

SEYYED HOSSEIN NASR

Western
& Science
Asian
Culture

Iqbal Academy Pakistan

Western Science and Asian Culture



Western Science and Asian Culture

Seyyed Hossein Nasr



IQBAL ACADEMY PAKISTAN

LAHORE

IQBAL ACADEMY PAKISTAN

Lahore, 1986

First Edition : 1976

2nd Edition : 1986

Copies Printed : 1100

Price Rs. 16/-

Printed at :

RED ROSE PRINTERS
8, Abbot Road,, Lahore - 6

Supervised by :

Farrukh Danial



FOREWARD

This eloquent little monograph speaks to a problem that has concerned every serious thinker ever since the West has dominated the East, but never had it reached such sinister dimensions that no one could afford to ignore or underestimate its threatening implications. The days of facile syntheses between Oriental spirituality and Western science and technology—according to which with the help of the two, paradise could be achieved on earth over night — are over. Despite the clamour for more and more technology and science on the part of Islamic governments, there is a growing awareness among the Muslim intelligensia, that if the East has to survive and to keep its civilization intact, it has to reconsider its position vis-a-vis the West and, acting more judiciously, to charter another course to avoid the impasse now being faced by the Western civilization.

To quote Huston Smith, "In envisioning the way things are, there is no better place to begin than with modern science. Equally, there is no worse place to end. . . . science dominates the modern mind. Through and through, from premises to conclusions, the contemporary mind is science-ridden." The contemporary science-ridden mentality has precisely ended in that "worse place"; assuming that only the scientific method gives "news about the universe" and producing the ontological conclusion that corporeal reality is the only concrete and self-sufficient reality there is, it has reduced the mansion of being to its ground floor. Ecological or energy crises can effect the bodies only, but the crises of world-view can destroy the souls beyond recovery and this is precisely the most formidable challenge to the Eastern spirit.

Dr. Nasr's essay brings us face to face with almost every aspect of the problem of encounter between Western science and Eastern cultures. In his usual brilliant and penetrating style he offers us extremely useful insights into the present situation of the crises; ecological, ethical, social etc, created by modern science and its applications and we hope that it would provide a necessary and timely corrective for much muddled thinking on the subject.

(MUHAMMAD SUHEYL UMAR)

“He who knows the Self more and more clearly is more and more fully manifested. In whatever plants and trees and animals there are, he knows the Self more and more fully manifested. For in plants and trees only the plasm is seen, but in animals intelligence. In them the Self becomes more and more evident. In man the Self is yet more and more evident; for he is the most endowed with providence, he says what he has known, he sees what he has known, he knows the morrow, he knows what is and is not mundane, by the mortal he seeks the immortal. But as for the others, animals, hunger and thirst are the degree of their discrimination.”

(AITREYA ARANYAKA 2.3.2.)

The applications of modern science, a science which until a few decades ago was completely Western and which has now spread to other continents, have caused directly or indirectly such conditions of hunger and thirst, not to speak of the real possibility of the total collapse of the natural order, that it is necessary to investigate once again the rapport of Western science with the cultures of Asia, now busy in adopting this science and the technology based upon it. It will of course be said that Western science is not solely Western and that it drew heavily from Islamic as well as Greek and Indian sciences. It will also undoubtedly be asserted that there is not a complete enough harmony of either form or content among the traditions of Asia to classify them together in one group or to consider them as representing a single point of view. Within the scope of the present discussion the answer to these objections can be formulated simply in these terms: Western science is of course inextricably linked to the Islamic and before it Graeco-Alexandrian, Indian, ancient Iranian as well as Mesopotamian and Egyptian sciences. But what occurred during the Renaissance and especially in the 17th century scientific revolution was the imposition of a new and alien "form" upon the content of this scientific heritage, a "form" which was derived directly from the anthropomorphic nature of the thought of the age and the secularization of the cosmos to which the whole development of the so called Renaissance led, often in spite of the attempts of some of its leading intellectual figures. This new "form" resulted in a unilateral science that has remained

ever since bound to a single level of reality and closed to any possibility of access to higher states of being or levels of consciousness; a science which is profoundly terrestrial and "externalized" even when attempting to deal with the farthest reaches of the heavens or depths of the human soul.

We are concerned then with a science whose objective pole does not extend beyond the physico-psychic complex of the natural world surrounding man and whose subjective pole does not transcend human reason, conceived in a purely anthropomorphic manner, and cut off completely from the light of the Intellect. This science, which operates within a universe from which man has been abstracted, although it is still completely bound to the purely human manner of understanding things, is totally different in its perspective and *Weltanschauung* from the sciences of the great traditions of Asia, such as the Indian and the Islamic, and therefore needs to be discussed in terms of its full confrontation with the cultures of Asia.

As for the differences existing between Asian cultures, this is hardly a point to be denied by a serious student of this largest of the continents of the world. But the elements unifying Asian cultures especially in their confrontation with Western science and its applications are such that we can still refer in a profound sense to an Orient which in fact extends beyond the confines of Asia to embrace much of Africa as well. The most important of these elements is of course religion in its vastest sense, or tradition as this term has been used by traditional authors in the East and the West

such as the noble Indian scholar A. K. Coomaraswamy, R. Guénon and F. Schuon during the past half century. Whether as monotheism found in its most universal form in Islam, or as cosmic dualism in the ancient Iranian religions, or as a polytheism in whose depth is contained the profoundest metaphysics based on the non-duality of the ultimate Principle as in Hinduism, or as a way related to the non-personal and non-theistic aspect of the Divinity as in Buddhism, the traditions of Asia have emphasized the hierarchic nature of reality, the predominance of the spiritual over the material, the sacred character of the cosmos, the inseparability of man's destiny from that of the natural and cosmic environment, and the unity of knowledge and the inter-relatedness of all things. These and many other basic teachings of the various Oriental traditions which form the heart of Asian cultures and in fact *comprise* these cultures in their metaphysical aspect are to be found throughout Asia and are the unifying bonds between these cultures. Yet, it is precisely such teachings that are openly challenged today with the ever greater spread of Western science and its applications in the form of technology in Asian countries.

