful to facts—to put in its place. The psychological environment for undertaking this is the status quo:

The industrial system wins belief for the image of implacable conflict (with associated features) that justifies its need. Having won belief, the arms competition seems normal, natural, and inevitable, as do the actions based upon it. Dissent seems eccentric, irresponsible. Herein is the power of a system that depends on belief rather than compelled support.

With almost no effort at all, one could compile a large bibliography of current writing that would give endless particular examples, with facts and developing commentary, of the basic psychological situation described. There is for instance the brilliant analysis of the escalating tendencies of the Vietnam war by Douglas Kiker in his Washington Report in the July *Atlantic*; or the somewhat inconclusive but psychologically revealing essay by Irving Kristol in *Foreign Affairs* for July. Then, there is Seymour Martin Lipset's scholarly study of the results of public opinion polls, published in *Trans-action* last year,

and reprinted in long excerpts in the *Los Angeles Times* for Oct. 2, 1966. The polls, it becomes apparent, measure the depth-penetration and effectiveness of the present imagery and thus tell policy-makers "how they are doing" in terms of public acceptance. As Dr. Lipset says:

. . . in the area of foreign policy most Americans know very little, and are only indirectly involved. They have no way of checking on often conflicting reports from countries and regions under contention, nor on public sentiments elsewhere in the world. Consequently, the press and political leaders can have much more influence in determining public opinion on foreign issues than on domestic issues.

Whether Tshombe is a villain or a hero, whether the downfall of Nkrumah is good or bad, is defined for the average American. If we trace the poll popularity of a single leader, say Tito of Yugoslavia or De Gaulle of France, it becomes clear that the poll variations in the United States follow policy decisions made about him on the basis of whether his actions further or hamper American concerns. In other words, polls do not make policy so much as follow policy in most areas of international affairs.

This article continues with detailed analysis of the responses to a number of polls, enabling Dr. Lipset to reach certain broad conclusions about the general temper of the American people a temper variously reflected in either a "hawk" or a "dove" direction, depending upon how the poll questions are asked and what is said to be "at stake" in the decisions involved. Dr. Lipset generalizes:

The findings of the survey clearly indicate that the President, while having a relatively free hand in the actual decision-making to escalate or to de-escalate the war, is more restricted when considering the generic issues of action or inaction. He must give the appearance of a man *engagé*, of being certain of what he is doing, that is, that the anticipated consequences do in fact come about.

The President knows that in order to get the support of the American people for a war they wish they were never in, he must continually put his best foot forward—he continually talks and offers peace, so that he may have public endorsement of war. . . . His interest in the opinion polls, therefore, reflects his desire to be sure that his approach is reaching the

American public in the way he wants them affected. The polls tell him how good a politician he is. They are also a weapon against his critics.

What becomes evident here is the fact that the people, like other peoples elsewhere, trust the images given them by their leaders, because, for the organism of society not to die, they must have trust, and because there are no alternatives available in their limited experience and knowledge of foreign affairs. What about another kind of imagery? Prof. Lipset has asked this question and made an answer: "There is no equivalent to Dwight Eisenhower around today—an opposition leader with sufficient personal status and international experience to become a counter-center of foreign policy confidence."

This is a way of saying that if you want to institute some changes *now*, you will have to use existing imagery that already enjoys popular acceptance. Either that, or start the long process of generating independent opinion through the laborious circulation of neglected facts. Efforts in this direction require a reflective, dispassionate atmosphere. The discovery and assimilation of the meaning of facts can not go on in any other atmosphere. People who refuse to accept this are really only competitive image-makers; they are no less image-makers for being certain that their images are *right*.

Getting the "true facts" spread around is going to be something of a project. A paragraph by Senator Mark O. Hatfield in the *Saturday Review* for July 1 considers how it might be begun:

William Sloane Coffin, chaplain of Yale University, commented that any American who had read one book on Vietnam was at least several light years ahead of the average citizen. One book, of course, is only the beginning. We are going to have to line our shelves with volumes on the political, social, religious history of Vietnam and Southeast Asia. Happily, there are some excellent books (many in paperback) that can sharpen us for the painful debate that must be sustained if we are to find a way out of the swamp and into a new concept of global power built on spiritual foundations rather than

atomic threats or Green Beret ballads. [The Senator gives a reading list.]

