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CONSCIENCE AND THE MAN

IT is natural enough, in a culture which habitually restricts its investigations of good and evil to social situations and confrontations, that discussions of "conscience" should deal almost entirely with the relations of individuals to the state. Since forms of political organization are commonly held to be the chief source of potential good for human beings, it is inevitable that they should also be the scapegoats for most of the evil and injustice. "Action," in the current vocabulary, seldom means anything but political action, and when men invoke a "higher law," they do this to show the inadequacy or even the immorality of the law presently embodied in constitutions and statutes. Other phases of the moral struggle—should they be admitted to exist at all—are brushed aside as unimportant or merely academic. Who, for example, now seriously interests himself in the issue of ethics as set by Thomas Huxley in his distinguished lecture, *Evolution and Ethics?* Huxley said:

> The practice of that which is ethically best—what we call goodness or virtue—involves a course of conduct which in all respects is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside, or treading down, all competitors, it requires that the individual shall not merely respect but shall help his fellows; its influence is directed, not so much to the survival of the fittest as to the fitting of as many as possible to survive.
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> Let us understand, once for all, that the ethical progress of society depends not on imitating the cosmic process, still less in running away from it, but in combating it.

Even if we take what Huxley says as substantially true, the doctrine hardly becomes operative for us until the cosmic "ruthless self-assertion" of which he speaks finds political expression—it is in this form, at any rate, that men attempt to oppose it. The primary and much subtler expressions of the same conflict within the individual are hardly noticed. Conscience, in short, or the human longing to practice "that which is ethically best," seems to us to begin its significant struggles only at the political level.

But isn't this, as we say, "natural"? Isn't it a fact that the moral warp in the human environment is not felt until we are overtaken by the constraints and injustices of man-made law? Isn't life in organized society the place where conscience is denied? Where else could be its theatre of action?

Moral indignation and world-wide cries of pain seem to confirm the political analysis. But a consequence of this stance is to let all our definitions of good and evil get their terms from the conflict-situations produced by the state. We never dig any deeper. It must be asked if the symmetries of moral thought, evolved in this way, really correspond to the symmetries of human beings.

Something of a case can be made for the idea that morality *is* entirely political. Aristotle supported this view, calling man a political animal and arguing that his duties to the state exhaust his nature (with the rare exception of "philosophers"). One might even deduce this view from Huxley, since he denies an inspiration for human morality in the evolution of the physical world. The "law of the jungle," he says in effect, and with reason, affords no model for human behavior.

It is possible, however, to make other interpretations of the world of nature. Kropotkin felt that men could learn much from the behavior of animals, as he shows in *Mutual Aid*, and more lately the "ritual" aspect of conflict within species has been offered as a kind of "natural sanction" against the genocidal slaughter pursued by human beings.

More to the point, however, is the general intuition, felt by many—itself perhaps an aspect of conscience—of the deep kinship of all life. Those in whom such feelings become strong sometimes ask if moral ideas which ignore this kinship are sufficiently rooted in reality. Richard L. Means (in the *Saturday Review* for last Dec. 2) has written well concerning the unity of man with nature, suggesting that a merely anthropocentric ethics is diminishing to human beings:

> . . . although the relations of man and nature may be envisioned in various ways—all the way from control to passive obedience—the notion that man's relation to nature is a moral one finds very few articulate champions, even among contemporary religious writers. Harvey Cox's book, *The Secular* City, for example, is set in an urban world in rather extreme isolation from the surrounding problems of resources, food, disease, etc. The city is taken for granted and all the moral dimensions of Cox's analysis are limited to man's relations with man within this urban world, and not with the animals the trees, the air—that is, the natural habitat.

It might be argued that technology has made the natural habitat irrelevant, but this neglects the possibility that what is wrong with technology lies precisely in our alienation from nature. In short, the refusal ever to look up from the arena created by politics and technological manipulation on the ground that the *faits accompli* of modern progress define what is morally important—this obsession with the gross symptoms of disorder may itself be what *keeps* us in disorder. Politics, in other words, may some day be recognized as no better than a reform-school theory of human progress.

Where could anyone get the optimism necessary to support another idea of progress? Perhaps, if only negatively, some optimism may be generated by the fact that all humanistic educational psychology is against the reform-school theory. And the irresponsible if raw and primitive dictates of conscience are against it.

