

submicroscopic, or inferred, world is no less anthropocentric than the macroscopic one. It is still the world we perceive and think about, only in this case there is a very much larger ingredient of thinking and a very much smaller one of perceiving. Certainly, as far as the problem of *method* is concerned, the approach to biology through physics is a way of thinking, another way from the macroscopic approach. Moreover it is the way of mechanism without organism. It is the way which treats any whole as constructed from its parts by aggregation; which assumes organization from without and not from within. That is no doubt why the method which springs from it is the familiar one of concentrating attention on ever smaller and smaller units—atoms and particles in physics, molecules and atoms in chemistry, chromosomes and genes in biology. Whether or no we add a hypothetical assumption—to my mind an entirely unwarrantable one—that as a matter of world history the macroscopic world was actually built up from these units, the fact remains that pursuing them further and further towards the infinitesimal is not the only possible method of discovery. In human history many of the most crucial discoveries were made quite otherwise—the discovery of wheat, for instance, and of the way to cultivate it and turn it into bread.

If mankind as a whole follows only the current trend of identifying biology more and more with physics, of learning how to *manipulate* life by treating it as the product of mechanism, no doubt many results will be achieved. But the achievements will all be technological; because the method itself entails treating nature as lifeless mechanism and treating man as a natural object, instead of what he is, a human subject; which means a human spirit. You may not be with me in everything I have said, but if I have rightly divined the impulse behind this conference, you are with me in this conviction and you share the determination not to leave other methods unexplored simply because they are unconventional.

## The Coming Trauma of Materialism

Theodore Roszak's *Where the Wasteland Ends* (1972) is a book which seems to me to deserve a somewhat extensive consideration, not only on its proper merits as a literary and intellectual product, which are high, but also in the whole context of its appearance and reception. His earlier *The Making of a Counter Culture* was, I suppose, "radical" in most senses of the word, but it was radical in a mode that is already becoming fairly familiar, as indeed its title suggests. Essentially it was yet another attack on the establishment. In the second book his own "countering" passes from strident protest into quiet, if emphatic, argument. It goes much deeper, inasmuch as its blows are aimed, not primarily at our "power structures," etc., and our ruthlessly technological civilization themselves, but through them at the historical and metaphysical roots from which they spring. His quarry now is not modern life, whether plutocratic, bourgeois, or proletarian, but the "mindscape" it expresses.

*Nevertheless*—and this is the surprising thing—it seems to have been fairly well-received. It is in paperback in America; its publication in England last year was greeted by substantial, and by no means contemptuous, reviews in many English journals; the *New Scientist* observes that it "goes to the heart of the issues so clearly disguised from view by those who maintain that all is well, or will soon be well, with the world"; and so on. This in spite of the fact that what the book explicitly and repeatedly, one must even say repetitively, seeks to undermine is something which everyone, whether establishment or revolutionary, really takes for granted—namely, the whole scientific and commonsense concept of "objectivity." "The act of knowledge," he quotes a historian of science as observing, "is

an act of alienation." And for Roszak the "alienation" of which we hear so much nowadays is merely a synonym, an emotive synonym but still a synonym, for the very principle of objectivity, on which all science is and has been based since the Scientific Revolution.

The vaunted progress of "knowledge," which has been going on since the seventeenth century, has been progress in alienation. The alienation of nature from humanity, which the exclusive pursuit of objectivity in science entails, was the first stage; and was followed, with the acceptance of man himself as part of a nature so alienated, by the alienation of man from himself. This final and fatal step in reductionism occurred in two stages: first his body and then his mind. Newton's approach to nature was already, by contrast with older scientific traditions, a form of behaviorism; and what has since followed has been its extension from astronomy and physics into physiology and ultimately psychology.

