

The Social Sciences and Global Transformation

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-- SUMMARY --

The terrifying uniqueness of the present world situation is the fact of rapid and fundamental change combined with the build up of a destructive capacity that can destroy all life. Together, they constitute a mutation in the human condition. And we lack the socio-cultural models that could help explain the dynamics of the global transformation now in progress.

North American social scientists have to make their contribution in a world where their perceptions are no longer the dominant ones. An essential condition of our time is pluralism in the international social science community. The North American preoccupation with stable systems and mathematical models accounts for an inability to grasp phenomena occurring outside the established structures. Social scientists are looking in the wrong places for significant actors to emerge.

There is need for social science to be more reflective. But a large challenge is how to integrate the normative and the analytical in a manner that is both ethically and intellectually valid. There is further need for the social sciences to help enhance the learning capacity of nations to adjust to social change.

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and Challenges of the Social Sciences
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I am most honoured at this opportunity to address this symposium on the fundamental challenges for the social sciences in North America in the 1980s. I believe that this meeting can be seen as part of the process of reflection and re-examination that is now taking place throughout the social sciences everywhere, and of the questioning of what their relevance should be to humankind's preparation for its entry into the 21st century.

The organizers of this symposium have rightly noted the many reports all pointing to the same conclusion -- that the remainder of this century, when the final preparations for entry into the next one will have to be made, will be "a critical watershed period in human history." This is the message of the two Brandt Commission reports, North-South: A Program for Survival, the Palme Commission report, Common Security, the US Government's Global 2000 report, the Inter-futures Project report, Facing the Future, as well as many other studies.

But the situation is even more unstable, unpredictable and open-ended than these studies suggest -- for there has been a serious underestimation in all our diagnostic and prospective exercises of the cumulative and interacting effects of the unprecedentedly rapid and fundamental change at all levels of society, in all dimensions of human and social life, and in every corner of this interdependent world.

We are in a situation today of drift, and social and political fragmentation at the national and sub-national as well as at the international levels. Concurrently, we are experiencing the counter-pull of increasing interdependence. All societies, the strong and the weak, are now exposed to many forces and processes beyond their control. We are witnessing shifts in the political and economic power configurations and the sometimes quiet, sometimes forceful interpenetration of traditional spheres of influence among the major powers.

Superpower rivalry has led us to a situation in which we have lost political control over the arms race -- we cannot go on for another 20 or 30 years or so in this fashion and expect to survive, precariously balanced as we now are on the brink of nuclear holocaust.

The international economic system is in crisis. The international financial system has become divorced from the economic system and has made rational management almost impossible.

We have reached a state of human folly where nations stricken by hunger and poverty must pay as much as \$125 billion a year on their debts despite stagnating economies, declining incomes, starving populations, and massive unemployment in the South, with continuing idle productive capacity in the North, and rapidly increasing arms expenditures in both the North and South, as well as in the East. Three quarters of a billion people are hungry in a world economy which, for all its present afflictions, still has the productive capacity to produce sufficient food for all. The small signs of possible economic recovery cannot hide the root conditions of continuing international economic disorder. The continuing arms race is of course one of them.

Our collective inability to deal with poverty and inequality in the third world has led, as we have seen in several cases to the total polarization of whole societies and the subsequent violent collapse of political systems. Social change, resulting from economic development or its absence have upset prevailing social and political equilibria often accompanied by pervasive rural and urban violence. Where local institutions were incapable of handling such conflicts peacefully we have seen the emergence of systems of suppression leading to the militarization of many of these societies, rapidly increasing arms purchases, but also various manifestations of armed popular resistance.

We cannot close our eyes to the fact that since the end of World War II more than 130 wars have been fought in the third world, and that many were the result of internal instability and not the result of major power rivalries, although that too has occurred. Aggravated by the global economic recession we may in some regions in the world in the next decade well witness the collapse of whole economies, and even states, leading to violence, civil strife, external intervention, mass-exodus, annexation and eventually the rewriting of the political geography of that region. We are also witnessing the migrations by millions of people across the globe into already overcrowded cities across national and continental boundaries to the areas of affluence and to the empty spaces of the world.