Of course the debate between modern science and religion or spirituality is hardly new. Voluminous works have been devoted to the "warfare" between theology and science in the West. In the East also for over a century numerous figures from nearly every Oriental tradition have tried to "harmonize" science and religion usually with a sentimental optimism and lack of intellectual rigour that is far below the dignity of civilizations

which have produced their Shankaras, Nagarjunas, Ibn Siñas and Menciuses. In fact pseudo-scientific theories such as that of evolution have entered in certain cases into the domain of religion itself, and some have attempted to synthesize such theories with the existing metaphysical and spiritual teachings of the traditions in question with results that cannot be called anything less than catastrophic.

The encounter between Western science and Asian cultures and the debate about this problem is to be sure hardly new. In fact this encounter has already caused notable changes within these cultures themselves. But certain new factors have appeared upon the stage of history during the past few years which call for a renewal of this apparently time-worn discussion and an awakening of interest on the part of all those who are seriously interested in the future of their cultures in this momentous period of history. The days of facile syntheses between Oriental spirituality and Western science and technology—according to which with the help of the two paradise would be achieved on earth overnight—are over. The air of our cities may become so polluted as not to allow us to remain impervious to the destruction of the environment by taking deep breathing exercises according to Yoga practices, which require at least some amount of fresh air from which the body can draw the necessary energy for its spiritual and physical practices.

A glance at the present day scene throughout the world shows clearly that indeed the situation *has* changed in this respect. Just a generation or two ago if one were

to survey the "intellectual" climate of the world, one would discover that in the West only a few lonely visionaries foresaw the profound crisis of the modern world and an impending calamity that would occur unless modern man changed the basic suppositions of his modern culture. When R. Guénon criticised the modern world relentlessly in his *Crisis of the Modern World* he was attacked for being too severe and excessively pessimistic. Likewise, a poet like T. S. Eliot wrote in his "Love Song of J. Alfred Prufrock" of the abysmal background of modern city life as "a patient etherised upon a table," and in his "The Hollow Men" spoke of secularized, modern man in these terms:

"We are the hollow men
We are the stuffed men
Leaning together
Headpiece filled with straw. Alas!
Our dried voices, when
We whisper together
Are quiet and meaningless
As wind in dry grass
Or rats, feet over broken glass
In our dry cellar
Shape without form, shade without colour,
Paralysed force, gesture without motion."

But his words were also taken mostly not as an expression of the state of things but as the fruit of the mind of an over-sensitive poet. The vast majority of Western men remained completely confident that with modern science and its applications they had the key to solve every problem which could possibly present itself.

Today we are witness to a new situation in the West. Physicists are studying the Upanishads and young students in the best universities are searching everywhere, from the visions of a Mexican *brujo* to the perennial truths brought to men by the prophets and seers of Asia over the ages. Groups and societies are even founded to bring back to life the Oriental cosmological sciences, not to speak of spreading the spiritual teachings of the Oriental traditions. Moreover, prophets of doom lurk at every corner and predictions of crisis turning into catastrophe, far from being taken as the hallucinations of fools, are seen as sober descriptions of events by the wise. In fact today the danger in the West is not so much the neglect of the spiritual cultures of Asia but their deformation and profanation in bastard form in the hands of charlatans who are willing to rape the most sacred treasures of their culture to satiate their demonic thirst for either power or wealth. Had the Oriental sages of old been alive today they would see the hand of justice at work in this spread of pseudo-Oriental teachings to the West. They would see this phenomenon as a revenge for what the West did to the authentic spiritual cultures of Asia.

Needless to say not all that is presented as Oriental spirituality in the West is false. Far from it. In fact one of the most significant events of this age is the spread of an authentic metaphysical and spiritual teaching to the West after centuries during which the West ignored and denied these teachings. But the authentic is covered, at least before the eyes of those without true discernment and the necessary perspicacity, by a thick veil of deviated

and mutilated pseudo-knowledge which parades around as the wisdom of the Orient, polluting the spiritual atmosphere in a manner that fully complements the physical pollution of air. Today the cultures of Asia do not remain ignored by the majority of the Western public to be studied only by a small group of specialists, as was the case with previous generations. They are well-known, but not as they are in themselves; rather they are depicted to the majority of Westerners in that deformed state which makes of them a veritable parody of the spirituality in whose light generations of Orientals have lived and died over the millenia.

Likewise in the East itself we observe a different situation from what existed previously. For some time the Westernized leaders of the various cultures of Asia remained totally impervious to the dangers which the complete adoption of things Western posed for the very cultures whose cause they seemed outwardly at least to be championing. Faced with immediate social and economic problems many of which were in fact directly or indirectly caused by various forms of Western domination, including for example the role of modern medicine in causing the population explosion, many modernized Asians felt that it was easy to adopt Western science and technology to solve their immediate problems but avoid the alien world-view and the negative ethical effects which accompanied it. The intrusion of the concomitants of Western science and technology upon the very life pattern of these cultures seemed a most unlikely possibility not worthy of serious consideration. Nor did anyone believe that a crisis of world-wide or even cosmic

proportions could possibly be reached as a result of simply adopting the Western pattern of life.

Few Asian cultures in fact took the trouble of providing a strong enough cultural and intellectual background drawn from their own traditions to make it possible for their intellectual elite to master Western science and technology without falling prey to the undesirable factors that accompanied them. Such a possibility is itself doubtful in the usual manner that the problem is considered. But even if such a possibility did exist, certainly no serious attempt was made to realize it on anything more than the level of exceptional cases which stood out as an island in a sea of wishy-washy thinking and planning in the vital question of educating the young in the light of the problems posed by their encounter with modern Western civilization.

The result has been that among the newer generation of Westernized Orientals one can observe clearly a penetration of Western attitudes into the heart of the province of culture in a manner which was unimaginable to the older generation that championed adopting Western science and technology. Even completely negative and destructive tendencies such as alienation, depression, nihilism and the like which mark Western youth today have reached the proportion of a contagious malady among the so-called intelligentsia of many Asian cultures. The leaders have now become alarmed, having realized how important such attitudes can be in the life of their nation and its culture. Many understand now the importance of what was glossed over earlier, namely the necessity to gather and to apply all the intellectual powers available

within each Asian culture to study the nature of the impact of Western science and its applications upon the culture in question. This awareness is one of the few hopeful signs upon an otherwise dim horizon, for it gives one the hope that finally the real problem will be seen for what it is rather than being glossed over with sentimental and shallow platitudes.