Why should we call conscience raw and primitive? Well, from the viewpoint of critics, its contentions often appear rationally under-developed. When some condescending official asks a conscientious objector how to run the affairs of the modern warfare state nonviolently, he gets no reasoned answer!. The C.O. hardly knows what would be right, except in very general principle, and the peace movement is torn by this practical shortcoming. The stride from "I will not kill" to plans for social organization of a great many people who will is hardly possible. How can non-coercers coerce? Non-violence, despite its great potentialities, is not easily altered from a technique of resistance to a method of construction. Many people are working on this transformation, and eventually they may succeed, but it is practically certain that this will require conscience to develop a wide spectrum of non-political meanings.

One of the inevitable consequences of thinking about morality as a special sort of statecraft is the vulgarization of thought. You don't really consider "morality" seriously until the state demands that you do something you know in body and soul that you cannot do. Saying *No!* to the state is now the positive moral proposition, and its logic is evolved in counter-argument. It has mainly a "resistance" content and the splendor of a "back to-the-wall" psychology. The state owns the theatre in which this drama is played. State authority sets the timing and supplies the props and scenery. So of course, since the language of the state is political, and only political, morality gets defined as little more than anti-state politics. That is all that shows. And, in dialogue with the state, unless you use state categories of meaning, you are not heard. This is really a terrible and demoralizing preoccupation for a human being. It puts conscience on very short rations.

One recalls the English tribunal who, during World War II, peered down magisterially at a conscientious objector who had just finished explaining the grounds of his war resistance, and said, "Young man, are you sure you haven't *reasoned* about your position?" The tribunal had been instructed that only religion could justify

conscientious objection, and since, for practical men, religion is notoriously irrational, to have reasoned about war resistance would be for the conscientious objector an unpardonable sin. And for many years in the United States, the "philosophical" war objector has been regarded as a dangerously rational individual who deserves full punishment. (The Seeger Decision of the United States Supreme Court [380 U.S. 163 (1965)] undermines this view, but draft boards are a backward lot.)

It happens that the final item in a book containing fifty-five documents expressive of conscientious objection to war—from colonial times to the present—is an impressive example of the struggle of a man to think in his own terms instead of in the categories permitted by the state. This book, *Conscience in America* (Dutton paperback, 1968, $2.75), is compiled by Lillian Schlissel and is subtitled *A Documentary History of Conscientious Objection in America.* The statement of Benjamin Sherman, with which the books concludes, is a valuable selection since it illustrates a man's successful attempt to define the meaning of conscience for himself, instead of matching up his moral feelings with the Selective Service Act. For Mr. Sherman, conscience represents one's accountability to himself, not to his government. He tells how he became uncomfortable with a deferment that was allowed because he was working as a part-time design draftsman on ordnance equipment that would eventually be "involved in the killing in Vietnam." He knew he could stay out of the war as long as he held that job, and there were other advantages:

> My period of employment at this company made it possible for me to attend art school and work as a sculptor without financial burden. I was, in effect, killing in the morning and seeking to create in the afternoon. The incongruity of these two acts unfortunately took too long a time to stab into the depths of my conscience. I was not endangering my life; perhaps this is what made the burial of conscience possible for those years. One often builds a "shell" around the conscience to avoid the fact that man is horribly cruel to his fellow men. But I believe that all but the most hardened of individuals have some cracks in this "shell." It is frightening to me, and often disheartening to see groups and governments trying to stuff untruths and inhuman chauvinistic catch phrases into these hopeful cracks in an effort to completely prevent any compassion for our fellow human beings to flow from us.

So he quit and was caught in the toils. He declared that the war was "unjustifiable, inhuman, and opposite to every ideal I wished to live for." Mr. Sherman's account of the various uncertainties out of which grew the moral certainty of his opposition to the Vietnam war is a rare example of the workings of independent moral intelligence:

> I am not a political sophisticate; maybe I am naive, my knowledge of the intricacy and intrigues surrounding the whole Vietnam situation is very limited indeed. But instinctively I cannot and will not fight against a people who, from all the information I have been able to glean, are being horribly and unjustifiably maimed and killed.
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> I am not a pacifist; I wish I was. I am the product of a society not geared to this type of thinking. I am not exceptional in this case. I would like to think that it is easier and not particularly dangerous to do the right thing. Our society covertly teaches us differently. Intimidation and distrust, whether I like it or not, have colored my reactions to situations. The pacifists, I believe, through their achievement of casting off our society's conditionings, are the hope of ever achieving some sort of peace and love between men.
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> I am trying to be human. My strength is not, as such, to be completely and lovingly non-violent. But I am trying to fight an unfortunate trait of character which I know is wrong. Violence and killing, for any reason, cannot be right. I am trying to clean myself up bit by bit.