Changes through this approach, in short, will require work, pain, and time, and these may not replace, they may only accompany, blood, sweat, and tears. What sort of pain? The pain to come to people who inform themselves is plain enough from what they may expect in response to their efforts from the image-makers who now dominate the scene, practicing a strategy described by Douglas Kiker:

It is to scramble all dissent and make it into one big messy omelet. It is to wrap William Fulbright, Robert Kennedy Mike Mansfield, Dr. Benjamin Spock, Stokely Carmichael, Dr. Martin Luther King, Cassius Clay, the Quakers, the pacifists, the peace-marchers, all the preachers and teachers who sign those ads in the *New York Times*, all the draft card burners and the flag rippers, all the demonstrators and the hysterical women—to wrap them all in one common, dirty cloak.

The pain can also become physically tangible, as the Los Angeles *Free Press* "extra" for June 26 makes clear. This issue is filled with "blow-by-blow" accounts of the police treatment of some of the estimated twenty thousand peace marchers who gathered to demonstrate during the Democratic Party money-raising dinner in Los Angeles on June 23, which the President attended. This, to return to Mr. Galbraith's article, is one aspect of "the power of a system that depends on belief. . . ."

We spoke of Mr. Galbraith's reluctance to make value-judgments or to cash in on his analysis by suggesting a program. Well, he does make a few value judgments. They result from what he sees as the weakness of a trust which has little support from anything but "belief." He questions certain articles of faith in the present policy:

The notion that the arms competition is ultimately benign has small foundation. There is a not inconsiderable chance of accident. There is also a chance that some day some true believer will react to the liturgy of conflict and provoke the ultimate conflict.

That the risks of agreed disarmament are greater than those of a continuing and unresolved weapons competition is also unproven. It is not clear why agreements can be negotiated in good faith on all subjects except disarmament. To eliminate civilized life for all time in response to a short-run calculation that liberty might otherwise be endangered is also irrational. And those who would make such a decision are themselves strongly subordinate to a system of belief. They are not free men.

And there is this to consider:

. . . the Cold War has elements of a self-fulfilling prophecy for it has cultivated the reciprocal mistrust which it assumes. Only if we understand our situation is there a chance that matters will improve.

Mr. Galbraith *does*, of course, have a program. He has a moral equivalent to war and a practical equivalent to the support military spending gives to the industrial system. It is for the two great industrial systems—the American system and the Soviet system—to compete in nonlethal technology instead of lethal technology. He suggests an expansion of space exploration which, he says, "is largely—although not totally—devoid of military implication."

Others have proposed similar alternatives—such as making war on want and disease—but space technology appeals to Mr. Galbraith as an economist: it will keep the machines going better than some other programs. He knows that the industrial system has a vast hunger for work to do and that it will collapse without it. He ends by saying: "This competition is not a luxury; it serves an organic need of the industrial system as now constituted. And it does not culminate in explosions of immeasurable effect."

But, as he also says, the "situation" is not likely to improve—by this means or any other—without understanding. So, if we have to get understanding first, anyhow, we may have a wider choice of alternatives after it is obtained.

The problem has two ends. One is represented by what we think (or believe) is good for us and our country in the way of foreign policy. An improvement at this end depends upon

putting facts in the place of beliefs—or on gradually improving the quality of our beliefs by feeding them a diet of facts; but it also depends upon what we think of ourselves—which is the other end of the problem. There is a kind of human being who grows restless and dissatisfied from having to live according to beliefs supplied by others. There are people who find this way of life intolerable, and this is so not merely in politics but in relation to everything in life. Such people know that they can't know everything, that there has to be *some* trust, but they also know that there is such a thing as taste, judgment, and discrimination in deciding whom you will trust. You might say that these people have a *feeling* appreciation of the problems and possibilities of self-knowledge.