Technology, he argues, is inhuman, and is proving baneful, because it is based on reductionism, and reductionism is the product of alienation. Therefore he makes it his principal business to contrast the principle of reductionism, explicit and implicit, with the opposite one of "transcendence," which has characterized the thought and feeling of all civilizations prior to our own. His case is that our behavioral interpretation of nature is not, as has been generally assumed, a reflection of fact but an arbitrary mental construct. It is a convenient and necessary one for the purposes of manipulation (technology), but insofar as it is assumed to reflect the whole truth, or the most important part of it, it is an illusion. Moreover it is *the* illusion, the one from which the whole of our cultural alienation springs, and we cannot find our way out of the one without finding our way out of the other. He sees the way out of the great illusion as proceeding, naturally, in the reverse order from the way in: first psychology and then the natural sciences. It will perhaps not be so difficult to cease taking behavioral psychology very seriously; we really *know* that another person is something more than his observed behavior, because we know that we are. "But now," he continues in a passage which I will quote nearly in full,

Suppose this ability we have to find something of ourselves in people should be expanded, so that the same personal transaction occurred with animal and plant. . . .

Suppose that ability began to reach out further still, discovering a reality of inventive pattern and communicative vitality even in what we once regarded as the dense, dead stuff of the world. . . .

Suppose the whole of creation began to speak to us in the silent language of a deeply submerged kinship. . . .

Suppose . . . we even felt urged to reply courteously to this address of the environment and to join in open conversation. . . .

Roszak attempts no prophecy; he leaves it at that; perhaps because he does not underrate the shocking nature of what he is supposing. It would involve no less than the removal of all those metaphysical and psychological premises which have become "the subliminal boundaries of the contemporary mindscape," since we absorb them "as if by osmosis from the artificial environment that envelops us and which has become the *only* environment we know." Nevertheless it is possible to take his advice and go ahead from supposing it; and that is in effect what I propose to do on this occasion. The reasons why I do not feel the supposition too fantastic to be worth making will I hope appear as I proceed.

Our contemporary "mindscape" dates back roughly to the Scientific Revolution. It has developed and strengthened since then, but it was then that it began. It was preceded by a very different mindscape, which had endured from some time in the first millennium B.C. to about the seventeenth century A.D.; and which I will, for convenience, call "Aristotelianism," not because it originated with Aristotle, but because he was the thinker who formulated most competently the presuppositions on which it was based. This earlier mindscape was one which assumed an intercommunion between man (the microcosm) and nature (the macrocosm) not limited to the mode of passive sensation and active manipulation. Assumed, not merely "believed in." Either men actually experienced it so, or they were subliminally assured that it was so, or both. One way or another it was, as Roszak effectively points out (borrowing the term from Freud), their Reality Principle, just as precisely the absence of any such participation is ours. We may perhaps designate our own Reality Principle, and the mindscape that goes with it, "Cartesianism" on the same principle as above; not because it was invented by Descartes, but because he was the thinker, fairly near its beginning, who most competently formulated the felt alienation of matter from mind, and thus of nature from humanity, of which it consists.

For Cartesianism, as for Aristotelianism, its own Reality Principle is and always has been the truth, not for itself alone but for all men at all times. Any other Reality Principle by which some men may appear to live, or to have been living, is subjective illusion. Thus, for Cartesianism which came later, Aristotelianism itself had been such an illusion. This is where Roszak takes his departure. He accepts that the alienation of matter from mind, and of nature from humanity, is the subliminal Reality Principle of Western humanity and increasingly of humanity as a whole. He denies that

Aristotelianism and still earlier "mindscapes" were, by contrast, illusionary. By and large they were a good deal *less* illusionary than Cartesianism. What he asks us to suppose therefore, in the passage quoted, is an abandonment by the Western mind as a whole of Cartesianism, which should be no less total and effective than was its earlier abandonment of Aristotelianism.