Well, it seems a pity that only a few court officials, some lawyers, and the readers of *Conscience in America* will have opportunity to brood on this rather wonderful soliloquy—for soliloquy it is. This is a man talking to himself about what he must do, and why. The State can take cognizance, or it can ignore what he says—but he will do what he finds out it is right to do by himself.

The law, through necessity to provide unambiguous definition—ambiguous law is useless—wants its certainties clear right at the beginning; and that is exactly where, for human beings and their consciences and moral problems, all the ambiguities lie. Conscience begins—who knows where it begins?—behind a great many veils of habitual or plausible assumption. It remains silent a lot of the time. If we are to make conscience more explicit, we shall probably have to go looking for it, and to get acquainted with its sensibilities long before it is stabbed by political enormities into crying out. Maybe conscience isn't, at root, only a voice of desperation, an amplifier of shame. Maybe, if it were exercised more, conscience wouldn't be identified for us only as something that speaks up just before the axe begins to fall. For that, apparently, is how conscience typically manifests in a society which relies on the reform-school theory of progress.

There may be clues to what conscience is like in its own, positive sense in the lives of men whose rejection of war is only a part—although never a small part—of their distinction. Men for whom the refusal to kill other men is not so much a "big decision" as a matter of course.

The difficulty, here, lies in making any overt act, or any overt rejection of an evil act, into the test of "true" morality. This is a form of the political fallacy and it always misleads in final questions. The crucial consideration in Mr. Sherman's statement is not so much his conclusion—which we may of course admire—but how he reached it. The motions of his mind in an admittedly imperfect situation have an integrity we cleave to. What is the governance of such thinking? Why don't more men try to think as he does? It is thinking that would eventually find a way, a right way, through any tough situation. Of course, he might not succeed. Well, he knows that. We know the same thing about ourselves.

What, after all, is a "tough situation"? It is always and only what a man with his conscience to light his way *sees* to be a tough situation. The situation and its toughness are uniquely *his.* Recognition of conscience means simply that you accept a man's own account of his tough situation and what he has decided to do about it.

The matter ramifies through endless levels of subjective exploration. The human subject is a moving, reflective awareness that looks for meaning and for good. Its growth-processes are more delicate than the slender, translucent tendrils of a plant. And more tentative than a trained scientist's anxiety not to deceive himself with the seductions of his longing to know. Conscience may be the first noticeable expression of a growing season of human identity. Yet we know it only as something that chooses the few last words a man says before they put him in prison. A fine way to encounter the best and most important part of a human being!

We need to give flesh and bones to the idea of conscience. Perhaps the best way to do this is to look for its nourishment outside the boundaries of controversial "moral issues." Our typical encounters with the "moral" tend to encourage narrow definition. A kind of cannibalism of values often comes about in moral discussion, from not enlarging its sources. Typically, moral debaters lose their sense of humor. The moralist has no time for anything but righteousness, and this seems to turn him into a strident and tiresomely "challenging" man. We know that a true morality has no compulsiveness in it, and there is no glint of a converting ardor in the eyes of the people we like to talk to. We naturally suspect righteousness divorced from quiet human wholeness, and without the self-forgetfulness that comes from outgrowing personal moral ambition.

Well, for the enrichment of the idea of conscience we suggest a reading of Michael Polanyi's Lindsay Memorial Lectures, published in 1958 under the title, *The Study of Man* (Phoenix paperback, University of Chicago Press, $1.50), Polanyi may not mention conscience anywhere in these lectures, but it doesn't matter. It seems absolutely certain that the "tacit knowing" of

which he speaks as fundamentally personal and the vital ingredient of all knowledge, scientific or otherwise, is conscience's *alter ego*—busy with other applications of its synthesizing and whole-making power. One of Polanyi's summarizing passages will illustrate:

> I shall now proceed to apply my analysis to the relationship between man's responsible choices and the lower levels of reality in which man's existence is founded.
>
> Remember the relation of machines to the nature of the materials of which they are made . . . The operational principles of a machine would guarantee invariable success to it, but for the fact that they can go into action only if embodied in tangible materials which carry in them always the possibility of failure. Human responsibility too is subject to a similar intrinsic limitation; it can operate only if embodied in human beings who are liable to failure. For no responsibility is taken where no hazard is met, and a hazard is a liability to failure. Moreover, while men are by nature subject to lust, pain and pride, which makes them liable to dereliction of duty, these self-centered drives are indispensable elements of a responsible commitment. For only by staking our lower interests can we bear witness effectively to our higher purposes. Lastly, in all our mental achievements we rely ultimately on the machinery of our body, and this limits the scope and endangers the proper function of our faculties. . . . *Everywhere the potential operations of a higher level are actualized by their embodiment in lower levels which make them liable to failure.*