In addition, there are more than 16 million refugees adrift around the globe. This large scale migration of labour and the resettlement of refugees have already led to massive

cultural and ethnic interpenetration on a global scale, severely taxing social adjustment mechanisms in many countries of the North and South. These have raised political, economic and cultural tensions leading to conflicts that may increasingly erupt not only along class lines, but also along the fault lines of race, ethnicity and religion. The reports of mass slaughter in many areas in the world are already a sickening commonplace of our daily headlines.

All this happens in a world that has become interdependent to an unprecedented degree. The fact that this interdependence is asymmetrical and unjust, does not deny its reality. One might reverse the statement and say that the non-viability of the international order is due to the asymmetrical character of the structures of interdependence.

In short, the whole international system itself is in a state of crisis. The many cohesions -- political, economic, social and otherwise -- which have held that system together are coming unstuck at a frightening rate and there are no signs of any replacement at hand. Worse than this there is increasingly the growing realization that we don't seem fully to understand, and have lost control over the international or global processes of change now under way.

Changes at the international level are now all interlinked with changes at the sub-national and national levels -- politically, economically, culturally or psychologically. They all affect each other and with cumulative impact. We are not only concerned here with the problems that deal with countries; countries themselves are confronted with powerful forces for change that affect them and the international system. Events at the sub-national level in a distant country may well impact on societies everywhere in the world.

In the process nations have become more vulnerable; our borders have become permeable to decisions taken outside one's national borders and to the rapid social changes that are taking place at all levels of society -- at the sub-national, national, as well as the international levels, and cutting across national boundaries. As a result most nations now feel that they are no longer in control of their destinies.

Domestic cohesiveness too is affected by major social changes within all our countries, North, South, East, and West. There is demographic change: the greying of society, urbanization, and in the North the increasingly smaller productive cohort in the population. There is in the North also the impact of technology on employment patterns -- robotization and automation are leaving increasingly larger numbers of what might be called the "structurally unemployed" -- especially among the young. The new technological revolution is also bound to affect North-South relations, and may even lead to new dependencies for the South. The pressure of massive unemployment on resources and on political systems

of whatever ideological persuasion in the South, are bound to tax them to the breaking point and possibly beyond it. Value changes of many sorts, about work, life-styles, the role of the spiritual and other non-material aspects of daily human life, are affecting human and social behaviour.

There are also the voices of the newly assertive and the newly aware that comprise a fundamental element in domestic change. These are the voices of the hitherto powerless and marginalized, voices of the little people on the march, clamouring for our attention and their political entitlement on a worldwide scale. They are becoming a major force for structural transformation and value change. These are the voices of the various grass root and liberation movements, of the women's movement, the ecological and peace movements, and the evolving workers' and peasants' associations in many parts of the world, in both rich and poor nations.

All of these forces for change, in one way or another, disturb prevailing equilibria and increasingly we see our institutions, at the national and sub-national level, incapable of dealing with the cumulative impact of these changes. At the national level, these processes have led to the erosion of the capacity of our political systems to deal effectively and in a manner that is at least perceived to be legitimate with the changes that are occurring. Profound value changes have led to shifts and divisions within the electorate and which has in many cases made it impossible for effective governments to emerge. We see now in many places of the world weak governments emerging even though power may in some countries increasingly be concentrated within those governments. Often the degree of concentration of power is simply a measure of its fragility within the society.

We are witnessing now as a result of the very powerful shifts in cultural and value orientation, the emergence of single issue politics in many countries -- a reduction and concentration of the political interest in specific issues without regard to the complex interlinkages of such issues with broader national or international problems.

We are witnessing also the development of underground economies that escape the regulatory power of the national bureaucracies. This is happening in the North, in the South, in the East, as well as in the West. Everywhere we are witnessing the changes that reflect the growing incapacity of the political systems to deal with the changes that are occurring within the society.

At the global level, these problems have added to the fragmentation and drift in international relations -- the uncertainty and unpredictability of political behaviour of individual countries as well as of alliances. The incapacity to undertake the concerted international efforts to overcome the global recession, the continuing international economic

disarray and the most urgent international or regional security problems and simultaneously the inclination to look for national solutions in isolation, is another manifestation of this process. It is quite certain, it seems to me, that in the next 20 years we will see not only continuing fragmentation, but also very important shifts in the distribution and configuration of power across the globe. Innovations in weapons technology combined with major shifts in political value orientation among the public in a number of key countries may well lead, 20 years hence, to entirely different configurations in the systems of political and military alliances that we know now.