It might be thought that (outside of strictly scientific circles, of which more later) such a change could take place without any very great upheaval. After all even in our Cartesian world quite a number of people seem to hold theories about the relation between man and nature which are incompatible with an absolute gulf between mind and matter. Quite a number of people for example take a respectful interest in astrology, not only on the puerile level of popular-press horoscopes, but also, as was the case with C. G. Jung, on a highly intellectual one; and astrology is based on an extra-sensory relation between macrocosm and microcosm. Others bridge the gulf with an idealist philosophy or a religious faith; and so on. But any forecast based on such considerations overlooks Roszak's point about the Reality Principle; it overlooks the extent to which Cartesianism has progressed from conscious to unconscious or "subliminal" conviction. "Materialism" in my title means, not any materialist philosophy, *à la* Haeckel or Lenin, but the mental habit of taking for granted, *for all practical purposes and most theoretical ones*, that the human psyche *is* intrinsically "alienated" from nature in the manner indicated, a habit so inveterate as to have entered into the meanings of a great many common words and thus to have become accepted as common sense itself. Materialism in this sense is not, for instance, incompatible with deep religious conviction.

The habit is one which owes a good deal to a certain secondary consequence of Cartesianism that is not often recalled or alluded to. Roszak himself has less to say about it. He emphasizes that the alienation of man from nature brought about "alienation from himself," but not that the transition from the first to the second came *via* his alienation from his own origin and *history* as man. It was this that was effected by the secondary consequence I am referring to. "Uniformitarianism," as it was called a hundred and fifty years ago when it was first postulated, is the maxim "that no causes whatever have, from the earliest time to which we can look back to the present, ever acted, but those now acting, and that they never acted with different degrees of energy from which they now act." So it was formulated by the geologist Lyell, as an obviously unprovable but very convenient postulate, at about the time when Western man was first becoming deeply interested in his own and nature's "evolution." Adopted as a habit, and eventually by force of that habit accepted as a fact, it has

determined the whole development of evolutionary theory. Causality not only is now, but always has been purely physical, untouched by "transcendence." Nature, alienated now from man, must always have been so alienated (so runs the tacit argument) and must therefore have evolved by its own objective and unchanging laws. Thus, other concepts of evolution, such as Goethe's, to whom Roszak devotes some attention, were quickly lost from view and the Darwinian theory triumphed. Fortunately the whole catenation is succinctly traced in the historical section of the article on "Evolution" in the 13th edition of the *Encyclopaedia Britannica*: uniformitarianism depends on Cartesianism and Darwinism depends on uniformitarianism. This is of course not realized by more than a tiny minority, and Darwinism, inculcated from childhood as fact, intertwines with, deepens, and spreads the subliminal roots of Cartesianism. It is the combination of the two which has been decisive for the Western mindscape and is now almost synonymous with it.

Intensive reflection on these lines is really indispensable if we are to take seriously the kind of change Roszak tentatively envisages, since to reject the permanent alienation of nature from mind is to reject also the concept of an exclusively biological evolution, that is, of Darwinism; and it is just a fact that Darwinism is immanent in our mindscape at all points. In order to convince oneself of that, it is only necessary to adopt for a few weeks the habit of reading or listening to contemporary literature and journalism in a rather special way. Pause every now and then and ask yourself: is one or other aspect of Darwinism (whether struggle for existence, sexual selection, or the simple animality of man) implicit in that last observation or in the terminology it employs? You will not need to continue the experiment very long. Begin with Women's Liberation if you like. You will find three-quarters or more of the arguments both for and against unquestioningly based on it. Or begin wherever else you choose—child care, educational theory, environmentalism, ecology—and when you have done with sociology in all its branches, spread your net wider. You are likely to get a still bigger haul from psychology; and the result will not be so very different with paleontology, anthropology, archaeology, aesthetic theory, linguistics, and even philosophy as now generally taught. I have left out biology itself, with genetics, physiology, medicine, etc., because in those cases the special attention I am suggesting is hardly necessary, the conclusion being obvious even without it. Indeed the whole point is that it is *not* only biologists who (to borrow a phrase from George Steiner) "biologize the data," but that, either discursively or semantically or both, we are all doing it all the time.

