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**Global transformations  
and coping strategies:  
a research agenda  
for the MOST Programme**

*by*

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1. The management of change in multicultural and multi-ethnic societies
2. Cities as arenas of accelerated social transformation
3. Coping locally and regionally with economic, technological and environmental transformations.

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## Table of Contents

Introduction	3
The economic dimension of globalisation processes	8
The financial dimension	14
The technological dimension and the emergence of a global culture	16
The social effects of globalisation	20
The political dimension	23
The case of environment : coping strategies	28
Global transformations and coping strategies as a MOST research theme	32
Economic evaluation as a coping strategy	46
Conclusion	57

## Introduction

Globalisation can be defined as a set of economic, social, technological, political as well as cultural structures and processes arising from the changing character of the production, consumption and trade of goods and assets that comprise the base of the international political economy<sup>1</sup>. There is an increasing structural differentiation of these goods and assets that has spread across traditional political borders and economic sectors, and has resulted in the greater influence of political and economic changes. These changes are translational and multinational dynamics which have a major impact on outcomes in determining 'issue-areas' (for instance, environment, trade and world regulation), and may permit global and local actors to be less dependent upon State decision-making<sup>2</sup>. The principal driving force in the globalisation process today is the search of both private and publicly-owned firms (and more generally, producers and asset holders) for profits world-wide. Their efforts are made possible or facilitated by advances in information technology and by decreasing transport and communication costs.

Globalisation can be considered the result of a larger building process of a world market. It is not synonymous with the internationalisation and transnationalisation of capital, itself a dual 'transformation'<sup>3</sup> which occurred mainly in the XVIIIth and XIXth centuries. The two processes were rooted in increasingly mercantilist modes of regulation of world social relations and, particularly after the First World War, in a centre-periphery model of multinational development. Regulation too is affected by globalisation, in the sense that the lead regulating actors of this new process are not primarily the States anymore.

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<sup>1</sup> "Goods" and "assets" are generally interchangeable terms referring to tangible or intangible property, effects, and wealth. However, the term "goods" is more often used for items or commodities that are themselves produced, consumed and/or traded, whereas "assets" applies to the production facilities or systems of production by which goods are produced.

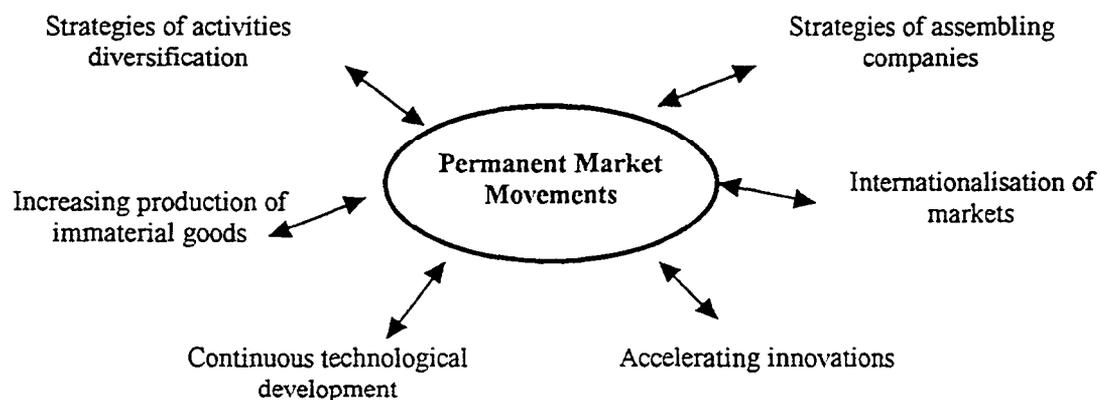
<sup>2</sup> See CERNY, Philip G. (1995), "Globalisation and the changing logic of collective action", in *International Organisation*, volume 49, number 4, autumn.

<sup>3</sup> Incidentally, the term 'transformation' throughout this paper is used deliberately in place of 'change' or 'development' to suggest systematic relabeling. The analogy can be made with mathematics to bring, out the sense of the word which is that of specifying structures within change - eg, a specification with an *alibi transformation* has *invariant* produced that reflect the unchanging feature of the situation, or, by contrast, a simple permutation in which new labels are produced.

Four principal features can be counted on to explain the origin of globalisation: the integration into world markets of national economies; the transition from a “high volume economy” into a “high value economy” (this is due to the growing number of knowledge-intensive products and services) <sup>4</sup>; the end of bipolarity and traditional prize-fight between capitalism and socialism; and finally the configuration of new trade blocs <sup>5</sup>.

Nevertheless, globalisation is neither uniform nor homogeneous. There is a marked difference between the degree of globalisation as reflected in trade, Foreign Direct Investment (FDI) and international finance. Its boundaries are unclear and its constituent elements and multidimensional character have yet to be adequately explored. Some social scientists have considered globalisation as a second step to *complex interdependence* which accepts that the notion of transnational interpenetration is not homogeneous either (Keohane & Nye). Others contend that globalisation modifies deeply the structural framework of rational choice in world relations, since the role of the key actor which commonly defined both the international and the domestic relations (i.e., the State) is subject to a critical structural transformation <sup>6</sup>. The State commonly faces crises of both organisational efficiency towards the consumer and institutional legitimacy towards the citizen <sup>7</sup>. Please see *figure I* for an unembellished illustration of the market and other dispatching sources categorised as interacting with it.