The rapidity of social change, fuelled primarily by the rate of scientific and technological innovation, by changes in military technology, but also by changes in communications, its technology, and their economic, social and cultural impact, now outstrips the capacity of our institutions and our political systems, be they national or international, to deal with and to absorb those changes effectively and in an orderly fashion. Compounding the social impact of the rapid rate of change is the increasing complexity of the changes as a result of the interdependent linkages between domestic, international and global change and the increase in numbers of social actors at the sub-national, national and international levels. These very profound social changes now occurring both impinge upon and emanate from the deepest wellsprings of social action which are embedded in the basic conceptions of the meaning of human existence and social life in this world that underlie our various cultures and concepts of social order.

It is therefore no exaggeration to look at this massive complex of interrelated changes on a truly global scale, pervading all societies, although each in a different way, as an ongoing process of global transformation.

What makes for the terrifying uniqueness of our situation however is not the process of global transformation itself, unprecedented though it is in human history, due to its scale, interdependent pervasiveness and complexity. It is rather its occurrence in combination with the existence of the present build up of a destructive capacity, sufficient to extinguish human life and civilization. It is this combination, amounting to a veritable mutation of the human condition, which we will have to learn to live with if we are to survive.

What makes this process of learning and adjusting so difficult is that the process of global transformation as such, like all historical processes, is an untidy and messy one. It refuses to conform to our thought structures, and to fit with our present categories of thought with which we tend to look at and try to understand the nature and the dynamics of the process of rapid and pervasive change.

This is happening at a time when the management of certain specific global issues becomes more essential than ever if humankind is to survive. The juxtaposition of this increasing disorderliness on the one hand, and the clear need for a greater management capacity to ensure the survival of humankind on the other hand, gives this period of global transformation its tremendous urgency.

In today's state of interdependence no nation or group of nations can enjoy freedom to act as they wish in isolation from the needs and directions of other societies. No nation, however strong, can define and ensure its security unilaterally. In defining its security needs each nation will also have to take into account the legitimate security needs of its adversary. And all nations will have to learn to live with a much higher level of vulnerability and uncertainty than ever before as a permanent condition of our time.

When we try to visualize these transformation processes that are now under way, cutting through national boundaries and across the international system of nation-states, one realizes that we do not have the socio-cultural models that could help to explain the dynamics of the interlocking processes of change through which our various civilizations are going. Neither do we have an adequate theoretical framework capable of linking up the differences in tempo and rate of these historical changes in various places on the globe, and capable of accommodating in any meaningful way the variety of different cultures in the world which stubbornly resist the homogenizing impact of the globally unifying systems of transportation, communication, energy and industrial production. Each of these cultures is guided by its own interpretation of the ultimate meaning of human existence and its translation into social organization. Each is moved by its own aspirations and by the dynamics of its own configuration of social forces as shaped by their own particular historical conditions. Each of these cultures is in the throes of trying to come to terms -- its own terms -- with science and technology, with interdependence and cultural identity, and in the process rejuvenate itself.

One cannot help but feel that, if we survive, and most likely after a long and painful period, out of this process of global transformation may well emerge a number of Western and non-Western civilizations, each valid in terms of its own cultural values, each capable of relating with the other civilizations on the basis of rough parity, and each capable from its own universalistic perspective, of contributing to the cultural enrichment and maintenance of a single pluralistic world.

In this light, what then should be the responsibilities of the social sciences? Clearly, the paramount one is that of the survival of humankind. How are we going to bring under control

and learn to manage forces which, left unchecked, could spell all our doom?

It is more and more apparent, for example, that for all the increasing nuclear stockpiling, the capacity of the superpowers to control global change is decreasing. How can we learn to control the arms race and manage in a peaceful, non-violent manner an international system in which no single state or no single group of states will be in control?

How can we control science and technology, which are now very much serving military needs, and helping fuel the arms race, without destroying their creative drive, so that they can work to benefit and humanize humanity, not terrorize or destroy it?

How can we tame a runaway international economic situation where the rapidity of financial information flows and international movements of money has almost completely escaped reasonable control by even the most powerful governments?

How can we preserve and enhance the ecological carrying capacity of a globe that in the 21st century must support some 8 to 10 billion people?