Thus, if Roszak is right, as I personally think he is, and all this is not twentieth-century enlightenment about objective fact, but simply an ingrained mental habit, it still looks to be a pretty ineradicable one. Nevertheless I believe it is worthwhile taking a look at the possibility of its *being* eradicated in the foreseeable future and trying to foresee some necessary consequences.

At this point I think it will help if we vary his metaphor of a "mind-scape" by substituting that of a frozen liquid mass; a frozen mass *on* which the psychological and physical structure of our technological civilization is erected, and *into* which are imbedded deep-down foundations determining even the minor details of the edifice they support. The mass, to repeat myself a little, consists of a collective conviction, mainly subliminal and by now amounting to certainty, (a) that nature is an objective system which man can only affect by manipulation from without and (b) that each individual man is a separate part of that kind of nature. Less important, but as following from the above, one might add (c) that one mind can only communicate with another through the medium of physical processes.

That is the mass, and its surface looks at first sight firm enough. Yet for those with eyes to see there are a good many indications that it is not nearly as firm as it looks; and further that the likelihood of the mass as a whole continuing solid is being seriously threatened from both above and below. Cracks are appearing in the surface, where the foundations first become visible to the naked eye, as the result of impacts from above, while from the opposite direction the frozen mass itself appears to be growing thinner, becoming more like a crust than a mass, as it is thawed by a gradual increase of warmth uprising from the depths below. The impacts from above represent instinctive human reactions against the *results* of the uncritical objectivity that has dominated intellectual life for the last two or three centuries; the warmth from below represents the beginnings of criticism.

As to the cracks, they seem to be of two kinds, the first originating more in the will and the second more in the intellect. As evidence of the first I would instance the truly remarkable, though scattered, proliferation of small journals and pamphlets, often the product of some voluntary association of human beings, widely diverse from each other in many respects, but having one thing in common, namely, violent reaction against technological civilization and its consequences. They are of course insignificant in terms of publicity, but anyone who goes a little out of his way to look for them is almost bewildered by the cataract of names: Alternative Society, Responsible Society, Confrontation, Dwarfs, Friends of the Earth, Resur-

gence, etc., etc. It would be unwise to ignore the presence among us of all those communes of mostly young people who are, with varying degrees of firmness, seeking to opt right out of technological society. Such at all events is the situation in England and I imagine it is the same or more so in America. The particular names I have cited may well not be the most important ones, and the reader may prefer to compile his own list of overt manifestations of what Roszak calls the Human Potentials Movement.

How widespread is the movement and what prospects are there of its becoming effective? It is difficult to say. The media, which constitute the mouthpiece of a democracy's mindscape, handle any widespread but new and radical movement of opinion in three stages: (1) silence, except for an occasional facetious and probably misleading reference; (2) if the movement does not fade away, but begins to organize within the silence (for instance, by attempting to influence legislation), it is disparaged, in the name of democracy, as a "pressure group" or "lobby"; (3) since it cannot be disparaged without being mentioned, this may bring about the third stage, at which it is at last openly discussed and thus begins to emerge from a collectively subliminal to a collectively conscious level. Roszak's Human Potentials Movement is clearly for the most part at Stage 1; the groups are small and widely scattered and presumably know little of each other; but straws in the wind such as a recent "Communities" issue of the Boston *East West Journal* and in England the *existence*, at least, of a "Directory of Communes" seem to suggest an incipient resolve to federate and thus to move towards Stage 2. Or perhaps some of them may be said to have already reached Stage 2; I am thinking of those groups and movements which derive their energy from what may be called the impulse of "practical ecology"—abhorrence of treating animate nature as an object, opposition to factory-farming, to wholesale experiments on animals, to test-tube babies, and of course to pollution in all its aspects. Roszak himself fills an Appendix with horrific instances of the things ecologists are objecting to.

