
International cooperation in a fractured global order

Francisco R. Sagasti

Recent changes in the world political and economic order require us to rethink our ideas on concepts such as 'development' and 'progress', and demand a new approach to international cooperation in science and technology.

I was asked by the organizers of the Colloquium to take a fresh look at the context for international cooperation in science and technology. In this presentation I shall sketch out some key changes that have taken place in the international scene over the last few years, speculate about what is likely to happen during the next decade, and derive some implications for international cooperation in science and technology.

The present turbulent period of modern history can be characterized in terms of several major clusters of change, each of which will force us to adapt our mindsets, ideas and concepts. And, as a consequence, they will also change the way that we visualize the role of science and technology in the process of development.

A changing context for development effects

The first group of changes may be referred to as a *rapidly shifting political environment*. We are moving to a post-bipolar world in which the East–West differences do not matter as much as they did a few years ago. This alters a fundamental premise of the post-World War II international order. One consequence is that at present we do not examine every problem of the world through the lens of East–West conflict, something we did until very recently. Moreover, a major war between the super-powers has become unthinkable, although it is important to note that all the wars fought since World War II have taken place in developing countries (there have been at least 40 or 50 such major episodes). We must not forget that even though we may be along the way to solving the major problem of nuclear annihilation, the wasting of human lives is still very much present in the developing regions.

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Nation-States have become less important as political units in the sense of being able to control whatever phenomena—economic, social, environmental or technological—take place in the world at present. This is hard to get accustomed to, for all our political systems are geared to focus on the nation-State as the locus of power, decision-making, and as the main unit of political, social and economic analysis. We have not learned as yet to live with the fact that these phenomena transcend national boundaries.

Furthermore, political pluralism, political participation and democratic movements are becoming a fact of life everywhere: East, West, North and South. It is now almost unthinkable to accept—at least without outrage, loud protest and international sanctions—any government's imposition of a repressive regime on its citizens.

Notice, by the way, that these shifts in the political environment have been brought about in large measure because of the spread of technological innovations, particularly in the field of transport and telecommunications.

The second group of changes refers to the *major transformations in the patterns of world economic interdependence*. First, something that began in the mid-1970s: the rapid growth and globalization of financial markets. At present financial markets constitute a highly complex web of transactions of all types, involving global securities trading, arbitrage in multiple markets and currencies, portfolio investments through a bewildering array of international funds, and massive transborder capital movements. Simultaneously, financial transactions have acquired a life of their own, and are becoming uncoupled from the production and distribution of goods and services.

There have also been major changes in the content and direction of international trade, such as the emergence of the North Pacific as the world's largest trading area (with the North Atlantic taking second place), and with the content of international trade changing against commodities and in favour of high technology services and manufactured products.

In addition, we have seen completely new situations in several key countries that affect significantly the world economy. During the 1980s, for the first time in recent history, the USA became a net debtor; Japan has now become a dominant actor in the international scene; Europe is gradually moving towards economic unity, fundamental systemic changes are now underway in the USSR, Eastern Europe and other centrally planned economies; the Latin American debt crisis has become a major impediment to development in the region, and a threat to the stability of international financial systems; and the dramatically worsening situation in Africa has reversed the precarious gains of the preceding three decades.

New actors have emerged on the international political and economic scene. Although we do not now discuss as much about transnational corporations as we did in the 1970s, they are still a powerful and growing force in the world economy. Non-governmental organizations of all types (trades union, professional associations, pressure groups, grass-roots movements, church organizations) have also become extremely active and are a major force to reckon with. Throughout the world, civil society is finding many ways of expressing itself at the local, national, regional and international levels. Global competition has fostered new kinds of collaborative arrangements between universities, research centres and enterprises (particularly at pre-competitive level), which often transcend national boundaries.

There are three sets of changes which I shall cover even more briefly. First, of the many *cultural transformations* under way at present, I would like to highlight three: the growing importance of religious values and the rise of fundamentalism as a main driving force of economic and political actions in many parts of the world; the tensions between cultural homogenization pressures brought about by the pervasive influence of mass media, and the desire to preserve cultural identity; and the emergence of moral and ethical issues at the forefront of choices about inter- and intra-generational equity, particularly in relation to the environment, income distribution and the elimination of poverty.

Second, *all developed and developing countries face the challenge of environmental sustainability*—for we can no longer blindly trust in the regenerative capacity of ecosystems. The problems of environmental sustainability and resource use are closely related to population growth, social demands and of poverty in the developing countries, and to the excessive and often wasteful consumption habits of the population in the rich nations. Major social adaptations and changes in life-styles will be essential in both groups of countries to meet the challenges of environmental sustainability during the coming decades.

Third, there is the *accelerating pace and increasing complexity of scientific advances and technological change*. Rather than reciting a litany of discoveries or innovations, I shall mention two main aspects of the scientific and technological transformations now underway. One refers to the changes that have taken place in the way we generate scientific knowledge, primarily because of advances in computer sciences and informatics. The other is related to the fact that technological innovation has become much more rapid and complex. The new processes of scientific research and the more systemic nature of the innovation process pose very difficult challenges for developing countries, not the least because the costs of engaging in these activities has increased substantially.

These sets of changes indicate that the world today is very different from what it was just two decades ago. However, the present generation of politicians, professionals, managers, scientists and community leaders has developed its views of the world during the last 30 to 40 years, and these views are becoming grossly inadequate to apprehend the new realities of the 1990s. We must question our own habits of thought and develop new concepts as we move into the next decade and the coming century.