Another factor which necessitates a new study of the relation between modern science and Asian cultures is the loss of confidence among these who profess this science, not so much in what this science can accomplish within its limited scope, but in what it is unable to solve because of its very nature. The accomplishments of modern science and technology are of course remarkable considered for what they are. But for several centuries a notable segment of Western humanity has transferred the complete and whole-hearted confidence which it had had in the priesthood in the Middle Ages to the scientists and engineers and in fact has had more confidence in their ability to solve the problems of mankind than serious scientists possess concerning themselves. Of course this confidence has not died out completely, but it has certainly been weakened. Even within the sciences themselves there are serious deadlocks which point to the necessity of a complete rethinking of the theoretical structure of some fields. Some even speak of a new scientific revolution comparable to that of the 17th century resulting in a science as different from what is called science today as the 17th century science was from its medieval predecessor. The idea of a continuous progress of science as understood

in its current sense is now questioned by many notable minds and some even speak of an eclipse of science in the form known since the 17th century and the possible return of men to the intense pursuit of other things such as art, philosophy and even theology, a phenomenon which has been seen often in the long history of science.

As for Western technology it too is shrouded evermore within clouds of doubt emanating from its own success. Men can land on the moon but cannot find the means of enabling human beings in most big cities to see the moon clearly at night. Means are provided to travel faster and faster but in actuality with ever diminishing speed for the vast majority of men who are forced to travel over ever greater distances for their everyday needs. Through medical technology men are kept alive even while seriously ill, longer than was ever possible while the deterioration of the natural environment decreases the quality of that elongated life every day and threatens man with new maladies rarely seen before. These examples could be multiplied indefinitely. Suffice it to say that here as in science there is, despite remarkable successes, a crisis of confidence which has turned an army of competent and far-sighted people in the West to search for alternative forms of technology such as soft technology and the like. Man has of course always had some form of technology at least since his becoming deprived of the Edenic state. But modern technology which is the direct application of modern science is of quite another order. It has sought until quite recently to manipulate the natural environment with the maximum use of energy and total indifference

to the qualitative aspects of nature and what is done to the human environment. That is why it has caused the profound crisis which has now brought its own future into serious question.

Asian cultures are, therefore, not faced any longer with two permanent ways of seeing the Universe: their own traditional perspective and that of Western science, perspectives which some have tried to harmonize in fashions that appear today as anything from hilarious to pathetic. Today one way, namely the traditional one, remains in its perennial form because rooted in immutable principles, whereas the scientific world-view is not only changing within the orbit of its own becoming, as has been the case since the 17th century, but is now challenged at its very roots, at least in certain of its aspects. There is no longer the compelling force of a "scientific" view of the Universe according to which matter or—from another point of view—quantity dominates, somehow evolving into life and even more mysteriously into consciousness, matter being led on by this same mysterious but scientifically "proven" process to some kind of superman who will save us all in the future. Rather, Asian cultures face a science that is fluid and itself in search of some kind of a philosophy of nature to hang on to, a science whose leading figures like Planck, Schrodinger, von Weizäcker and Heisenberg have been and are more seriously interested in theology and traditional philosophy than those mesmerized "philosophers" in the West who have turned philosophy itself into a shadow of experimental science and have forfeited the right of intelligence to principial

knowledge.

There is another characteristic of science and technology today which makes it incumbent upon all of us who are at the stage of adopting them to study them and their effect upon our traditional cultures with prudence: of late we wake up every morning with a new crisis directly related to the way in which the industrialized world has been dealing with its natural environment. Only a generation or two ago nations took pride in having very big cities which were signs of status and the urbaneness of their culture. Little was anyone aware how rapidly sedentary life, praised throughout history for being the mother of human culture and refinement, would become so deformed as to cause urbaneness to turn into urban crisis and force men into abominable conditions in big cities never paralleled before in their seriousness in human history.

Only a decade or two ago Western man still prided himself in removing hills and changing the directions of rivers and spoke with humour or condescension of the "animism", "totemism", "spiritism" or "nature worship" of those peoples who still saw in nature the *vestigia Dei*. Most modernized men prided themselves in their attitude and continued with zeal their increasing activity aimed at satisfying the never ending but ever more intense passions of men and based upon viewing the world as if it contained unlimited possibilities. We recall that only a decade ago when preparing the Rockefeller Series lectures at the University of Chicago which finally appeared in book form as *The Encounter of Man and Nature, the Spiritual Crisis of Modern Man* (London,

Allen and Unwin, 1968) we had the greatest difficulty convincing the majority of intelligent college educated people in America of the imminent ecological crisis. Then suddenly it dawned upon everyone how dangerous the crisis actually is and how little time there is left for industrialized man to change his way of life to gain at least a breathing space in which to think of a new life style which would allow him to continue his terrestrial existence. It suddenly became clear that the most immediate danger to human survival came not from disease or hunger, which are of course real and with which man has grappled over the ages, but from this blind rape of nature which the industrialized world, fortified by a pseudo-scientific ideology giving it a clear conscience to destroy all other than its immediate surroundings in order to achieve a "higher" civilization, had carried out since its colonization of the world, beginning in the Renaissance and of course on a much more rapid scale since the industrial revolution.

The ecological crisis has come upon the scene to remind man that there is something profoundly wrong with the concept of man and his relationship with nature cultivated since the 17th century in Europe. Certain Westerners may continue to blame the goats in the Middle East for the deforestation of hills and mountains. But the truth is that what man has been able to achieve in two centuries through denuding forests and polluting land and water in certain regions of the United States, Europe or the Soviet Union, goats have been nowhere able to match or even approach over a million years. The responsibility for the problem in its acute present

day form cannot be placed upon the shoulders of all men throughout history equally or even unequally. It is almost completely the outcome of the indiscriminate use of a technology tied to lust and passion by a civilization which has given man absolute rights over nature and even over himself without making him aware of the responsibilities which in all Asian cultures precede rights in the same way that ontologically the Principle (*atma*) precedes all of its manifestations (*maya*).