Similar hazards, Mr. Polanyi shows, attend decisions in the social framework, and while an ideal society would give each person equal access to all the forms of truth, we are in fact profoundly dependent on one another, since one man can know very little for himself, and social institutions, while performing these services, also "set narrow limits to man's freedom and tend to threaten it even within these limits." These are the circumstances. The problem is how to use them. Polanyi writes:

> What then is our answer to those who would doubt that man made of matter, man driven by appetites and subject to social commands, can sustain purely mental purposes? The answer is that he can. He can do this under his own responsibility-precisely by submitting to restrictive and stultifying circumstances which lie beyond his responsibility. These circumstances offer us opportunities for pure thought—limited opportunities and full of pitfalls—but all the same, they are opportunities, and they are ours: *we* are responsible for using them or neglecting them.

It is by this means, according to Polanyi, that men may lay together "the spiritual foundations of a free society," and this, in his view, is "man's cosmic calling." Pervading these lectures on the study of man is this theme of personal knowledge and personal responsibility as at the root of all knowing and all morality. It is the idea, you could say, of Conscience as Man.

REVIEW
ORDEAL BY HISTORY

STAUGHTON LYND'S *Intellectual Origins of American Radicalism* (Pantheon, 1968, $4.95) should help a lot of people to recover their enthusiasm for the study of American history. Mr. Lynd is himself a committed radical, but he has not written a tendentious book. It is an impressive combination of the longings of a warm heart with the tempered judgments of a disciplined mind. You could also say that it is a study of the obstacles to the social realization of radical vision.

What makes a man a "radical"? The only possible answer is, some kind of moral sensibility that actively responds to intuitions concerning the potentialities of all human beings. The radical *feels* what the eighteenth century called "the rights of man"—a political expression embodying the moral necessities of organized society. The contradictions of human nature may be admitted to be real, but the radical will deal with them later. First things first.

It is difficult to imagine what "radical thought" would be like in a world of little or no social injustice. Perhaps it would not exist. Perhaps moral energy would find some other driving intensity. The fact is, however, that in our world the moral intuitions of men come out mainly in the form of protest and revolutionary impulse. These forces are both irrepressible and subject to compromise or partisan distortion.

Mr. Lynd starts out with analysis of the ferment of eighteenth-century ideas about man—typified by the moving expressions of the nonconformist English clergyman, Richard Price, in contrast to John Locke's concern for property rights. There were many men of that time who accepted the *principle* of the priority of human rights over property rights, but could see no practical way to establish that priority in law. Radicals are still confronted by this problem. The radical feels that we *ought* to be able to trust the basic instincts of mankind, but his program must take into account the phenomena so well described by the "realists." Lynd has a paragraph on this:

> The ambiguity of the [American] Revolution's philosophy lay in affirming personal liberty while at the same time linking it to private property and economic self-interest. As Richard Hofstadter observes, the Founding Fathers "thought man was a creature of rapacious self-interest, and yet they wanted him to be free—free, in essence, to contend, to engage in an umpired strife, to use property to get property. . . . They had no hope and they offered none for any ultimate organic change in the way men conduct themselves." Hofstadter's generalization is as applicable to James Madison or to John Adams as it is to Alexander Hamilton. Hamilton wrote in 1775 that "in contriving any system of government . . . *every man* ought to be supposed a *knave;* and to have no other end in all his actions, but *private interest"* (a saying of Machiavelli's which Hamilton found in Hume).

This is not to suggest that the longing for a social order in which wealth would be unable to abridge human freedom entirely died out. Both Franklin and Jefferson maintained fond admiration for the propertyless society of the American Indians, but they couldn't see how such arrangements could be made to work and still allow "progress." When Cornelius Blatchly asked Jefferson his opinion of an essay arguing that property is a social creation and ought to be held in common, Jefferson replied that social ownership would work only in small communities. Lynd summarizes:

> Eighteenth-century radicalism did not transcend private property in theory, any more than in practice. Its characteristic economic demand was not that the public administer the means of production or that the good man give all he had to the poor, but that the laborer be fully paid. Woolman, when all is said and done, asked the owner of property to be a faithful steward. Jefferson's economic reforms were confined to the edges of society: to the West, and (by changing the laws of inheritance) to succeeding generations. Even in *Agrarian Justice,* Paine held that "nothing could be more unjust than agrarian law (i.e., an equal distribution of property) in a country improved by cultivation."