What is this feeling-appreciation good for, in relation to practical problems? Well, it seems to help people to keep their moral and intellectual balance *while* they are coping with situations concerning which it is just impossible to have a sufficiency of the "facts." It gives them a method of remaining independent, free men while honestly recognizing the limitations placed by ignorance on all men, including themselves. That is what self-knowledge is good for. And that is why, also, *all* problems of human decision which deal more with potentialities and possibilities than with *status quo* facts—which involve transitions from belief-systems to tentative knowledge-systems, which require a choice between definitely anti-human activities and optimistic but admittedly risky and uncertain activities—always have two ends. There is simply no way to handle such problems without at least the beginnings of self-knowledge.

A man with some self-knowledge, for example, will not go about proposing programs which rudely and too suddenly violate the self-imagery of other people. He will not use the language of manipulation as a shortcut to "getting things done." He will not talk about people as though they were nothing but "sheep," even though it can be proved that in certain

relationships they are behaving like sheep *right now*. Calling them sheep will not make them into something else. It may make you feel good, but it will not make them feel good, and then they will have to learn to think in spite of you, instead of with your help.

Could there be a social-science approach to such problems which starts out from the self-knowledge point of view?

## *REVIEW*

### MORE WORK-IN-PROGRESS

BOOKS about the self are difficult to write. That is, books which set out to examine the idea of the self present many more difficulties than those which are exciting and valuable because they deal with this subject without ever saying so. To speak fruitfully of the self, as such, involves a rare art of self-observation pursued without the fussiness or embarrassments of what we commonly call "self-consciousness." So it is a particular pleasure to report on a book which succeeds in this.

*Coming into Existence*, by Raymond Rogers (World Publishing Co., 1967, \$4.95), subtitled "the struggle to become an individual," with an introduction by S. I. Hayakawa, is a triumph of natural, unmannered, introspective thinking. The author's approach to questions and problems is apparently so "everyday" that the reader is in danger of not noticing what a fine book he has written. It is not really an "intellectual" book; while there is a lot of intellectual communication in it, the real content does not result from the manipulation of concepts. Its substance accumulates from slow, deliberate, and wondering self-examination. The other books used by the author afford much more than "quotations" because he has made their thought his own.

Mr. Rogers starts out with a passage from a novel which tells about a child who has a "self-awareness" experience—a brooding sense that she is *herself* comes over her. The nuances of this experience are considered and Mr. Rogers says:

For most people now, personal identification comes neither as a sudden revelation, an effortless gift, nor a gradual natural growth. Rather, if it occurs at all, it is likely to come as an achievement, sometimes a slow, laborious, painful emergence accompanied by doubt, confusion, and perplexity. "Who am I? What am I? What is this whole thing about?" There is a feeling that one could and should be somebody, doing something. But what, and how?

These are the questions on which *Coming into Existence* is based. The author accepts help

from Ortega concerning the subjective aspects of human reality: "To live . . . is to find oneself suddenly fallen, submerged, projected without knowing how, into a world that cannot be changed, into the world of now." And from Prescott Lecky, an almost unknown psychologist of a generation ago, he obtains the conceptual forms for describing the dynamics of human becoming in terms of self-activity. It is the life of self-expression which by its pervasive energy creates the field for self-realization—a process called by Lecky "dynamic unification." This is a key conception in the book—and, if you will, in life. Mr. Rogers has this illuminating passage:

The struggle toward existence is the struggle toward self-awareness, but this struggle consists of self-activity that starts below the level of self-awareness and comes to a culmination in the subjective experience of awareness. This means that psychic existence is not an absolute thing like physical existence, a matter of being or not being, but rather a matter of degree, of more or less. It means that one might be only partly in existence, that coming into existence is a process of proceeding along a continuum from little or nothing to more and more, and that awareness occurs when one passes some critical point on the continuum.

This seems an accurate account of the coming into maturity. A man bound by convention—or by fear and the attraction of second-rate securities—is only partly a man. If he can be reduced by crowd emotion, or elated by mass enthusiasm about something that has nothing humanly excellent in it, his self-activity is still embryonic. But in those so confined there may be secret, childlike longings for greater individual being, and there can always be a beginning to self-activity. A reading of Plato's *Apology* might light a fire of independence in a man who had never dared to think of himself as a man, but is now *moved* in this direction by the story of Socrates. For human beings, the paths to such awakening must be legion. Literature can give us no more than general types of this mysterious process.