To the list of existing crises has now been added the energy crisis, which again has loomed upon the horizon suddenly taking everyone except a few experts by complete surprise. Until just a few years ago nations were classified according to the amount of energy they consumed and those which used less energy were considered as being in the lower scales of human existence. It was incumbent upon all men to rise as fast as possible on this scale. Energy was considered easily available and the sky was the limit. Meanwhile the wealth of certain nations grew by leaps and bounds at the expense of others which were duty bound to provide cheap sources of energy to make the ever rising spiral of energy usage possible. If someone protested that technologies should develop to conserve rather than waste energy he was brushed aside as being anachronistic and against the progress of mankind, which was in fact directly related to the amount of energy he was able to use or rather squander. If the figures given by geologists is to be accepted, it took nature 400 million years to create the petroleum which men will have exhausted in about 400 years if the present trends of consumption continue.

Now, suddenly it has dawned upon everyone that the earth is limited after all, as are both its raw materials and easily accessible means of energy. The energy crisis has forced a complete re-thinking of the applications of science to many fields. It has compelled many men to think again in terms of conservation of energy, maximum use of manual labour, return to simpler means of transportation and the like. Suddenly many in the West have accepted, albeit reluctantly, that all the wisdom ingrained in Asian cultures is most urgently needed to induce the peoples of industrialized nations, many of whom have long forgotten what discipline means, to adapt themselves to the new situation caused by the energy crisis.

Such instances could be easily multiplied. But the few examples given are sufficient to make it clear that the rapport between Western science and its applications and Asian cultures has changed greatly in both dimension and direction of late, and that it is necessary to bring the profoundest insights of Asian cultures to bear upon the crucial problems created by modern civilization for the sake not only of Asia but of the whole of mankind. In the East both those who proposed an indiscriminant adoption of Western science and technology and remained certain that their culture would remain intact and those who wanted even to dispense with their own cultural and spiritual heritage to adopt one of the Western "isms", from positivism to Marxism, as their ideology, have to reconsider their position in the light of the unprecedented crisis at the very heart of the civilization which they wished to emulate. Strangely enough the energy

crisis may be a blessing in disguise to give a few moments to everyone to ponder over the situation at hand before embarking upon a course from which there may be no return.

Let us consider some of the direct effects of the application of modern science and technology upon human culture, mostly in the West but also of late in Asia. There is needless to say a distinction to be made between science and technology. But inasmuch as in the West they have become ever more closely associated with each other since the beginning of this century, for the sake of the present discussion they can be considered together. One of the most notable effects especially from the point of view of Asian cultures is the compartmentalization of knowledge and ultimately the destruction of the ultimate science of Reality, the *scientia sacra* or gnosis which lies at the heart of every integral tradition.

The cultures of Asia have always envisaged the wise man or the sage as a central figure in the everyday life of men. The sage might also be learned in particular branches of the sciences, but what characterizes him most of all is his knowledge of the Truth in its universal aspect and inasmuch as it concerns the well-being and ultimate ends of man, his felicity, (*sa'adah*) in both this world and the next, to use the language of Islam. No doubt the separation of the sciences of nature from philosophy and philosophy itself from religion has enabled men to learn a great deal about the material domain, but by the same stroke it has deprived man of the knowledge of the whole of Reality,

both spatial and non-spatial, which surrounds him and which concerns him in a terribly real manner whether he chooses to take it into account or not.

It took several centuries from the beginning of the scientific revolution for the most outstanding thinkers of the West to realize what a terrible loss this plunge into sheer multiplicity and loss of a knowledge of the principal order involves for human society as a whole. For now there is no one to turn to in whom one can confide with his whole being, a person who induces certainty in his followers and companions because he not only thinks but also lives and embodies the sapiential doctrines which he expounds.

The wedding between metaphysics and the cosmological sciences so evident in Asian cultures is not only the expression of the truth which lies in the nature of things, but also a practical reality essential to the welfare of human society. In Hinduism all knowledge is contained in principle in the Vedas and in Islam in the Qur'an. This does not mean at all a limiting of the knowledge in any particular domain of reality as is proven by the remarkable developments of astronomy and arithmetic in India or medicine, algebra and physics in Islam. It means rather that particular knowledge is always related to the whole and that the harmony of the parts *vis-à-vis* the whole is always preserved as in nature itself where every living organism is based on harmony between the manifold and the One, the One which is the principle and source of all multiplicity. The vision of the whole was always related to the sense of the holy, of the sacred which nature displays at

every turn. To lose the sense of the whole is also to become blind to the sense of the sacred and ultimately to forget the total order.

The destruction of the wholeness of human life so decried today and the ever greater compartmentalization of the human mind and the decomposition of the human psyche so much feared in modern societies where it is becoming an ever more common phenomenon, are ultimately related to the loss of principal knowledge, and the subsequent segmentation of what men learn and know.

For cultures whose central intellectual figures have always been sages who have unified knowledge in its essential aspect within themselves such a loss cannot be anything less than tragic. Furthermore, this is particularly unfortunate in that it occurs at a moment when the most intelligent Westerners, especially the young, are searching for a way to re-unify various domains of knowledge and to re-integrate themselves as intelligent beings. The living Asian cultures possess the necessary intellectual doctrines to achieve such a goal for real metaphysical knowledge with its concomitant means of realization has not as yet perished among them. But to achieve this goal requires changing the attitude of euphoria or in certain cases hypnosis before Western science and Western thought in general and instead applying the intellectual criteria of Oriental traditions to their study, criticism and finally integration into a higher form of knowledge.