How can we learn to live at such high levels of population density with a reasonable degree of civility, and without totally destroying our concepts of personal space and privacy, when urban concentrations in the third world are already becoming unmanageable?

How is the world going to cope with the political and cultural tensions engendered by unprecedented migration flows, and how can we enhance the social adjustment capacities of societies?

How can we help prepare planners and decision-makers for the management of complex interactive systems where problems cannot be taken up singly but must be dealt with together at many different levels simultaneously?

How can we learn to manage our interdependence in a world that is likely also to be very pluralistic in a profoundly cultural sense, contrary to many earlier naive notions of universalism?

And how, finally, should North American social scientists make their contribution to such tough and often politically sensitive problems when the North American perception and definition of these problems is no longer necessarily the dominant one -- as it has been so often in the past?

The Northern American societies are of course not immune to the effects of the global forces of change. They have in fact often been the prime generators of these forces. At the same time Northern American societies themselves are undergoing vast changes. These changes -- value-changes, changes in industrial structure, in productivity levels, the inadequacies of old political and social organizations and their methods -- are all part of the same cloth of global transformation.

Here as in other industrialized parts of the world, a number of these forces have come together in what might be called the crisis of the welfare state. Confronted with this crisis, the only response so far seems to have been to try to dismantle it and thereby reduce the burden of the social services and social security in proportion to the production capacity of the nation -- at the expense of the poor and the aged.

The time may have come to begin thinking beyond the welfare state towards new ways in which we could organize ourselves and our societies to meet our needs for a more viable and humane society that would bring into a new equation the values of equity, liberty, security, economic growth, technology and employment. The long period of low rates of economic growth and high unemployment levels that seems to be in the offing for the OECD countries could be seen as an opportunity to explore different kinds of societal growth and evolution. Changing attitudes toward work, the longer period of leisure time, increasing automation, and the potentials of the new communications technologies may be made to come together to provide new opportunities to organize and manage our production systems differently, and to bring our social services and social security systems in less costly ways more in line with changing needs and with the opportunities in the different phases in a longer life cycle.

In this, like in many other areas there is need for decentralized, self-managed systems that are less dependent on large bureaucracies. This however also requires the articulation of different concepts of efficiency and productivity. We will have to develop new concepts and indicators of social and cultural productivity that may have no direct impact on rates of economic growth. With the earlier maturation of the young, and longer life expectancy we may also wish to consider new sorts of interweavings of the learning and work cycles, which would make it possible for the young to assume social responsibility and accountability at an earlier age, and for the aged to continue doing socially and meaningful work and learn longer. Another major challenge in the industrialized countries is the need to retrain their labour forces and management for new industries and new ways of organizing production. Both industry and labour must find ways to overcome the rigidities that have developed in their structures, in order to respond more effectively and efficiently to the technological revolution that is already under way. The industrial restructuring required by the technological revolution would provide an opportunity to consider how economic growth could be made independent from the arms industry. In many ways solutions to this crisis are closely linked to solutions sought in the developing world for their particular problems.

How can North American scientists learn to combine their inward and their outward vision -- addressing both sets of problems in their interrelationships?

The complexities of our modern world, which I hope the foregoing review has stressed, are such that no single cultural vision, no single systems approach, will be adequate in trying to come to terms with them. Each perspective -- North or South, East or West -- coloured as it inevitably is by its own life experience and values, will have something to contribute to our capacity to understand the rapid change that is now and will remain part of our daily lives.

It becomes obvious then that universalistic concepts of a cosmopolitan world order derived from a single dominant cultural perspective do not have much meaning for our understanding of the dynamics of interdependence, and its present structural disparities. It is only out of the recognition of the pluralistic dynamics of change in the interaction of complex systems that we may be able to manage interdependence in a culturally diverse world.

The need for macro-sociological studies, not limited to individual countries, but covering cultural or geo-political regions and global phenomena, is obvious. The magnitude and the pervasiveness of the interacting forces at work in the process of global transformation will force us to break out of country boundaries in the social sciences.