Developing country challenges

Developing efforts during the 1990s will confront an increasingly heterogeneous set of situations. Whereas 20 or 30 years ago we could speak of developing countries more or less as a coherent whole, this is no longer possible, for differences between and within these countries have been continuously growing. General recipes do not work any more. We need differentiated approaches, tailor-made solutions and specific answers that correspond more closely to unique circumstances, problems and situations. This, in turn, increases enormously the demands on policy design and implementation capabilities at all levels.

Nevertheless, in spite of this diversity one characteristic common to practically all developing countries is the *mismatch between financial resources and social demands*. While housing, food nutrition, health and education requirements are all growing at an

accelerated pace, the financial capacity to meet them is diminishing rapidly, especially for countries burdened with debt. At the same time, many developing nations face severe institutional and human resource constraints, and governance is becoming increasingly more difficult. The many intractable problems that besiege Latin American, African and Asian countries (debt, falling commodity prices, deteriorating physical infrastructure, rapid population growth, environmental degradation, employment generation, terrorism, drug trafficking, civil wars, etc.) bear witness to their difficult predicament as we move into the last decade of the 20th century.

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What do these changes in the world context and these development challenges imply for international co-operation in science and technology? What do we see when taking a fresh look at these new situations? Let me offer five propositions.

The first is that we are witnessing at present the emergence of what I would call a *fractured global order*; an order that is global but is not integrated; an order that puts all of us in contact with each other, but simultaneously maintains deep fissures between different groups of countries and between peoples within countries; an order that segregates a large portion of the world's population, and prevents it from sharing the benefits provided by scientific advances and technological progress. In short, a fractured global order.

But this is not an inevitable condition, nor an inescapable trap; there is no need to passively accept the emergence of a disjointed world economy and of a sharply divided global society, in which a privileged few coexist in uneasy truce with a majority of dispossessed. The 1990s provide us with a window of opportunity for experimentation and change. It is possible to take advantage of the unusual opportunities that this emerging fractured global order can offer, so as to distribute more equitably the benefits of scientific advances and technological progress. For example, the new spirit of political cooperation between East and West, the pragmatism that increasingly characterizes international negotiations, and the breakthrough results in peace-making efforts by the United Nations, all suggest that much could be done in the social and economic field—if we could but summon our collective political will to do so.

The second proposition is that we shall have to *rethink radically what we mean by development and progress*. In the same way that the concept of 'development' replaced the idea of 'progress' in the last half century, we now have to rethink the meaning of these two words, primarily because their implicit view of poorer nations catching up with the 'developed' West is not viable any longer. Perhaps the appropriate word to use now is *empowerment*, for the aim should be to enable individuals and social groups to choose what is best for them, and to assist them in acquiring the capacity to decide and bring about their own destinies with full knowledge of the possibilities, limitations and consequences of their actions for present and future generations.

Third, we will have to face the *imperative of social and institutional innovation*. Here we must get rid of quite a few old concepts, of the heavy ideological baggage that we have carried implicitly with us for decades. For example, a rigid distinction between the 'public' and 'private' spheres of economic activity does not make much sense at present, for a very large number of entities that represent diverse segments of civil society are gaining in economic importance and influence in all countries. A sharp differentiation

between 'market' and 'planned' economies does not make much practical sense either, for in both developed and developing nations mixed-economy systems have become the predominant organizational form for the production of goods and the provision of services. In short, we have to move beyond the many dichotomies that plague our habits of thought, in order to design institutions that will function better in the fluid and uncertain context of the newly emerging fractured global order.

The fourth proposition is that *knowledge generation, dissemination and utilization of knowledge will play an even more critical role in whatever we may call development, progress or empowerment in the coming years*. I would go so far as to say that I would define these three concepts in terms of the capacity to generate, acquire, disseminate and utilize scientific and technological knowledge, both modern and traditional. The presence or absence of this capacity constitutes the crucial distinction between developed and developing nations; between those parts of the world in which individuals have the potential to decide and act with autonomy, and those in which human beings are not yet empowered to fully realize their potential as such.

Finally, if we accept these propositions, *we must also rethink the role of the international system*. The one we have at present is woefully inadequate to tackle the challenges we anticipate will emerge during the 1990s. In particular, we have to rethink the role of multilateral institutions. The existing multilateral order emerged after World War II, largely in the shadow of East-West confrontation. Multilateral actions brought together nation-States belonging to different camps, including a non-aligned camp, and provided the basis for a continuous dialogue that managed to prevent a world conflagration of catastrophic proportions. But we are moving beyond this situation. The task is now to rethink the function and structure of international institutions to make them responsive to the new demands imposed by the emerging fractured global order.

For example, in the same way that multilateral institutions impose economic policy conditions on developing countries in exchange for access to financial resources, is there any way a supranational institution could impose conditions on the developed countries on issues such as energy use, resource depletion and preservation of the environment? Can we devise alternative organizational and institutional arrangements capable of transcending the autonomy and sovereignty of industrialized nations and impose, if necessary, some of the changes that all of us agree are essential for human survival and a more equitable world order? Is there any way of leveraging existing international organizations to alter the asymmetry of international power relations? Can we take advantage of the opportunities offered by the multipolar political and economic system that is emerging at present so as to mobilize science and technology for more equitable world development?

These are difficult but crucial questions. In addition to posing them, we must become very practical and pragmatic in the search for answers. The real challenge is to take these propositions and similar ideas that have been discussed for some time, and to transform them into viable political options and proposals for international cooperation. This is a challenge that we all will face during the 1990s, the decade of the emerging fractured global order. ■