The loss of the "Center" in Western civilization has implied not only the segmentation of various branches

of knowledge but also a divorce between contemplation and action leading to the nearly total eclipse of the former by the latter. On another level, it has led to a divorce between science and ethics from which the modern world is suffering so painfully today. Due to the decadence which set in among Asian cultures during the last few centuries many leaders of the East in the past were concerned quite rightly with the evil of lethargy and lack of action within their societies and with the fact, to quote Frithjof Schuon, that "The East is sleeping over treasures". From their perspective, the mode of activity of the West appeared to incorporate an ideal harmony between knowledge and action and to provide a model to follow to overcome the ills which they observed and still observe in some quarters around them. Few were aware that this apparent harmony in the West was based upon the application of an incomplete and partial knowledge to the needs of man considered not as a total being with both spiritual and material needs but as an earth-bound creature, or ultimately as an animal with endless passions and a voracious appetite which only increased by leaps and bounds from day to day.

The consequences of the course of action followed by the West during the past three or four centuries are now so evident that even the most ardent champions of secularism in the West are openly concerned with the dangerous ethical consequences of the applications of a science which no matter how innocent in itself often leads to results completely beyond the control of those who are its creators and propagators. The issue has now become of paramount importance since the forces

which can be manipulated have gained almost cosmic proportions and the issue at hand is ultimately the survival of the whole of mankind or even the earth itself.

There are two ethical questions to be dealt with, which, although outwardly quite distinct, are profoundly interrelated: firstly, the ethical implications of the use of some of the sciences and certain forms of technology directly for military purposes and indirectly in ever increasing degree for what appear as peacetime goals; and secondly, the ethical behaviour of men and women in a society whose spiritual foundations have been eroded by the secularism and materialism implied by the "scientific" world view.

The first problem has concerned all serious men ever since the horrors of the First World War which mechanized the generalized devastation beyond anything experienced until then, and especially since the mushroom clouds over Hiroshima opened the gates of hell for men who until then had been dreaming of establishing paradise on earth through purely material means. India has been witness to some of the profoundest debates on this question during this century.

It is, therefore, hardly necessary to enter here once again into the question of the ethical implications of war at a time when most of the causes for which men are willing to go to war are devoid of the sacred and even of anything more than material interests and when

the means provided by technology for warfare are such as to give a completely new dimension and scope to war, making of it a totality which implies complete destruction and annihilation rather than simple victory or defeat in the traditional sense of these terms.

It must be emphasized, however, that this change in the dimensions and proportions of the effects of modern warfare is directly related to the ethical implications of the applications of science and cannot be disregarded as irrelevant to this problem. There are those who claim that such evil effects of the applications of science as modern military weapons are due only to social problems of human societies and are unrelated to science itself. But this is to forget that as the Old Persian proverb says one should never place a sharp dagger in the hands of a drunkard. Those who make sharp daggers with certain knowledge that sooner or later they will end up in the hands of drunkards can hardly shun the moral responsibility that such an undertaking involves and this most of all when they operate at the source or the frontiers of science and technology where new weapons of ever greater danger are produced forcing others to follow suit simply to guard their independence. But these are matters for another discussion and another day and there are those much better suited than us to carry it out. Its brief mention here is necessary however since it is such an awesome aspect of the interaction between Western science and Asian cultures.

The problem that is less known, especially in Asian cultures which are only now adopting Western technology and familiarising themselves with Western

science, is the ethical implication of what appear a peaceful uses and applications of science and technology: the ecological crisis is caused directly by the excessive and unguided application of science and technology in various forms resulting not only in the depletion of resources and the like but also in over-population, famine and now certain new forms of disease which directly threaten the lives of human beings. Asian cultures have never been anthropomorphic in perspective and have never divorced man from either the Divine Order or the rest of the creatures who share the blessings of the earth with him. Ethics in all Asian cultures has included not only human society but all the other creatures on earth, animate and even inanimate, if one considers the sacredness of certain mountains, rivers, stones and the like in many Oriental traditions. The anthropomorphism of post-medieval Western society created an ethical code embracing only man, and in fact only Western man since another code was used for the inhabitants of other continents. The other creatures were there to provide for man without any rights of their own. This plunder of the natural environment has now turned upon man himself, and suddenly within a single generation even "peaceful" applications of science and technology have gained ethical implications never dreamed of before, leading now to the ultimate question of who should have the right to live and who should not in a world which can no longer feed all of its inhabitants. It is a fact to ponder upon that while men considered the earth as their mother and Heaven as their father, the earth managed to feed

the children it had begotten; and that since the time that men have ceased to regard the earth as their mother but rather have seen it as a female captured in war to be prostituted and raped, the earth can no longer feed them all. The bounty and grace (*barakah* in Arabic) of the earth seem to shrivel before a humanity which refuses to see anything in nature beyond the means of satisfying its animal needs.

The ecological crisis is now upon us with its full implications of doom and disaster unless men re-think their whole approach to the use of their environment. The ethical implications of science in this domain have become as harrowing as in the military field. And indeed it could not but be so since the activity that has led to the ecological crisis has been for the most part camouflaged as an attempt to achieve peace and prosperity. But in reality this activity has been inseparable from other forms of war: economic war with other nations and even within a single society; conflict with other human beings and with other creatures; and confrontation with oneself and ultimately with the Self or *atman*. Both in the conditions called war and peace, which are ultimately both forms of war externalizing man's inner war with his true nature, the ethical implications of the applications of Western science and technology for Asian cultures are of such dimensions that they need to be carefully studied and analysed before the blind limitation of the blind continues any further.

The second ethical question which does not seem to be related to the above outwardly but which is in-

wardly inseparable from it is the ethical behaviour of Western society itself. A generation of men and women brought up in affluence and made aware of the overt contradictions within the ethical ideals for which the modern West has stood for some time have turned to various sources for new ethical systems in a state of confusion while for a large number of people, especially in big cities, the general moral standards have decayed in every way. Whether it be the question of sexual relations or theft or murder, a new situation has arisen whose seriousness hardly needs to be emphasized. The Asian cultures are still relatively free of such problems but as recipients of all that flows across their borders into their homelands they cannot remain indifferent to the effects that the recent "moral revolution" in the West will have upon them.

The ethical crisis of the West is also reflected in the loss of discipline among notable strata of society and the expectation on the part of many to become ever more wealthy while working less and less every day. It is a "right" which people expect without pondering over the responsibilities which are inseparable from any form of right. The current economic crisis, despite all the attempts made to blame it on the rise in the price of oil, is due most of all to this crisis within industrialized societies.