*Figure I: Global market and dispatching sources*



<sup>4</sup>R Reich (1992), *The Work of Nations*, New York, Vintage Books.

<sup>5</sup>SONNTAG (Heinz R.) et ARENAS (Nelly), *Lo Global, lo Local, lo Híbrido - aproximaciones a una discusión que comienza*, UNESCO/MOST, Discussion paper n° 6, 1995, 25 p.

<sup>6</sup>In the modern study of international relations, the State has constituted the key unit of collective action, while the interaction of States has been the very object of inquiry similarly, in the domestic arena, the State has both encompassed the political system and constituted a potentially autonomous collective agent within that field.

<sup>7</sup>Lipset defines legitimacy as “the capacity of the system to engender and maintain the belief that the existing political institutions (and institutional forms) are the most appropriate ones for society”. In: LIPSET (Seymour Martin), *Political Man*, Garden City, New York, Doubleday, 1960, p.77.

Actors and their edifice actions in globalisation processes are of diverse character. The literature on this subject often enumerates the following actors and subject matters: translational corporations, financial enterprises, technological changes, NGOs, environmental and population issues, international organisations. This coterie of actors, science and ideology (“the knowledge structure”), their clash and the deals they strike modify deeply the current paradigm of international relations. Their matching and behaviour may be categorised at separate levels: at the level of the State (*State-centric world*) and at the level of subnational and translational non-governmental actors (*multicentric world*). These two levels are autonomous and follow different objectives and strategies <sup>8</sup>. Please see figure II for a summary of relationships between actors and the entities that participate in globalisation processes.

Extensional and intentional behaviour has been observed and characterised in “global trends” <sup>9</sup>. The processes involved are thought to connect individuals to large-scale systems as part of complex dialectics of change at both the local and global poles. Of course, there are local and global processes, but also processes that are regional or national in character, i.e., Asian, African, European, Latin American, and so forth. In as much as the local and the global shape the circumstance of our daily lives, the crux of the matter is not one of awarding empirical or theoretical priority to the one above the other. Rather, one is to insist on the local, the global and other relevant (but perpetually shifting) geographical scale levels which are the result, the product of socio-spatial change.

What has the MOST Programme to offer on this matter? Through its third research theme on “*coping locally and regionally with global economic, technological and environmental transformations*”, MOST will try to buttress social science research aggregated or otherwise on each of the topics mentioned in the title. The nature of the research must be clearly distinguished from traditional academic research, the extension of results to those studying and designing policy compels the outputs of the MOST programme; thus, *scaling the global* is of great relevance in MOST research agenda.

To start out analysis only from the standpoint of geographical scale is antagonistic to apprehending the world in a dynamic, process-based manner. Scale and spatial configurations (physical, ecological, in terms of regulatory order or as discursive representations) are always a

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<sup>8</sup>ROSENAU (James N.), 1992-a, “Governance, order, and change in world politics”, in ROSENAU (James) et CZEMPIEL (Ernst-Otto), org., *Governance without government: order and change in world politics*, Cambridge University Press, pp. 1-29.

<sup>9</sup>See, e.g., Anthony Giddens (1994, *The Consequences of Modernity*, Polity Press, p. 177), cited by JENTOFT (Svein) et al., *Coping locally and regionally with economic, technological and environmental transformations*, MOST Programme (UNESCO), Tromso Meeting (Norway), March 1995, 17 p.

result of the perpetual movement of socio-spatial dynamics. We understand scale to be a “produced” factor. It is -at once the arena and the moment, both discursively and materially, where socio-power relations are negotiated and regulated, where conflict takes place. It is the result and the outcome of social struggle for power and control. The leverage available to each social power varies considerably depending on who controls what and on what scale. Scale happens to express human and social relationships and is not socially or politically neutral. The ontological priority given by MOST to a process-based view has the consequence that both the “global” and the “local” are seconded as the stinting point for analysis and explanation. The scales seem not to operate hierarchically, but simultaneously. The global and the local become sites for hemming together contrasted methods of analysis. We aim to encourage such analysis in our research so that each method receives its productive due.