> But if the revolutionary tradition did not destroy private property, either in theory or in practice, it demythologized it. Property in the nineteenth century was no longer the ark of the covenant it had been in the eighteenth. It was recognized to be, not a natural right existing before society, but a social convention. The illegitimizing of inherited political rights was understood to qualify inherited economic rights as well. Property in man was denounced, and the old notion that God had given the things of this earth to mankind in common was revived.

This brings us to Mr. Lynd's central thesis, which is that in the nineteenth century American radicalism was vigorously reborn in the passionate conviction that *human beings cannot be the property of other men.* The sacredness of property became blasphemy when that property was a man—a *slave.* How can pious rationalizations of property rights be tolerated when they lead to this unspeakable crime against human beings? Perhaps we can see here, dimly, a slow and tortured evolution of the idea of man. Because it develops jerkily in a political theatre, and in the uneven grain of social and economic life, it is very difficult to see man as he is, of himself, apart from all these practical entanglements. Pure theory seems impossible, and theological attempts usually go in the wrong direction. So the entanglements get into the picture, and only climaxes of oppression like human slavery can bring on a crisis of new questioning. In the nineteenth century, this questioning found two general patterns:

> Both American abolition and Marxism rebelled against the results of the eighteenth-century revolutions. To a significant extent the two movements shared a common vocabulary, desiring the "transcendence" (*Aufhebung*) of man's alienated condition and the reconstruction of society as a voluntary association of free moral agents: in the words of the *Communist Manifesto,* an association in which the free development of each is the condition of the free development of all. But despite these similarities between the American revolutionary tradition and Marxism, Marx's American contemporaries laid more stress than he did on the experienced reality of conscience and the need for personal commitment. For Marx, responsible social action presupposed a rational survey of the economic situation in which one planned to act. Inevitably the required analysis fell to an elite which had the leisure and training to make it. Despite his emphasis on the dependence of theory on practice, Marx felt considerable distrust for workingmen who sought to change society on the basis of their own experience and perceptions. In this he somewhat resembled those American Founding Fathers who considered moral outrage against slavery premature and utopian, and placed their hope for its eventual abolition in long-run economic trends.

The more direct intuitions of the abolitionists, never dependent on the theories of "experts," appeal to Mr. Lynd:

> Abolitionist activism therefore has something to say to Marx's dialectical materialism just as it spoke tellingly to the materialism of the Founding Fathers. What it has to say is this: One cannot entrust men with a collective right to revolution unless one is prepared for them to revolutionize their lives from day to day; one should not invoke the ultimate act of revolution without willingness to see new institutions perpetually improvised from below; the withering away of the state must begin in the process of changing the state; freedom must mean freedom now.

This last sentence is probably the most important affirmation of Mr. Lynd's radical credo, in the entire book.

It is interesting that the abolitionist movement, in its beginnings, was largely pacifist. But with the rise of impatient, righteous emotion—the need to stop talking and *act*—most of the anti-slavery spokesmen resigned themselves to war. It is impossible to know what might have happened if the civil war had been avoided. But what can be said is that the justification of war for a liberating cause became a doctrine that was firmly implanted in the American mind, providing moral justification for far more dubious crusades. We won freedom for ourselves with arms; we are doing the same thing, now, for others; and we shall do it again. As Lynd says:

> In this way was the idea of holy intervention, hammered out on the anvil of domestic conflict, transferred to application overseas. Willing or unwilling, the world would have a hard time resisting

this benevolent imperialism which insisted, as it bombed and strafed, that it had only come to help.

Well, the umpire theory of human freedom, with ground rules for a carnival of material acquisition, does not work. But neither does the planned and enforced environment for "conditioning" people into correct opinions and equitable sharing. The means become the ends, and lead finally to war, with the rhetoric of the old, now displaced, ends declaring justification of the criminal violence that results.

There is a usually unexamined problem of moral psychology here—in the failure to note the basic difference between the violent reaction of a desperate man who suffers outrage in his person and against those he loves and is responsible for, and the actions of men who, arguing from postulated desperation, create a body of *theory* justifying violence. There can be wonderful existential honesty in a desperate man's action; but calculating, rationalized violence has other effects. It requires, for example, schooling in hate.

Men are subject to passion, we may say, but you can't plan and nourish a life—neither a single life nor a social community—on the energies of passion. Only the Gandhian radicals, so far as we can see, have come to grasp this fundamental of radical planning. It also seems a conclusion implicit in Mr. Lynd's book.