This is also evident in the major problem of implementing the recommendations made by a number of authorities to ameliorate the negative effects of the ecological crisis. Many works such as the well-known report of the Club of Rome have called for men to turn

towards qualitative growth, to the so-called "finer things of life" rather than remain bound completely to the quest of purely material objects. But such recommendations usually overlook what might be called the forgotten dimension of the ecological debate. Men have forgotten that only a spiritual power can control the dragon of the passions and that in the absence of spirituality no written or oral advice or political recommendation can cause men to turn their attention away from the material plane towards the spiritual and to cause the storms of the mind and the soul to subside as has been the aim of the sages of Asia over the ages. That is why the ecological crisis cannot be solved without turning to the spiritual dimension of the problem which many try so hard to overlook. The loss of discipline and a lowering of ethical standards have indeed turned against Western man at a moment when he is most in need of them and of the virtues from which they are inseparable.

This lowering of ethical standards and even bewilderment as to which ethical system is meaningful might seem outwardly independent of Western science and its applications, and many in fact have argued in favour of this thesis. But closer scrutiny reveals that the two are inseparable. Norms of ethical behaviour are inseparable from the view held by men concerning the ultimate Reality, or metaphysics in its universal sense. Western man has in fact been living since the Middle Ages on the ethical heritage of Christianity while gradually separating himself from the Christian doctrine concerning the nature of things. Now the legacy is nearly exhausted and for that very reason

the ethical system which appeared obvious until recently, even to men who attacked its metaphysical and theological foundations is being challenged in its totality.

The sciences themselves are of course innocent of any claims about the ultimate nature of Reality and therefore of any possibility of providing the necessary basis for an applicable and meaningful ethics, despite the extravagant claims of agnostic humanists and proponents of scientific ethics whose ineptitude and innate weakness is demonstrated by the trivial role their theories are playing in this supposedly most "scientific" period of human history. But the atmosphere created by those who give a totalitarian interpretation to modern science and want to forge of its limited understanding of the material plane a key to unlock the mysteries of Heaven, cannot but result in an atmosphere of doubt and agnosticism which corrodes the metaphysical and religious doctrines upon which ethics must of necessity rely. The general change in the ethical behaviour of industrialized societies, which display every day to a greater degree disorders and maladies of a serious nature, cannot be considered a characteristic of Western society alone. It is related to the indirect effect of what Western science and its applications have been until now and what they have induced not necessarily through the intention of their propagators but by the very fact of their existence within the mind and soul of Western man. Surely no one who is seriously concerned with the future of Asian cultures in their contact and confrontation with Western science and its applications can remain oblivious to the factors which press upon the whole value system and

pattern of ethical behaviour in societies in the throes of adopting Western science and technology.

As a response to the critical appraisal we have made of the present situation, the often repeated cry will no doubt be heard again that the hands of the clock cannot be turned back and that all that is occurring in this field is inevitable. If however, all is inevitable, then why even bother to think or to act? As for the famous hand of the clock, it cannot without doubt be turned back but strangely enough it usually returns to where it was before if one waits long enough, and also occasionally the clock stops working completely. In any case no argument can withstand the statement of the truth and the necessity for man to conform himself to it no matter how bitter the pains of making this decision and acting accordingly.

It would be absurd to deny the validity of the knowledge acquired through modern physics of the structure of the atom, at least as a way of knowing the structure of matter; or of the insight acquired by modern biology into the working of the cell as a way of knowing life, although it might not be life everlasting. Likewise, it would be ridiculous to deny that trains go faster than cattle driven carts or that modern surgery is more efficient in removing brain tumors than the methods used by the ancient Egyptians or Ibn Sina. The question is, however, not to doubt the obvious, but to ask whether all men can or should in fact journey by fast trains and cars and whether this should be considered as the goal of human society; or whether the very conditions which make possible remarkable advances in certain aspects

of medicine do not cause other-forms of malady, no less serious than those for which cures have been found, to appear on the scene. Both a knowledge of most branches of Western science and the application of this science through various forms of technology have already spread within various Asian cultures in different degrees. The question is not whether the process can be stopped immediately or not. We must rather question the way in which the process is to continue in the future in the light of the profound crisis which is taking place within the heart-land of the civilization that has produced and nurtured Western science and technology during the past centuries. The question is whether Asian cultures will copy blindly and end up with various degrees of speed at the dead-end now being faced by Western civilization, or whether they will act judiciously and wisely in a manner which will provide enough protection for their own cultures to survive and even to provide the necessary light to guide men all over the world—even beyond their own cultural borders—out of the labyrinth in which they now find themselves.

As we have already stated, both Western science and technology are in a state of flux and rapid change, beset with uncertainties about which direction they will follow in the future. In physics there are signs of the need for a completely new look at basic particles. Some even speak of the psychon as a "phychic" particle to add to the number of existing particles to explain certain phenomena. In astronomy and astrophysics there are new theories propounded every day almost with the rapidity of changes of fashion, and opinions even about

whether the Universe is finite or infinite oscillate back and forth every few years. There is no real cosmology—which can only come from higher metaphysical principles—in the West today, and despite all the attempts made (such as the pseudo-synthesis of Teilhard de Chardin) no satisfactory general world-view has been found within which to place all that man observes in the world about him, not to speak of the world within and beyond. The same can be seen in biology where after a long period of aping physics there are signs of new interest in a world view in which the morphology of living forms have a meaning in themselves rather than simply in terms of their chemical components. Finally, in psychology and psychoanalysis after several decades of tyrannical rule by those parodies of traditional doctrines which Freudianism and Jungianism represent, there is now a wide awareness that these modern disciplines have failed utterly to penetrate into the inner nature of the human soul. There are even attempts to benefit from the insights of the traditional sciences of the soul for which the traditions of Asia such as those of Tibet and India are justly so famous.