We will also have to break out of the conventional disciplinary boundaries. We need more holistic conceptions of development that integrate economic and social, political and cultural processes. We will have to develop the methodologies that will enable us to handle interdisciplinary research on large scale issues. The inclination to think in linear terms has made us less sensitive to the way our perception of national interest is shaped and transformed by internal changes and in response to external events, or to the way the centripetal and centrifugal forces in the development process interact. One of the central problems in development has turned out to be the need to keep the inevitable disparities arising from the development process itself within the bounds of acceptability set by the moral precepts of a culture or of an ideology. Where this has been impossible, the political system begins to erode. A great deal more attention therefore needs to be paid to the high incidence of systemic collapse, the frequency with which breakdowns occur of the social consensus on which political cohesion is built, and without which polarization and political violence set in. Static equilibrium theories are incapable satisfactorily to explain events of this nature, and much more dynamic approaches are needed to begin to understand the politics of instability and its relationship to power, its formation, its typology, its application and the limits to their applicability inherent in

each type of power. It may in this connection also be more useful to look at factors affecting the resilience, rather than the stability of societies in dealing with change; factors like the capacity towards solidarity making, community formation and maintenance become even more important in light of the additional eroding impact of modern communications on social cohesiveness. The enhancement of a society's resilience may also be affected by the impact of religion and ideology, both orthodox and heterodox. We need to know much more about the manner in which transcendental conceptions of human life, and in some cases of social order as well -- or ideologies for that matter -- are capable of self-reinterpretation in light of new needs and opportunities, and which in that way could play a role in the reintegrative dimensions of development and modernization, so needed when familiar institutions are beginning to fail and traditional moral certitudes begin to fall apart, or at least are perceived to do so.

These phenomena are as much part of the development process as are the elements of more conventional development theories and their alternatives, and are significant for developing and industrial countries alike. It is in this light that in looking at our disciplinary boundaries, we should also reconsider the relative importance we have accorded to each of these disciplines in the study of development. The need to give greater importance to religion and culture has become quite obvious.

The interaction between national development and international processes that have proven to be so powerful now forces us to develop more effective methodologies capable of dealing with the multidimensionality and scale of problems of global significance and the interlinkages between sub-national, national and international processes of change. To take just one example, changes in the dietary habits in a developing country's villages, resulting from the demonstration effect of elite food preferences, and often leading to even greater food dependency for the whole country cannot be understood in isolation from patterns of international food trade.

We will consequently also have to look at the processes of change of global significance through more micro-studies at the level of the household that involve changing conceptions of work and their impact on the role of women, the young and the aged. It is the responses at this level that generate the impulses to upward mobility, to urbanization, migration and to heightened political awareness. It is also clear that these macro-sociological as well as micro-studies will have to be set more firmly in their historical contexts if we want to develop a greater understanding of the processes of change in development.

Therefore, pluralism in the international social science community containing a large variety of more or less

ethnocentric sub-cultures becomes an essential condition of its relevance to our times. And following on this, communication among the various ideologies, schools of thought, and their perspectives on the fundamental problems of global significance within this community is an absolutely necessary precondition to an understanding of international processes and the manner in which our individual societies and their institutions interact with each other and are affected by -- and are affecting -- global conditions. More than ever, social scientists the world over need to collaborate on problems in their own and other countries and enhance their capacity to understand the values and perspectives of colleagues from other cultures, not through the application of concepts and models derived from a single culture, but by developing new comparative methodologies that encompass several.

We are of course all aware of the tremendous contribution North American social science has made to the present social science capability in the third world. We are all equally aware of the questioning that is now going on from their side regarding motivations and the relevance of the concepts and models coming from the North for a proper understanding of their societies, which has now led to the drive towards "indigenization." I don't want on this occasion to enter that debate -- I have done it elsewhere -- but I should like to make two points.

The first is that in my view both sides of the debate are caught in the same underestimation of the magnitude and pervasiveness of the forces at work and of the changes that are taking place. This underestimation has led both sides to continue working with theoretical frameworks that are too limited to accommodate the magnitude of the forces at work.

Secondly, the debate itself tends to focus on the development process, but this process can no longer be understood except in the context of global transformation and interdependence.

Let me make, in addition, a more immediate and concrete point. There is little hope that we will be able to come to grips with the present crisis of the international system, if we do not deal with its linkage with the problem of industrial and social restructuring in the North, and with the need for structural reform necessary to deal more effectively and more directly with the central problem of the South: poverty and inequality.