COMMENTARY
SCIENCE AND EDUCATION

THE general principles set out by Ortega y Gasset in *Mission of the University* (Princeton University Press, 1944, and Norton paperback) apply directly to the discussion of how to popularize science (see Frontiers). Ortega wrote:

> Man is occupied and preoccupied with education for a reason which is simple, bald, devoid of glamour: in order to live with assurance and freedom and efficiency, it is necessary to know an enormous number of things and the child or youth has an extremely limited capacity for learning. . . .
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> Education comes into being, then, when the knowledge which has to be acquired is out of proportion to the capacity to learn. Today, more than ever before, the profusion of cultural and technical possessions is such that it threatens to bring a catastrophe upon mankind, in as much as every generation is finding it more nearly impossible to assimilate it.
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> It is urgent therefore that we base our science of teaching its methods and institutions, upon the plain, humble principle that the child or youth who is to be the learner cannot learn all we should like him to know—the principle of economy in education. . . .
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> We must begin, therefore, with the ordinary student, and take as the nucleus of the institution, as its central and basic portion, *exclusively* the subject matters which can be required with absolute stringency, i.e. those a good ordinary student can really learn.

A little further on, Ortega makes a crucial distinction. The object of education is to make of the ordinary man a cultured person, that is, to teach him the great cultural disciplines. These, in broad terms, encompass physics, biology, history, sociology, and philosophy. Yet the culture the student needs is not "science," although it contains some knowledge of science:

> Science is not something by which we live. If the physicist had to live by the ideas of his science, you may rest assured that he would not be so finicky as to wait for some other investigator to complete his research a century or so later. He would renounce the hope of a complete scientific solution, and fill in, with approximate or probable anticipations, what the rigorous corpus of physical doctrine lacks at present, and in part, always will lack.
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> The internal conduct of science is not a *vital* concern, that of culture is. Science is indifferent to the exigencies of our life, and follows its own necessities. Accordingly, science grows constantly more diversified and specialized without limit, and is never completed. But culture is subservient to our life here and now, and is required to be, at every instant, a complete, unified, coherent system—the plan of life, the path leading through the forest of existence. . . . Precisely by recognizing science to be a thing apart, we pave the way to the segregating of its cultural elements so that these may be made assimilable.

The practical common sense of this analysis is obvious.

CHILDREN
. . . and Ourselves

THE EDUCATION OF THE ARTIST

[This is the first half of a lecture which was part of a series of ten, on "Art and Learning," given by the American painter Robert Jay Wolff, at Brooklyn College in the Spring of 1948, to students preparing to teach art in the public high schools of Greater New York. We plan to print several of these lectures here. Their general value and wide application will be obvious to the reader.]

I

THIS is an ambitious subject. It is something people will talk about at the drop of a hat. There is something about it that loosens our tongues and I have reason to believe that something is not always primarily an interest in the artist or an interest in society but more often the fascination of the kind of collective gibberish that loves to manufacture synthetic relationships between two safely undefined elements. We could take a plunge in that direction by saying at once that the artist should be reintegrated into society or that, on the other hand, the artist should be free and that society should leave him alone. We could take up the cudgels on the issue as to whether the free artist is useful to society or whether he is a social anachronism who is merely tolerated out of historical habit. Is he a prophet or a ne'er do well? Is he to build or to destroy? Should he speak our language or invent a new one? You can see how such questions could be the touchstones of endless verbiage. It is obvious that first we must come to some agreement as to what we mean by an artist if we are going to make any sense at all.

As teachers of art who are concerned with the young and, in your case with the very young, we would be putting the cart before the horse if we were to evaluate the ingredients that go into the making of a successful artist and then proceed to concoct a program based on these ingredients and with the intention of reproducing the successful artist in ever increasing numbers. Actually this is the kind of wishful thinking that has shaped the present-day art education which has proved so unreal and inadequate and which we are in the process of trying to correct. If this principle were to guide you in your first job as a teacher what would be your approach? It is easily predictable. You would find here and there among your students a few exceptional aptitudes and you would soon find yourself concentrated on these few in your effort to prove that your methods are good in the face of the failure of the majority. It is easy at this point to say that art is a specialized subject and that the reason for an art curriculum is to weed out those who will never be artists from those who are born to the purple. This is another way of describing art education as a kind of torture chamber where all but a few are successfully persuaded never to touch the stuff again. Each time this happens our culture dries up just a little more. As to the few who make the grade, they are left out on a limb, not quite knowing what to do with their talent and their special knowledge in a world that has been educated to believe that art is not its dish and it ought to know. It tried it and flunked it in high school.