In all of these and many other fields there is a deep thirst for a philosophy of nature and a total world view which can give a new direction to the sciences themselves. And it is precisely at this critical point that the Asian cultures can play a major role in the transformation of the sciences by providing a wider world view within which they can be seen for what they really are, and in certain cases even by giving a new form of life to the sciences, transforming them into elements

within another universe of knowledge and experience. Some Western scientists and thinkers are already seeking to pursue this goal, but for the most part they do not have access to the genuine teachings of the Oriental traditions and so their efforts always face the danger of resulting in that metaphysically absurd and spiritually dangerous type of eclecticism and pseudo-synthesis of so-called Eastern spirituality and Western science which is more insidious than materialism pure and simple and which is at the antipode of what we have in mind. The creative encounter of Asian cultures with various branches of the Western sciences at their very frontiers, which is our concern, is not based on the uncritical acceptance of Western science as an inviolable deity and the docile surrender to its claims. Rather, it is founded upon a regaining of full confidence in their own traditions by those Asian thinkers who are in a position to deal with such matters and to face the problems involved in an intellectual endeavour of such dimensions. It means most of all casting away that sense of inferiority *vis-à-vis* the West which has plagued so many Westernized Orientals during the past two or three generations, paralyzed their minds and prevented them from acting intelligently before the thought patterns and ideologies which have inundated the intellectual scenery of various Asian cultures like a tidal wave during the past century.

The same situation exists in the domain of technology. Most Asian societies are now becoming rapidly industrialized due to various seemingly irresistible forces, both external and internal, at the very moment

when the whole meaning of the process of industrialization as understood until recently is called into question. There is no longer a single model for development to follow. Continuous material progress measured in terms of GNP and similar figures which both the West and the Communist worlds have envisaged until now as the natural goal of every society is refuted as even a physical possibility on a world-wide scale, as a result of both the ecological and the energy and raw materials crises. Nor are such ideals as ever greater speed, ever increasing use of energy and the like considered any longer to be obviously beneficent in themselves. Asian societies are beginning to undergo major changes in the construction of their cities, means of production, transportation and the like at the very moment when the most advanced industrial countries are also seeking new technologies to prevent a major catastrophe from falling upon their heads.

There is no question here of Asians stopping to feed and to clothe their people or to provide for their medical and educational needs. The question is how to avoid the schooling, energy and medical crises outlined so daringly by such men as Ivan Illich and Theodore Roszak. The works of such men must at least be seriously studied even if one chooses to chart another course than that which they propose, for they speak of very real and not imaginary problems upon the very material plane with which modern man is almost totally concerned.

The cultures of Asia are fortunately still very rich in providing alternatives in various forms of technology.

Most of the traditional architectures of Asia such as Islamic architecture have been based on the principle of conserving energy, close rapport with the natural environment, maximum use of natural sources of energy, and the creation of an organic link between the spaces in which man works, sleeps, prays and relaxes. These are all ideas which many contemporary Western urbanists, city planners and architects are seeking to realize even if not all of them understand that this organic unity of traditional architecture is possible only in the presence of the unifying spiritual principle which lies at the heart of the traditions of Asia. It is, therefore, particularly painful when one observes in so many Asian countries urban monstrosities being built which stand not only against the living architectural traditions of the countries in question but also are opposed to all that those who are trying to cure the maladies of urbanism in the West are acclaiming with the loudest voice possible.

The same problem can be seen in medicine and diet. Many people in the West are now discovering the remarkable possibilities within the traditional schools of medicine in Asia to cure certain types of illness before which Western medicine has remained more or less powerless until now. They also realize the economic value of traditional medicine in smaller towns and especially in villages which are deprived of modern medicine because of the exorbitant cost of training modern doctors. While even the material, not to speak of the spiritual, value of traditional medicine is being realized to a greater degree every day even in the West,

in many Asian cultures everyone is trying to bury and forget the remnants of traditional medicine as soon as possible and to expand the use of the products of modern pharmaceutical industries in order to replace the herbs and minerals drawn directly from the bosom of nature.

To cite yet another example, much is being said today of the virtues of labour-intensive industry, of manual work when and where possible and of the disaster of following blindly the policy of replacing men by machines indiscriminantly. The teachings of saints about the innate virtue of manual labour and especially of handicrafts, which were soon forgotten by most men even among their admirers, have of late received renewed attention and attracted new interest. Of course men cannot be asked to crank a wheel to run a power station, but men can continue to make many things without their being automatically replaced by the machine. And this can be of benefit not only from a spiritual, social and ecological point of view but also in the long run even economically. The young scientists and engineers in the West who are seeking to create what they call "soft technology" are pursuing this very goal.

In the rapid process of industrialization which many Asian countries are now undergoing the necessity of using a sense of discernment and of being judicious is more urgent than ever before. It is even imperative at a time when technology in the West itself is undergoing major changes and men are searching for new life styles. If this discernment is not used Asian societies will continue to eat the bread crumbs and the refuse left

from the banquet table and possibly the "last supper" of the industrialized world. But if they do use discernment again with full confidence in their own cultures they can choose intelligent alternatives whenever possible and draw from their own experiences for many things from architecture to agriculture, providing in this way a meaningful life style for themselves and even sources of inspiration for others.

To carry out this immense intellectual task of confronting creatively Western science and technology, the intellectual elite of Asian societies who are called upon to carry out this task must rely upon their own cultures. They must recall first of all that profound truth which is iterated in every Oriental tradition in a particular form, the truth contained in the myth of the sacrifice of Purusa mentioned in the Rg-Veda and in the metaphysical doctrine of universal man (*al-insan al-kamil*) which forms one of the pillars of Islamic metaphysical doctrines. According to this doctrine the cosmos is brought into being by the sacrifice of that spiritual reality which is also the prototype of man and his own essence. To destroy the natural environment before the altar of man's passions means therefore also to sacrifice the inner man for the human animal, which is nothing but the most externalized aspect of the totality of man. It is also to strangle and destroy man himself, for despite all the appearances the outward man cannot survive save with the aid of the inner man. To kill "the gods" is finally to commit suicide.

At this critical moment of human history when the authentic cultures of Asia, such as those of India and

Iran, must do everything possible not only to survive but also to act as beacons of light in a world of shadows, it is paramount to recall the truth for which the myth of the sacrifice of Puruṣa, or the reflections of the prototypes of all things in the Universal Man, or similar traditional doctrines are the most intelligible symbolic expressions. In the encounter with Western science and its applications the remembrance of this truth which binds man in the most profound sense to the Universe surrounding him is more urgent than ever before.