So a deep subjectivity is involved in coming into conscious existence; yet, when once the

process is recognized and accepted, the individual begins to construct a new scale for the meanings of human life—a scale in which the stages or calibrations slowly acquire a second-degree objectivity concerning the process of becoming. The virtue of Mr. Rogers' book is that it is of great assistance to anyone trying to make such a scale for himself.

For people concerned with the humanness of human beings, there can be no more important project. Actually, today's world of intelligent and concerned people might be thought of as engaged in an enormous effort to rearrange the priorities of values, with ever-increasing emphasis on subjective realities. So aware of what these people become that they regard it as commonly understood. For example, in an article in the *Texas Quarterly* for the Winter of 1966, John Lukacs remarks in passing:

This is an essay dealing with the changing face of Progress, not with its essence. I cannot, therefore, discuss the relationship of "internal" with "external" progress, save to say that the former is, of course, more important than the latter, since the only real progress through the history of mankind consists of the development of man's consciousness of himself.

*Coming into Existence* is a book about "internal progress," attempting systematic study of "the development of man's consciousness of himself." Following is a characteristic passage:

. . . human living is essentially a matter of self-activity as distinguished from passivity, a matter of spontaneity, of starting something, of attack, of taking initiative. In this view the possibility of living is the possibility of meeting difficulties and taking action toward them, of overcoming them or of making some use of them. It is the possibility of making something not only of our situations, but also of ourselves.

Making something of ourselves is an integral part of the problem because we are involved in the world's ambiguity. Our own behavior is often unavoidably ambiguous, just as our other experience is. Even our most carefully considered actions are frequently both "good" and "bad." We encounter life-generating difficulty even within ourselves. We can reasonably ask whether or not it is possible to do "nothing but good"—that is, to behave in a purely

constructive way. The standard human virtues were identified long ago and are well known to almost everybody. It is easier to understand them than to practice them in specific situations, however, because the practice of one virtue is sometimes not consistent with the practice of another. This is the origin of some of our moral problems and, more broadly, some problems of psychic integrity.

It is virtually a disservice to Mr. Rogers to separate such general statements from the rich matrix of illustration in which they occur, and which gives them meanings that spur the reader to find illustrations of his own. In short, while the book has its clear statement of principles, these are nowhere *formidable*—the development *is* far too natural for anyone to be overwhelmed by synthesizing abstractions such as the following:

There are no potential animals, but the world is full of potential human beings. Everyone starts as a mere potentiality. But not every potentiality becomes a person because not everyone overcomes the difficulties involved. Even a grasping of the general idea of human living is an overcoming of difficulty, a noteworthy accomplishment. And the actualization of a human life, even momentarily, which is the ultimate, the definitive human achievement, is vastly more difficult. Some succeed, some fail. Some succeed or fail in a spectacular way, rising to tremendous heights or falling below the animal level. But most attempts are neither spectacular successes nor failures; they partake of both success and failure.

Moreover, one doesn't succeed or fail just once—once and for all. One doesn't succeed, then remain effortlessly on the human level, inactive, or fail and remain forever barred from human living. Rather, human living is either a repeated or a continuing achievement, an incessant becoming.

One can light up almost any aspect of human life and striving with what *is* said here. For example, the "work-in-progress" aspect of growth, when recognized, helps to explain why the sharp abstractions of scientific knowledge, with their beautiful finality and unambiguous simplicity, are so difficult for us to apply to the human side of human life. For here, reality is always *potentiality*, not finality. Mr. Rogers has made some delicate tools for grasping and coping with this fact.