The collective incapacity to undertake concerted international action does not only have to do with the lack of conceptual tools that might enable us to understand and deal with these linkages, but also with the unpredictability in international behaviour of nations, North, South, East, and West, which themselves are in the grip of powerful changes beyond the control of governments or national elites.

More attention needs also to be given to overcoming the fragmentation and lack of communication among and within the disciplines. It is becoming extremely important for North American social scientists to look at other societies in the world and what is happening to them. It is particularly necessary to understand their interactions with North America as well as among themselves not only in political or developmental terms but also in terms of the global implications of the changes taking place in these societies.

There is therefore an increasing need for analysis and reflection that goes beyond national interests and that is predicated on the sense of solidarity of the human race. We all must learn to think of humankind as a single unit in all its myriad diversities.

This also means that while the mainstream of North American social science has been possibly overly concerned with itself and its methodologies, there is a clear need to pay more attention to the social and cultural changes in the broad canvas of human affairs in their own society the understanding of which may often require qualitative judgements rather than quantitative measurements. There is a need, I believe, to more closely link the problems being studied with the moral concerns of our times, and less with the selection of areas of research that might lead to the perfecting of methodologies.

There is need for more systematic identification of the problems of North America and the manner in which those problems both arise from and add to the global problematique.

The North American preoccupation with stable systems, and hence with quantification and mathematical models, accounts, I believe, for their inability to grasp phenomena that take place outside the established structures like the military, the bureaucracy and the ruling elite. This has imposed serious limits on the ability to anticipate events. The social scientists must bear some responsibility for looking in the wrong places for significant historical actors to emerge.

This also means that in North America, social scientists will have to pay a great deal more attention to social analysis, to the processes of societal change in their own countries, to the problems related to the manageability of their own societies and to the high degree of social innovation that will be required in response to new problems, domestic ones and those on the interface with international problems.

Working on their own societies, North American social scientists will also have to pay a great deal more attention to the work of third world social scientists working on similar problems in their societies.

North American social science has generally shied away from normative considerations. Nevertheless, it is obvious that the identification of social science problems in the global transformation process is essentially a normative

endeavour. One could not hope to correctly identify the priority problems in the global problematique without being guided by general concerns for values like freedom, civility, justice and equity. Futurological scenarios remain silent on the question of freedom. The important question that has to be asked is: Can there be a scenario of freedom in our responses to the complexity of the problems on the global scale? Is it possible to retain and enlarge the areas of freedom of decision for the individual human being, and how could the political space for this be ensured? The overriding considerations and values which should govern the identification of topics relate of course in the first place to the question of human survival, and especially human survival at the lowest possible level of violence and the maximum level of freedom, civility and justice.

The global problematique also poses new challenges to the policy sciences. The management of global problems will require concerted international actions in which most likely no single country will be capable of dominating. It will no longer do to formulate policy recommendations which remain unimplemented because of the so-called absence of political will. The effectiveness of the policy sciences has actually so far depended on the stability of power relations on which the technocratic institutions are capable of making optimal policy decisions with a high probability that they would be implemented. That stability of power relations does not exist in the international setting and one of the challenges that will have to be faced in connection with the process of global transformation is the challenge to the policy sciences to deal with the power conditions that are necessary for policy implementation on a global or local scale. This cannot be done in an a-historical context in which the policy sciences prefer to formulate the problems and solutions. It will be necessary for the totality of a world in transformation to be grasped in a structural way. The pluralistic evolution of the social sciences in various societies will require mechanisms to engage in a continuing interparadigmatic dialogue between the different perspectives on the structural dimensions of global realities. This becomes especially necessary because increasingly we can expect to see the emergence of new social theories and approaches outside North America.

The management of global issues obviously will require concerted action and the capacity of organizations at the international level should become a priority concern of social scientists. It requires a continuing monitoring capacity of the process of global transformation as well as an enquiry into the possibility of less bureaucracy-intensive modes of organization. It would be a sad prospect indeed if the capacity for concerted international action would be proportionate only to the size of the international

bureaucracy. But the recent development of markets without specific geographical or spatial locations because communication is replacing transportation could provide some pointers in the direction of alternative solutions.

Given the tremendous impact of science and technology, now and even more so in the future, on society and on the process of global transformation, social scientists all over the world, but especially in North America, will have to contribute to humankind's capacity to make the right technology choices. These choices are bound to affect the distribution of power, authority and wealth, but also life-styles, concepts and degree of privacy, the balance between the individual and the collective and the political space of freedom. They will also impact on the economic and power relations between the North and the South.