There is another kind of external impact from another source, namely, an increasing awareness of phenomena that simply do not fit in to the mindscape. It must be fifty years or more since Charles Fort filled one or two books with a huge collection of these *inexplicabilia*—"the data that Science has excluded," as he called them—culled from an astonishing variety of sources. Arthur Koestler's *The Roots of Coincidence* has recently mounted a more systematic attack on a similar footing. Less anecdotal and probably more persuasive is the continued incidence of things like second sight, or telepathy, the sort of thing in which the older institutions for psychic research, and more recently the followers of J. B. Rhine, are spe-

cially interested. These however are still outsiders, if rather insistent ones. What is more striking is the growing number of *systematic* ideas and practices, sufficiently established to form a positive part of the structure of society but occupying a sort of scientifically *demimondaine* existence because they are counter-Cartesian. A good deal of psychoanalysis comes within this category. Hypnotism was the name given to the discredited "Mesmerism" that fascinated the early nineteenth century when it was found it could not be dismissed. The label was considered more scientific but in fact did nothing to render the phenomenon more explicable in purely physical terms. Yet it is actual and empirical enough to have called forth protective legislation to prevent its abuse. The "high-potency" remedies in use in homeopathy are prepared by carrying dilution to an extreme which excludes the possibility of physical causation, and for that reason are rejected as a flight of fancy by a large part of the medical profession. Yet they are in regular and organized use all over the place by fully qualified doctors. Acupuncture, which contradicts all established medical theory, is in use for anesthetic purposes in the Royal Victoria Hospital, associated with McGill Medical School, in Montreal. If I am reluctant to add the Anthroposophical Movement and the many practical activities which have been inconspicuously pursued for half a century by the followers of Rudolf Steiner, it is only because they call for so much more than the passing mention that alone is in place here. Familiarity with the incredible breeds, not contempt but respect, and it is no wonder if there is less readiness than there was to dismiss out of hand even such seeming *grotesqueries* as Michel Gauquelin's "cosmic clocks" or the claims of the Findhorn Group in Scotland to be fostering the growth of plants with the help of friendly nature spirits.

But once again the reader will be able to compile his own list. Some will no doubt recall the astronomical paperback sales achieved by the publishers of Edgar Cayce or Carlos Castaneda. As I write, the British *Daily Telegraph* is running in its weekly Supplement a series of articles covering the "paranormal" in general, including such diverse instances as extrasensory perception, psychokinesis (with special reference to Uri Geller), faith or psychic healing, astrology, acupuncture, and others. The writer reminds us that, until James Reston proved it on his pulses during a visit to China, acupuncture was "dismissed as a load of old Chinese rubbish"; he speaks of "trends emerging which are pointers to the future" and he wisely forecasts "a long hard struggle ahead," during which, whatever has been going on outside the medical schools, medical students "may expect to be taught from the same old biology and physiology textbooks."

Fixation by textbook, to which T. S. Kuhn also pointed in his *The Structure of Scientific Revolutions* (1962), plays and will play of course a major part in maintaining the compactness of the crust; and this really brings me to the underside of it and the opposite of surface cracks, namely thermal dissolution from below. But before going on to it, I ought to mention a contemporary manifestation, which may be thought to work from both directions at once. I referred in passing to Castaneda but without pausing to point out that the widespread use, and the literature, of psychedelic drugs has fairly obviously been loosening for a vast number of minds the reassuring opacity of the five senses and therewith of the Reality Principle which science has chosen as its base and on which technology rests. The increasing vogue for literature from the East, itself largely untouched by Cartesianism, is no accident.

When however I speak of dissolution from below, I am thinking more of those places—intellectual, academic, and occasionally scientific—where the basic presuppositions are less buried and more explicit, a little less subliminal and a little more conscious; the kind of thought-process that is observable in Koestler's *Beyond Reductionism*, logical appraisal of the presuppositions of materialism and no longer from a standpoint fixated within them—objectivity in fact about objectivity. There is some danger here of my metaphor leading to confusion, since we are accustomed to think of unconscious in terms of depth and conscious in terms of surface. The movement I am now considering is still "underground," but only in the sense that it is largely unknown to the general public. Nevertheless I have the impression that it cannot remain so very much longer. I can only mention one or two out of the many indications on which that impression is based. The metaphysical implications of advanced physical research are perhaps the most obvious, where quantum theory and its consequences are already leading here and there to point-blank questioning of Cartesianism itself and thus of the possibility of continued scientific dependence on "objectivity" as it has hitherto been understood.