In the *Secret Rose Garden* (*Gulshan-i rāz*) of Shabīstari man is ordered to contemplate upon his intimate relation with the Universe about him in these immortal verses:

<p>که تا بدون حسّی گردی در آیات هر آنچه آید به آخر پیش بینی طفیل ذات او شد هر دو عالم بدان خود را که تو جان جهانی که هستی صورت عکس است زهی باطن که عین ظاهر آمد همان بهتر که خود را می ندانی</p>	<p>تفکّر کن تو در خلق مساوات جهان را سر بسر در خویش بینی در آخر گشت پیدا نقش آدم تو مغز عالمی زان در میانی از آن دانسته ای تو چطو است زهی ابل که عین آخر آمد تو از خود رزق و شب اندر گمانی</p>
--	--

Meditate upon the structure of the heavens
So that thou may praise the "Truth" in its theophanies,

Behold the world from end to end within thyself,
Wherever comes at the end, thou may see beforehand.

The world of Adam appeared last of all
Yet the two worlds became dependent upon his essence.

Thou art the kernel of the world, situated at its centre,
Know thyself for thou art the soul of the Universe.

Thou knowest all the names of God because
Thou art the face of the reflection of the 'Named'.

Oh first who art identical with the last!
Oh inward who art identical with the outward!

Thou art cogitating about thyself day and night,
It is better that thou shouldst think no more of self.

And we read in the *Mundaka Upanishad* that:

“The whole universe is a manifestation and product of that universal, formless, causeless Being. The sun, moon and all the quarters, all knowledge, and the souls of all existing beings are parts and manifestations of that single all-immanent Being. All life and all qualities, functions and activities are forms of that single Energy. He is Fire which has lighted the sun and makes it burn, like a log burning in fire. Thereby does the sun give us warmth and light. The rain does not rain, but it is He that rains through the clouds. Beings come together and multiply, but it is He above that multiplies through them.”

[11, (1), 415]

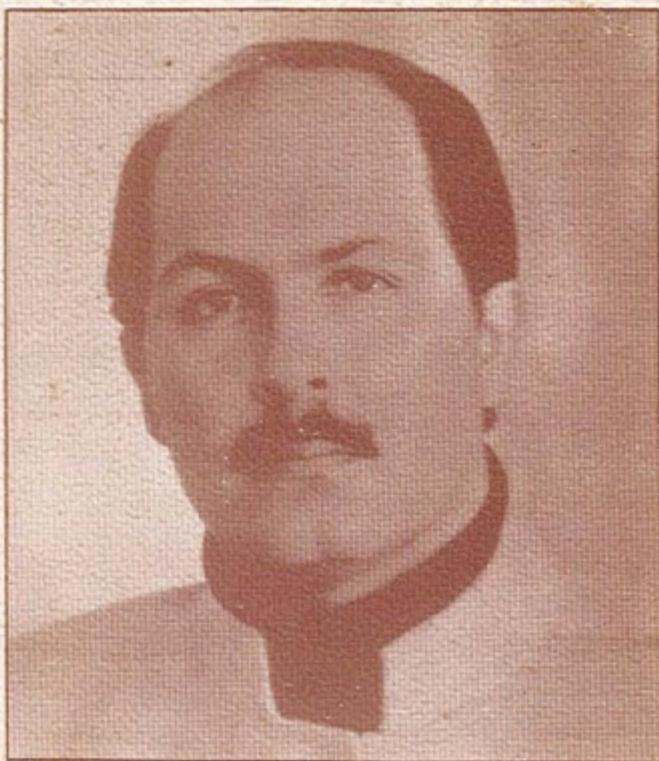
The survival of Asian cultures does not depend so much upon their immediate success in the material

domain no matter how important this success is at the moment—as upon the degree to which they are able to preserve this vision of Unity binding the various levels of knowledge and of reality, of the spiritual and material into an inseparable whole. This is a vision which modern man in search of a way to save himself from the devastating effects of his own activity is also seeking, but having lost the direction of the sky he is for the most part searching for the Sun in the bottom of a well. Nothing could be more tragic for the world as a whole if at the moment when Western man who had long forgotten this sense of Unity is searching to re-discover it in order to save himself, Asian cultures should forget and discard this precious vision of Unity which lies at the heart of their cultures.

SEYYED HOSSEIN NASR
22 February 1975

SUGGESTIONS FOR FURTHER READING

1. Coomaraswamy, A.K., *The Bugbear of Literacy*, London, 1946.
2. Guénon, R., *The Reign of Quantity and the Signs of the Times*, trans. by Lord Northbourne, Baltimore (Md., U.S.A.), 1972.
3. Illich, I., *Energy and Equity*, London, 1974.
4. Illich, I., *Tools for Conviviality*, New York, 1971.
5. Mumford, L., *The Pentagon of Power*, New York, 1970.
6. Nasr, S.H., *The Encounter of Man and Nature, the Spiritual Crisis of Modern Man*, London, 1968.
7. Nasr, S.H., *Islam and the Plight of Modern Man*, London, 1976.
8. Needleman, J. (ed.), *The Sword of Gnosis*, Baltimore (Md., U.S.A.), 1974.



SEYYED HOSSEIN NASR was born in Tehran, where he received his early education. He studied in the West and gained his BS from the Massachusetts Institute of Technology and his MA and PhD from Harvard University, where he studied the History of Science and Learning with special concentration on Islamic science and philosophy. In 1958 he returned to Iran to teach at Tehran University, where he was Professor of the History of Science and Philosophy. In 1962 he was visiting lecturer at Harvard University, and he taught there during the summer of 1965. During 1964-65 he was the first holder of the Aga Khan Chair of Islamic Studies at the American University of Beirut. Formerly Chancellor of the Arya-Mehr University of Technology in Iran, he is now teaching at George Washington University, Washington D.C.

Professor Nasr has lectured in America, Europe, the Middle East, Pakistan, India, Japan, and Australia. He is the author of more than a dozen books and numerous articles, and his works have appeared in more than ten languages.