The interface between science and technology and society will require a systematic effort on the part of the social scientists to work together with the scientists and the technologists of various kinds, but especially with those from the life sciences and communications, as well as with scholars in the humanities and philosophy. For many of the choices that our societies will have to make will be essentially culture choices. It has become increasingly clear that in the final analysis the future is an ethical category. It will therefore be very much up to the social scientists to develop the concepts and methodologies to deal effectively with the multidisciplinary and multidimensional requirements of these issues of national and global significance.

The growing awareness of the ethnocentric overtones of North American social science may have been helped along by the changing notions about the value-free character of the social sciences, about objectivity and about quantification. These had been very much responsible for the increasing narrowness of focus, the loss of relevance, and the growing distance between the concerns of the social sciences and the burning issues of society. The illusory character of the notion that in the social sciences the observer can be totally detached from the object of observation, releasing consequently the social scientist from social and moral responsibility, has now become generally accepted.

This general trend has led to concepts of the participant observer and to the differentiation between the inside view and the outside view. It has led to a clearer understanding of the limits to the value-free character of social science and the need to work not so much with an ideal conception of objectivity but with the notion of relational objectivity. We are now also more aware of the limits to the observer's capacity to objectify his observations.

Having said this, we may point to something that has begun to break through in the self-perception of the social sciences.

It is a double phenomenon that flows not only from the acceptance of the inseparability between the observer and the observed. It has now led to the recognition that the very interaction between the observer and the observed could be the source of a new creativity in the social sciences.

This has led social scientists, men, but especially women, as a matter of conscious choice, to identify with and to commit themselves to various grass roots movements in their societies in North America and developing countries alike.

They have come to consider it to be their professional and personal obligation not only to be a participant observer in a movement, but through action research, or even by assuming the role of a theorizing activist, to illuminate that movement, its essential character, and the options that are open to it for further advancement. This legitimate development has raised profound questions, still being debated, about objectivity and ideology, about universality and authentic specificity as well as about methodological rigour.

A second phenomenon closely related to this one is the contribution social scientists may make, again from the acceptance of the centrality of their interaction with their respective societies, to the collective self-reflection within that particular society or culture. Contributing to the process of collective self-reflection by which a society defines itself and its identity, and clarifies its central purpose, thrust and linkage with the central moral issues of its time is a role which the concerned scientist will find difficult to escape.

It is such a commitment that will force social scientists to concern themselves with the larger questions of societal change. It will force them to step outside the increasingly narrow boundaries of their specialization and look for ways to relate to these broader issues, without loss of rigour and professional integrity, but in the knowledge of the fact that they can only illuminate the issues within the context and the bounds of their own time. It will also force them to deal with normative issues and the very much neglected normative dimensions of social science and law. The very large challenge now is to find ways to integrate the normative and the analytical in a manner that is both ethically and intellectually valid.

A more reflective social science would also enable us from time to time, to take stock of our situation, of the state of the human condition, assessing whether we are further drifting towards collective self-destruction, or find ourselves on the road to Orwell's 1984 -- how close it seems -- or to a more advanced level of human and social organization in freedom, justice and peace.

Having said all this, one is inevitably confronted with the question of how the social scientific understanding of the

problems and recommendations for their solutions could be communicated to users and decision-makers and assimilated into public understanding and awareness. Here I believe social science should be much more concerned with what I would like to call "the learning capacity of nations." The very fundamental and rapid character of the social changes that are already taking place, and will continue is such that our societies will have to prepare themselves for a radically different future. This requires a much greater anticipatory and "imaging" capacity and a greater institutional adjustment capacity. One might say that each society will have to learn to live with the emerging future through a continuous social learning process that will not only involve the formal educational system but especially the informal ones.

It is only by accepting the need for continuous learning and adjustment on the part of our political, educational and social institutions, and by the public at large, that a society can prepare itself for the future. The study of the learning processes of whole societies might be an important focus for at least a segment of the social sciences in North America and elsewhere. It is the only way to overcome the social and institutional rigidities that have crept into our institutions and our processes which now limit our collective capacity to adjust. And on our ability to adjust, in a peaceful and humane fashion, hangs the survival of humankind.

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