Less noticed as yet, but more ominous, is the condition of the crust in its other aspect of congealed Darwinism. (I use this term to cover *any* exclusively and mechanically biological theory of evolution, so that from this point of view later developments such as the substitution of "mutation" for chance variation, of "genotypes" for species, or of "adaptation" for survival of the fittest make no difference.) I have a strong impression that here too the crust is thinning from the bottom upwards. It is true the surface looks firm enough. For the British *Guardian*, commenting on legislation in Dayton, Ohio, to insist that the Darwinian theory should be taught

as theory rather than fact is indistinguishable from insisting on Fundamentalism, and requires the like facetious treatment. For the media, today no less than yesterday, to doubt the Darwinian theory is to be a flat-Earther. Evolution means Huxley, Monod, and Bronowski. But underneath, and not now so very far underneath, it is a rather different story. Thus, the *Everyman Library's* (1967) edition of the *Origin of Species* includes an analytical Introduction, which remarks on "the hymn to Darwin and Darwinism that introduces so many text-books on biology and evolution," reveals the existence of "a great divergence of opinion among biologists, not only about the causes of evolution but even about the actual process," and records the writer's own conclusion "that Darwin in the *Origin* was not only not able to produce palaeontological evidence to prove his views but that the evidence he did produce was adverse to them."

There is nothing specially new in such ideas. There have always been pockets of open-mindedness here and there kept hidden for fear of common sense. There have always been crypto-skeptics, such as the Cambridge Professor of Zoology, Adam Sedgwick, mentioned by E. L. Grant Watson in his *The Mystery of Physical Life*, who used to teach his pupils orthodox Darwinism in the early part of the century—and then privately assure them that, if they took the trouble to look at the *facts*, they would find whole groups of them which contradicted any theory of evolution so far advanced; adding that he himself believed archetypal forms of plants and animals to have been "precipitated."

But it is a long step from an eccentric professor's study with the doors shut to *the* popular cheap edition of the *Origin of Species*. Is the surface quite so solid as it looks through the media? According to the *Los Angeles Times* in October last, an Indiana professor of anthropology criticized his colleagues *sharply* for declaring "as a fact" that man descended from ape-like creatures and suggested that they did so "for fear of not being declared serious scholars or of being rejected from serious academic circles." George Macbeth's *Darwin Re-tried* (1971), which is not the only radical critique in the English language published in the last two or three years, consists almost entirely of the quoted utterances of contemporary biologists ranging from Sir Julian Huxley (on television): "The first point to make about Darwin's theory is that it is no longer a theory but a fact" to Professor Ernest Mayr of Harvard: "The basic theory is in many instances hardly more than a postulate." Divergence of opinion on subsidiary details is not less striking; and the book leaves one with a startling impression of head-on conflicts of opinion and a state of general disarray in the citadel, which do not suggest that the garrison is particularly well-equipped to withstand a daylight assault from pure reason.