## COMMENTARY A POET'S ANSWER

FILLED with visions of the promise of the industrial system, J. A. Etzler published in London in 1842 a pamphlet entitled *The Paradise within the Reach of All Men, without Labor, by Powers of Nature and Machinery*. Even in those days, an enthusiastic man could hope to persuade his fellows that by means of "transcendentalism in mechanics" (automation and cybernation?) it would be possible, "within ten years," for mankind to "enjoy a new world, far superior to the present, and raise themselves far higher in the scale of being." Most of the pamphlet is devoted to practical ways and means, such as the exploitation of "wind power" and other as yet unused resources. Emerson read Etzler's work and persuaded Thoreau to review it, and a year later Thoreau's comment appeared in the *Democratic Review*. (Thoreau's review-essay is now available in his *Anti-Slavery and Reform Papers* [Harvest House, Montreal, 1963].) After extensive quotation to show the content of the pamphlet, Thoreau wrote of Mr. Etzler's proposal:

. . . his dreams are not thrilling nor bright enough . . . His castles in the air fall to the ground, because they are not built lofty enough; they should be secured to heaven's roof.

The chief fault of this book is, that it aims to secure the greatest degree of gross comfort and pleasure merely. It paints a Mahometan's heaven, and stops short with singular abruptness when we think it is drawing near to the precincts of the Christian's—and we trust we have not made here a distinction without a difference. Undoubtedly if we were to reform this outward life truly and thoroughly, we should find no inner duty omitted. It would be employment for our whole nature; and what we should do thereafter would be as vain a question as to ask the bird what it will do when its nest is built and its brood reared. But a moral reform must take place first, and then the necessity of the other will be superseded, and we shall sail and plough by its force alone. There is a speedier way than the "Mechanical System" can show to fill up marshes, to drown the roar of the waves, to tame hyenas, secure agreeable environs, diversify the land, and refresh it with

"rivulets of sweet water," and that is by the power of rectitude and true behavior. . . . Where an angel travels it will be paradise all the way, but where Satan travels it will be burning marl and cinders.

Thoreau's view does not lack for advocates today. The language may be different but the points are the same. As C. R. DeCarlo observes in *Dialogue on Technology* (Bobbs-Merrill, 1967):

In some ways science as technology is like the magic bottle in the fairy stories, one simply has to wish and the desired result is accomplished. . . . However, as Ulrich says in *The Man Without Qualities*, "it is so easy to act, so difficult to find a meaning for action." It may well be that through the enormous leverage of science and technology we may approach a position in which we will have a complete mastery of means and an emptiness of ends.

And Richard Kean writes in the same volume:

It has been said that the threat of technology is not so much that it will replace man as that he will imitate it. Structuring his life to meet the "organizational necessities" of the industrial age, man has done just that. He has failed to distinguish between form and function. He has established corporate, self-justifying mechanisms which accumulate tremendous amounts of power over which he has no real control.

The modern, secular term for Thoreau's "moral reform" and "rectitude and true behavior" is "meaningfulness." And, as Nels Ferré remarks in the *Saturday Review* (July 1), "Meaningfulness . . . is living by and for some purpose." This is hardly possible for men who suffer an "emptiness of ends." Their mastery of means will be impressive, even fascinating to them, but entirely useless. People who imagine that, given the mastery of means, high ends will just bubble up "naturally," are as much the victims of superstitions as the Africans who pour gin on their land so that their departed ancestors will give them "lots of money." They put the cart before the horse. They need to reflect on the wisdom of Nietzsche's apothegm, quoted by Ferré, that "he who knows the why of life can stand almost any how." And they need to recognize that it is by no means a Luddite attack on technical mastery of

the "hows" to insist that knowledge of the "why of life" must come first.

Friedrich Juenger's brilliant analysis in *The Failure of Technology* (Regnery, 1948) is not refuted by application of more sophisticated technology. Juenger wrote in summary of his thesis:

No connection whatever exists between the reduction of work on the one hand and leisure and free activity on the other; just as little as an increase in speed of locomotion implied a rise in morality, or the invention of telegraphy, an increase in clear thinking.

Hannah Arendt (see *Frontiers*) has put it very well: such delusions could "end in the deadliest, most sterile passivity history has ever known."

## CHILDREN ... and Ourselves ON OPEN FIELD TEACHING

AN article by a mathematician, "The Role of Intuition," in *Science* for May 5, brings home the fact that whenever the higher reaches of learning and discovery are discussed by men who have had some experience of them, what they say is pretty much the same. The writer of this article is R. L. Wilder, research professor of mathematics at the University of Michigan. At the outset, Prof. Wilder does the best he can to establish what he means by intuition, drawing on Descartes, Kant, and a few others.