There is only one road out of this dead end and that is back to the fact that every human being has the capacity for expression, that we all have potential talents which, under present mass concepts, require the most carefully planned and uninhibiting conditions to bring out. Moholy-Nagy has rightly made this premise the basis of any approach to designer education. It opens areas of art experience, at least on the feeling side, to everyone and it makes it plain to the few who will become professional artists and designers that the key to their future work is not a bag of acceptable tricks but is, in fact, in the extent to which they share and understand the common experience. Beyond that it is, even with the most gifted, a matter of hard work and character. The man who said that what a gifted artist spits is art, is right. Yet the forms and colors and images that could spill so easily from his hands can be meaningless if they lack affinity with the

unexpressed aspirations of his fellow men. In other words, we are trying perhaps above everything else, to reduce the separation between the artist and the man next to him by giving both the chance to explore the unlimited human capacity for creative sensory and perceptional experience. In the beginning there should be no differentiation between the laymen and the artist. Try not to display your preference for the gifted student. Try, and even if you don't succeed try again. Try, not only in the interest of the not so gifted ones, but also for the good of the gifted one. If a genuine mutual respect can be created the gifted ones will not miss the golden opportunity to absorb the thing that happens when a finally uninhibited duffer comes through. Believe me, there is nothing more health-giving to the soul of a self-satisfied talent than the sudden realization that one of the innocent ones in the class has brought something out of himself that he with all his tricks hasn't quite been able to manage. This is good for him and it is good for the innocent one. And if this kind of thing carries on in the same spirit the two will go out into the world with a mutual respect for each other and you will have the suggestion of the kind of understanding between layman and professional which produces the kind of culture which is our crying need.

We come to a conclusion. As teachers of young human beings we are not talent scouts. We start with the understanding that we can take no student for granted and that each one represents a result, not of a previous development that has brought out what is best and basic in him, but of exposure to an environment from which anything can be expected. In other words, you cannot take what you find on its face value. You have to start your own search in each individual case and you must try to remember that talent is not easily detectable, like an ornament, but that it is everywhere and often in abundance where you least expect to find it.

How do we go about this search? What are the instruments of discovery? Certainly you will make no headway in this direction if you begin by teaching, by imposing a methodology, a way of doing, so to speak. This would be no test because only those already possessed of an artificially acquired facility would respond and your accomplishment would involve merely underlining a limited something that is already known, leaving the main job untouched. In other words, introductory curriculum should not only circumvent conventional abilities and habits but should set out to deliberately make it impossible to apply them. Assume that whatever trick has been brought into the classroom must be put away, not by asking the student to suppress it but by giving him tasks that will have no part of it. This is the point where the sneer begins and the wounded self-esteem hides behind the opinion that this indeed is kindergarten stuff. Make room for the possibility that this is a cry in the wilderness, that when fear and misgiving are overcome through trial and practice, the contempt may vanish. The content of these first tasks will be taken up later. For the present it is enough to say that they should be within the range of all shades of abilities, that they should have that anonymous quality which discourages self-conceit and stimulates innocent and almost aimless exploration of simple tools and materials, visual and tactile sensations, and the instinct for order. This is the way to self-discovery on all levels.

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(*To be concluded*)

FRONTIERS

Science for Man

THE flat conventionality of a report on books about science for the general reader, in the London *Times* (Literary Supplement) for June 27, leaves much to be desired. The article starts out by explaining why at least some knowledge of science is important to the modern citizen. First "economic survival" depends upon "effective use of science and technology." Second, only scientifically informed citizens can be intelligently critical of government policies relating to science. Third, science is already so much a part of modern life that "an understanding of the sciences is becoming a necessary part of the intellectual background of the modern 'cultured' men."

There seems a bland assumption, here, that we know what we are talking about when we say "science," while practically the reverse is the case. Among the serious thinkers of the time, the question of the nature of science, like the nature of man, is up for grabs, and to pursue a discussion of how to "popularize" it more effectively, as a practical issue involving publishers' policies and problems of marketing, seems comparable to doing exercises in Ptolemaic astronomy at a time when the Copernican system is about to take over.

The explanation of this somewhat comfortable approach is probably that Science is now a secular sort of theology which has replaced the sacred brand for answers to questions about what the world is and how it works—true enough in its details, but conveniently devoid of larger meanings. It is a practical substitute for religion and philosophy without requiring the practice of any religion or philosophy. Science, quite simply, is the means to power. And in a world which worships power, while giving lip-service to other faiths, the practical access to power acquires immeasurable prestige. This is the real importance of science, when you consider how scientific activity actually works, in modern society.