Suppose such an attack should be mounted, and that it should be successful: the question I am asking myself is what will happen, in the first place to the general public? What will the effects be, as the crust grows too thin to go on bearing even the media, and the mental and verbal clichés they stand on begin collapsing under their feet? Roszak paints his roseate picture of a new and quite other mindscape. I do not think, as he appears to do, that it must involve the virtual abolition of technology; but leaving that aside, let us hope it might come true, at least in some measure. Well, but what of the "long hard struggle ahead" that comes first? I doubt if he has given much attention to this. I am certain his *New Scientist* reviewer has not. In Stevenson's story the transformation of Mr. Hyde into Dr. Jekyll was accompanied by convulsions. It seems clear that, as far as the élites are concerned whether of the sciences or the humanities, the first phase of the struggle must be one of powerful and even reckless resistance. Is there a hint of this already when a scientist of repute is heard committing himself to such a wildly unscientific statement as Sir Julian Huxley's on television? Does not that sort of thing sound by now rather less like common sense and more like mulishness? But there are other and more aggressive forms resistance can take. Twenty-four years ago, when Dr. Immanuel Velikovsky propounded certain astronomical and geophysical theories which, if accepted, would oust the uniformitarian hypothesis, Albert Einstein expressed the opinion that he had nevertheless made out a *prima facie* case on the evidence, which ought to be carefully investigated. The point here is, not the theories themselves but what happened to them. The trouble was that, if established, they *would* oust the uniformitarian hypothesis; and *The Velikovsky Affair* (1966) sets out in documented detail various measures, including the threatened blacklisting of a publisher, which were taken to ensure that they should remain not only uninvestigated but also as far as possible unheard of.

I fear the long hard struggle will involve repressive and other measures compared with which the Velikovsky affair will look like bow-and-arrow warfare.<sup>1</sup> How could it be otherwise when one thinks of what will be at stake for the defense? One has to imagine a twentieth-century biologist being asked to accept that the whole library of textbooks from which a man learned at school and university, from which he has himself been teaching all his life, and to which he has perhaps added an original contribution of his own, is in fact largely irrelevant. By way of comparison suppose a consulting engineer in high repute with his clientele who, as he

1. Perhaps, who knows, they will begin with the scientific *demimonde* referred to above. In some European countries active steps are already being taken to outlaw the use of "high-potency" homeopathic remedies.

believes, has spent his life examining and improving a vast central heating system, and who is now asked to accept that what he was working on was really only the thermostat! Why was Velikovsky ostracized? With the collapse of uniformitarianism the *actually* would again become the *obviously* unverifiable; and this must apply to all calculations of past time based solely on physical data—for example the age of the Earth itself. With that of Cartesianism similar extrapolations of the geometrically measurable into “outer space” (the sidereal macrocosm) must evaporate into adroit brain-spinning.

Let us nevertheless suppose that the resistances are eventually overcome and try to imagine a second stage of transition. This must surely be a climate of extreme depression amounting in many quarters to despair. Certainly if I myself, forsaking generalities, endeavor to focus on particular goings-on at the point of time where it shall at last have become incontrovertible that the age of postmaterialism has dawned, I am simply forced to envisage an epidemic of something like nervous breakdowns, with probably some suicides, within such solid fortresses of conformity as M.I.T. or the London School of Economics and among their alumni.

There will be problems for the many as well as for the elites. And here I seem to see not so much depression or despair as a period of total confusion. For example, what exactly will happen to popular sexology, as the cracks start and widen between habits of behavior and habit of mind? If it becomes as much a matter of common sense as the converse is now that an individual human being is a unit of dignity transcending birth and death and not a lump of galvanized meat? Darwinism, directly and through Freudianism, has been responsible for the artificial abstraction of “sex” from gender or humanized sex. One’s imagination boggles at the convulsions that must accompany any struggle of anal and oral eroticism to turn into something like romance or the marriage of true minds or even something altogether new; at the incertitudes, the qualms, the misgivings, the deflated egos, the sagging self-assurance of a permissive society, as its whole vast monkey ethic of solemnly inculcated sensuality, masturbation, perversion, abortion, hitherto fed to it from school, university, parliament, press, and sometimes pulpit, begins to subside beneath its feet.