I believe [he writes] that the intuition about which some philosophers speak is—if not wholly, at least partially—a "native intuition." Thus Descartes stated: "By *intuition* I understand, not the fluctuating testimony of the senses, nor the misleading judgment that proceeds from the blundering constructions of the imagination, but the conception which an unclouded and attentive mind gives us so readily and distinctly that we are wholly freed from doubt about that which we understand." And Kant, as I interpret him, conceived of the concepts of both time and space as deriving from an a priori intuition which is independent of experience. Among the more modern philosophers, especially those of a mystical bent, knowledge imparted by this native intuition may be considered more valid than that gained from observation and experience. The "intuitionism" of Brouwer and Poincaré, insofar as it conceived of the natural numbers as "intuitively given," seems to proceed from this native intuition.

Probably a very large book could be made simply by collecting other definitions of intuition which parallel what has been said here, but for practical purposes it seems likely that the definition made by Descartes is as good as any.

Prof. Wilder's article is essentially a discussion of the respect the teacher of mathematics ought to show for the intuition of his pupils, but before we see what he says on this subject it may be valuable to recall the similar views of Albert Einstein. Wilder observes: "It is almost a truism that without intuition, there is no creativity in mathematics." And Einstein, writing in the *Journal of the Franklin Institute* in 1936, in the paper, "Physics and Reality," said:

Physics constitutes a logical system of thought which is in a state of evolution, whose basis cannot be obtained through distillation by any inductive method from the experiences lived through, but can only be attained by free invention.

The justification (truth content) of the system rests in the proof of usefulness of the resulting theorems on the basis of sense experiences, where the relations of the latter to the former can only be comprehended intuitively.

Einstein also wrote:

That the totality of our sense experiences is such that by means of thinking it can be put in order is a fact that leaves us in awe but which we shall never understand. . . . nothing can be said concerning the manner in which the concepts are made and connected and how we are to coordinate them with the experiences.

Well, to call these concepts "intuitions" is to say *something*. By perceptive accounts of the meaning of intuition, such as Prof. Wilder's article, aided by the framing effect of each man's own subjective experience, we assemble a kind of unified constellation of subtle feelings about "knowing," and these feelings gain some authenticity from the "awe" of which Einstein speaks. All that we are saying is that it may be useful to think about the "intuition." Or that "something" may be said on the subject, provided it is said carefully, and without matter-of-fact presumption. This seems exactly the case in respect to Prof. Wilder's remarks about how to teach mathematics to the young. He begins by saying that "individual mathematical intuition is not a static but growing thing." He continues:

It starts developing when we are children, during the time when we learn to distinguish shapes and sizes (geometric intuition) and to count (arithmetic intuition). We are not born with it, for without a cultural basis for its development, there can apparently be no mathematical intuition. By the time the child starts in school in our culture, however, he usually has some basis to build on—his parents have probably taught him to count, for example—and the continuing development of this basis undoubtedly forms one of the central responsibilities of primary teachers.

What is this "basis" for intuitive development? (We do not really *know* we are not born with it!) It lies, Prof. Wilder shows, in the relationship between

two components—the "knowledge" component and the intuitive component. The knowledge component is, so to speak, both the raw material and the fruit of the intuitive component. The *relation* between these components, as maintained by the teacher, or as suppressed, determines the quality of the education that takes place. The two cannot really be separated, of course, but the relation needs to be understood. Prof. Wilder explains:

Perhaps I can make this clearer by stating my conception of what the new curricula being developed today should accomplish in contrast to the old, standard, mathematical curriculum. The old curriculum was designed chiefly for the knowledge component; the student was taught how to perform arithmetic and algebraic operations and how to prove theorems. But little conscious development of mathematical intuition took place; what there was of this seemed to find expression chiefly in the problems that were given to be solved. . . . For example, while under the old system the student was *told* the formula for carrying out a process, under the new he should be invited to do a little guessing as to what form the process should take. This guessing and the accompanying experimentation, resulting in a decision as to the final result develops and strengthens the mathematical intuition.