But science is also the pursuit of truth. Its practice makes a high profession, with impressive examples of commitment and integrity to be found within its ranks.

So, like everything else which reveals great contrasts between individual profession and institutional practice—as in religion, for example—the character of science is marked by paradox and contradiction. And we don't need exciting little books on how the double helix was discovered half so much as we need more analyses of the sort Socrates pursued in the *Phaedo,* when he recalled the scientific theories of Anaxagoras.

The very notion of "popularizing" science ought to be held suspect. It seems a "good enough for the masses" sort of education for us poor non-specialists—a course of indoctrination which might generate more respect for scientific authority and do something for the budgets of men and organizations engaged in "research."

This is not to recommend a proud humanistic neglect of science, but rather to propose a much more fundamental approach. How many Hiroshimas must be wiped out before it is generally admitted that power gained through science is totally without responsibility? And what sort of education could be possible in a program of "popularization" which leads men to know the words—the simpler ones—about discovery, but not to experience its acts? When a discipline has a content which places the world in the hands of a few experts, leaving the rest of the population to make the best of its half-instructed ignorance, there *must* be something wrong with its organization, methods, and ostensible ends.

The right way to go at this problem may be to look, not at science, but at man. Examine the student, not the subject-matter, and serve the learner, not the unwieldy and amorphous totality of the scientific institution. Human life is a moral undertaking, not an impossible attempt to absorb masses of technical information which, in its most exquisite evolutions, tells us how to blow up the world.

Tolstoy proposed a simple definition of education. Its purpose, he said, is to make the learner equal to the teacher in what is taught. This frees the learner from authority, and an education which does not seek to do this is in principle a fraud. All that ordinary popularization of very difficult matters can do is to make the learner embarrassingly conscious of his ignorance and inadequacy, and of the likelihood that he will stay that way.

Tolstoy shows that education which stereotypes inequality leads to the psychological subordination of the learners to authority. Obviously, we should not endorse such education only because we don't know what else to do. The project ought rather to be to evolve a better conception of the meaning of science along the lines, say, of Michael Polanyi's book, *Personal Knowledge*, and A. H. Maslow's *The Psychology of Science.* What is wanted is not survey courses in other men's achievements and opinions, but fires of inspiration and paths to understanding. The London *Times* article refers mournfully to the fact that there is today "a widespread disenchantment among young people with science and technology at a time when it is becoming vitally important to have a deeper understanding of science in all its aspects—the method of gaining knowledge, the knowledge gained and the significance of that knowledge economically, politically, socially, psychologically." But if men like Polanyi and Bronowski in England, and Maslow and Rogers in the United States, could be drafted to write books on the essential meaning of the scientific enterprise, the disenchantment might be replaced with intelligent appreciation—something that popularizing books can never accomplish. (Paul Goodman could help here, too.)

It would be important to be very careful not to induce fascination by all the clever things scientists can do with matter—and more recently with men. We need no further submissions to the sort of management Wylie Sypher described in the Winter 1967-68 *American Scholar:*

> . . . we are living in a technological society—which is to say a society increasingly managed by technicians who try to deal with everything by their methods, their planning, their programs. The great danger in methodical planning is that it becomes official, and thus of necessity the technician easily becomes a bureaucrat. The evil comes when method is used (or abused) technologically—that is, when it is beguiled by its own mechanism.

Then there is the distinction between science and art, made by Bronowski (in the *American Scholar* for the Spring of 1966); and even more luminously spoken of by Mr. Sypher in the article quoted above:

> [The] first time the astronomer feels his wild surmise he is a poet, and the poetry in science is this instant of revelation or epiphany. Then his discovery must be *reduced* before it is reliable science. So Bachelard describes science as a way of organizing our disappointments under the guise of knowledge. Knowledge in scientific form is coherent disillusion, a sacrifice of discoveries to concepts and systems, a loss of an epiphany.

This may seem a back-door way of getting at the meaning of science, but it offers a salutary sobering effect in our present state of manipulative elation. The creative side of science, in other words, is always in its growing-tip of discovery, and not in those stable dogmas of how things work, which, through their reliability, soon fall below the level of truly human concerns. What matters to man is his becoming, not the settled, external conditions he may well leave behind. Far more than more laws of falling bodies, we need insight into the possibilities of ascending man. A regenerated science would have concern with this.