One way and another there is an opportunity here for a good book in the genre of science fiction by a really imaginative writer, who should fill out in terms of concrete events and experiences the issues I have merely glanced at, and no doubt introduce others. It need not for instance be assumed, as I have implicitly done, that the whole of society would resist, weaken, and capitulate at the same pace. It might become sharply divided

against itself along the lines I hinted at in an article in this quarterly in the winter of 1972, with a consequent development of widespread domestic and civil strife. In any case the *order* in which various sections of society may adjust to the new mindscape would be an interesting feature to work out. The humanities should in theory lead the way; but it is by no means a certainty. Possibly, if I were capable of writing such a book myself, I might be tempted to depict the avant-garde movements in art and literature as the last of all to toe the line. Because, ever since Marinetti’s hymns to mechanism at the turn of the century, their whole *raison d’être* has been self-appointed leadership of a culture advancing towards more and more materialism and more and more technology; and because, when a marching column turns about, the vanguard automatically becomes the rear guard.

But I hope this flight into fiction will not lead the reader to treat all my speculations as an idle exercise in crystal-gazing. They are intended more seriously. If a society is really faced with startling changes and fairly imminent ones (and there is a good deal of evidence that ours is) it cannot be amiss for a few people here and there to be peering ahead, however inadequately, by way of preparation for them. I must add in conclusion that I regard the speculations as applicable only to an open society. I have no space, nor am I sufficiently well-informed, to consider what is likely to happen in Czechoslovakia or elsewhere behind the iron curtain. But it looks as though, both above and below the surface of the crust, it could be very different from anything I have envisaged here. Above it, they have their own way of dealing with dissenting voices and dissident groups. Below, the difference is perhaps even greater. It is the weakness of most of our own counterculture groups that they evidently think it possible to abolish or tame technology and its *sequelae* while still retaining materialism (in the sense of course in which I have been using the term). It is the strength of Roszak’s book that it does not balk this issue, though in sum he handles it rhetorically rather than acutely. But if the information available from Ostrander and Schroeder’s deplorably journalistic *Psychic Discoveries behind the Iron Curtain* (1970) is reliable—and it seems to be well-documented with references unverified by me—the course they have set themselves there is exactly the opposite. Their back-room boys are quite ready to abandon materialism, provided they can maintain and even enhance technology by doing so. Research into *psi* phenomena of all kinds, but particularly psychokinesis, far from being discredited as reactionary mysticism, is now being enthusiastically financed by the state. But the research is strictly technological and the aim is operational not cognitive. What matters is, not the nature and highest function of mental energy but

the problem of quantifying it as manipulable "psychotrons." In this way it is incidentally disinfected of all philosophical and moral implications and the trauma of thermal dissolution may well be averted. If so, we should do well to reflect that the presence among us of a powerful impulse no longer to deny the spirit but to impound it, or rather no longer to doubt it but to deny it—to materialize as it were the immaterial itself, or in other words to turn from theoretical to practical reductionism, may be pregnant with the gravest possible consequences for humanity as a whole.

## Participation and Isolation: A Fresh Light on Present Discontents

I suppose everyone would agree that one of the particular things we observe when we try to take a general look at the world as it is today is a growing demand on all sides and by every kind of human being for a greater share in the control of his own life and destiny. This ideal used to be called "democracy," and still sometimes is, but it seems to be becoming apparent to more and more people that, although there is a great deal of what is called democracy about, there is little if any of that distributed control. One manifestation of this, often noted, is the fact that on a particular occasion where people do have the opportunity to exercise their democratic rights, that is, at an election, either municipal or parliamentary, it is extraordinary how very few people take the trouble to go and do it. "Electoral apathy" it has sometimes been called. Arising out of this feeling of dissatisfaction there is a tendency nowadays to speak less of "democracy" and more of "participation," as a better name for the thing that we ought to have but haven't got. Demands for participation are heard everywhere, as loudly on the other side of the Atlantic as on this, and indeed throughout the world, and they grow louder and louder. Some years ago I suppose we rather thought we had done something towards participation when we converted an empire into a commonwealth; but I doubt whether very many simple citizens of the Commonwealth countries feel themselves participating much more in the control of their own lives than they did under the Empire. Meanwhile, in almost any direction we turn we get the same demand. The manual and other workers in industry demand participation in the management: students call for participation in the policy decisions of their university: women want to participate in the structures