Prof. Wilder then points out that this procedure is exactly that followed by the research mathematician, and he holds that "all concepts should be introduced in this way." When the intuitive capacities of the student are bypassed in education, no real or "creative" teaching occurs:

To explain a concept to a student adds to his knowledge component, perhaps, but does not strengthen his intuition. Probably the worst example of this kind of thing is the writing of a definition on the board, then explaining what it means and how it is used.

There is a striking parallel, here, to points made by Frank Lindenfeld and Peter Marin in their article on "open field" teaching (MANAS, Sept. 7, 1966), in which the writers say:

We view the process of education as involving a flow from experience to perception to abstraction. . . . Perhaps a good example of this is the concept of "alienation." Students, as we all know, hear a good deal about this "condition" of modern man. But their understanding of the concept and the condition to

which it refers is much richer if the discussion of it has emerged *naturally*, as a result of the confrontation of their own experiences. They may not have the word at first to describe what they are talking about, and the teacher may then want to supply it, but we feel that he should supply the word and the abstract concept only *after* the students have provided the opportunity.

If the concept comes *first*, the student will apply it like a "title" to their experience without ever letting the experience itself emerge—and their knowledge will tend to remain "abstract," without roots in their personal experience.

The correspondence, here, with what Prof. Wilder says, is obvious. (It is incidentally interesting to wonder how intuitive operations may differ in relation to a "social" subject such as Lindenfeld and Marin are concerned with.) A parallel more specific in its relation to teaching mathematics is found in an article by J. J. Gordon in *Education of Vision* (Braziller, 1965), in which the writer tells how he encouraged his students to use analogy and metaphor to solve scientific problems by unconventional and new means. Mr. Gordon makes this general observation:

Perhaps the greatest danger in the teaching of science is to present students with a *fait accompli* universe. It is a didactic tradition that undergraduate students must accept the phenomenological universe as described by someone with special knowledge, i.e., the teacher. The teacher is saying to students that they must surrender to his rules or they can't play in his backyard. By the time a student has clerked his way through his undergraduate work in a science, it may not be possible for him to tolerate the ambiguity of constructing his own ways of understanding.

The point is made—heaped up, pressed down, running over. But where did we get all these terrible habits that genuine teachers have to spend their lives trying to correct? Is it conceivable that the religious background of Western man, with its precise "creedal" formulations of religious truth, inscribed on the *tabula rasa* of small children's minds in the form of "correct belief," is a basic cause of these difficulties in education? If so, then what might be the application of "open field" teaching in this crucial area of learning?

## *FRONTIERS*

### The Great Refusal

A FEW weeks ago, a MANAS "Children" article recalled Herbert Marcuse's characterization of the role of high culture in relation to mediocrity and Philistinism as the Great Refusal. In *One Dimensional Man* (Beacon), Marcuse said that the vast absorptive power of the present technological civilization had nullified the power of the Refusal. There is certainly some truth in this. But also, some kind of cycle may govern in such matters. If, for example, you read the Summer 1967 issue of the *American Scholar* you find the active presence of the Great Refusal throughout the magazine. It comes as affirmation after affirmation of the reality of subjective, self-determining, creative, and morally free Man. The rest of this brief note will be devoted to illustrations—which by no means exhaust those available in the Summer *Scholar*.

First, Joseph Wood Krutch—although Mr. Krutch's contribution seems a bit melancholy. If he had been able to read the other articles in this issue of the *Scholar* before writing this piece, he might have felt more encouragement. He says:

To me it seems that most of my fellow citizens are crassly and cynically materialistic while most of the intellectual minority, which one might expect to oppose them, is nihilist—interested chiefly in destruction and violence, in non-art, non-music and non-painting. Philosophy is bent on destroying itself as it becomes Logical Positivism on the one hand or Verbal Analysis on the other. The persons who appear most likely to shape the future are the scientists and technologists who, as in a recent issue of the *SCHOLAR*, tend to agree that all the culture of the past is irrelevant, and that the world should, and soon will, be a science-fiction writer's dream. Thus the physical, intellectual, aesthetic and moral world in which I want to live seems to be disappearing.

But Mr. Krutch has a strong company of friends. Right after his article comes an essay, "The Crisis in Biology," by the distinguished authority on Evolution, George Gaylord Simpson, in which holistic, non-mechanistic logic makes

mincemeat of the over-simplifiers and reductive thinkers in science. Dr. Simpson is a cautious teleologist who insists on purpose in scientific explanation in all cases where purpose manifestly defines the reality of what is being studied. He writes with a beautiful clarity:

In physical sciences it is not legitimate, indeed it is downright silly, to ask what things are for or what good they are. . . . But in biology it is not only legitimate but also necessary to ask and answer questions teleological in aspect, concerning the function or usefulness to living organisms of everything that exists and that occurs in them. . . . [chemical] reactions themselves are meaningless except as they relate to the organisms and populations and ecosystems in which they occur.

The general principle:

Intracellular chemical reactions . . . would be incomprehensible and also would not exist if it were not for their roles in the life of the cell and the organism as a whole. And that is true both up and down the hierarchy, from an atom to the whole of life and back again. It is ridiculous to base a philosophy of science or a concept of scientific explanation wholly on non-biological levels of the hierarchy and then attempt to apply it to the actually biological levels without modification.

In passing, Dr. Simpson charges the behaviorists with just this sort of offense in psychology: "They virtually exclude the psyche from psychology, and their understanding and explanation of what they observe, being limited to the physical level, are grossly incomplete." We are not claiming Dr. Simpson as a "transcendental philosopher," but he is using the methods on which transcendental philosophy depends—taking what is genuinely *given* in subjective as well as objective human life, and building upon it as real.

In "Medical Education and Psychoanalysis," Richard Noland declares that Psychoanalysis ought not to become a "medical specialty":

. . . the danger of absorbing psychoanalysis into medicine is simply that medicine would trim it "to order, to fit crude clinical requirements." Psychology would be replaced by a scientific theory that views body and mind materially, and by a clinical technique that emphasizes quickness and efficiency. Therapy

would only require the right drug for the right symptom. . . . If, then, psychoanalysis is not to remain stunted (and it is this aborted form that humanists commonly attack as inadequate), it must become one of the humanistic and behavioral sciences. It must work toward a metapsychology of culture and all its parts—historical process, social institutions, art and religion.

A California psychologist, Harvey Mindess, concludes a study of Freud on Dostoevsky with these words:

Despite his unequaled talent in analyzing human fixations, neuroses and regressive phenomena of all kinds, Freud, it seems clear, was deficient in perceiving instances of spontaneous inner development—creative achievements of integrity and insight in individuals who have been in the past, or who even remain, disturbed.

Toward the end of a musing discussion of "Poems, Poets, Computers," Howard Nemerov has this passage:

A good deal of evidence—from science fiction to schizophrenic fantasies—suggests that our tensions about the machine became immensely aggravated when machines began to become our substantive daily reality. . . . The relation of the arts to machinery . . . has always been ambiguous, containing both fascination and fear of being enthralled; in a sense its closest analogies are the relation between the spirit and the body, and now, with the advent of computers, the relation between the mind and the brain. It is true that minds without brains have not been observed to exist; yet I think it would be overhasty, on that account, to follow those philosophers who tell us that the term "mind" is a redundancy and a merely hypostatical entity, and that it must therefore be given up. . . .

Hannah Arendt says on this point: "The trouble with modern theories of behaviorism is not that they are wrong but that they could become true, that they actually are the best possible conceptualizations of certain obvious trends in modern society. It is quite conceivable that the modern age—which began with such an unprecedented and promising outburst of human activity—may end in the deadliest, most sterile passivity history has ever known." And, putting that warning in direct relation with our theme, "Thought itself, when it became 'reckoning with consequences,' became a function of the brain, with the result that electronic instruments are found

to fulfill these functions much better than ever we could."

So we have Affirmation, Refusal, and Diagnosis of the most searching kind in this issue of the *American Scholar*. These members of "the intellectual minority," at any rate, are plainly not "nihilist."