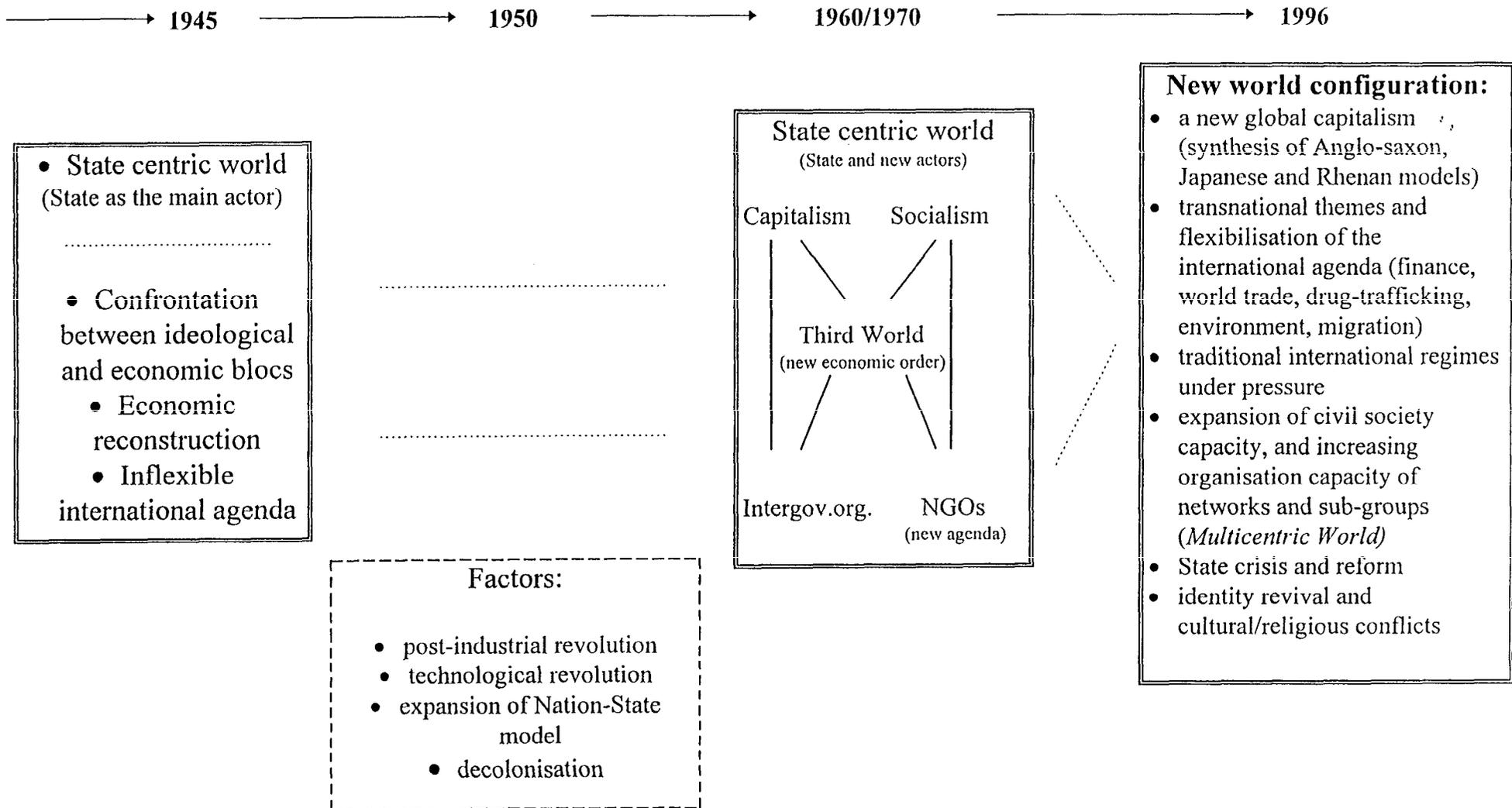
In this connection, Erik Swyngedouw recalls that *glocalisation* would refer to the contested restructuring of the institutional level <sup>10</sup>. The restructuring goes from the national scale upwards to supra-national and/or global scales and also downwards to the scale of the individual body, the local, the urban or regional configurations. *Glocalisation* would also refer to the international strategies for localizing principal industrial, service and financial international capital. In particular, concepts such as the “local” and the “global” are often merely speculative, discursive vehicles which are used to order political, social and economic processes according to particular spatial criteria <sup>11</sup>.

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<sup>10</sup> SWYNGEDOUW (Erik), 1996, “Neither global nor local: *Glocalisation* and the politics of scale”, in COX (K.), org., *The Global and the Local: Making the Connections*, Guilford/longman, New York, 1996.

<sup>11</sup> AMIM (A.) & THRIFT (N.), org., *Globalisation, Institutions and Regional Development in Europe*, Oxford, Oxford University Press, 1994.

**FIGURE II: STRUCTURE AND EVOLUTION OF GLOBAL TRENDS**



Source: adapted from SELA, 1993, *Escenarios de Cambio Mundial*.

## The economic dimension of globalisation processes

At the midst of globalisation is a shift in economic policies and organisational structures that spoils and gives quarter to market forces and private enterprise. The fundamental reforms have been to reduce state intervention in the economy, privatise public enterprises, liberalise prices, deregulate utilities and services, and keep inflation under control. These strategies are often related to structural adjustment policies of the 1980s, mainly in developing countries, accompanied by an accelerated integration to the world economy.

Economic globalisation also implies rapidly changing methods of production, favouring higher levels of technology use and more flexible production units (“flexible specialisation”)<sup>12</sup>. The new global paradigm rests on changes in modes of production from large-scale integrated manufacturing facilities to decentralised networks of smaller firms, each capable of greater adaptability to shifting tastes, technologies or prices<sup>13</sup>. This new industrial organisation is responsive to other changes promoted by global production and consumption patterns. These include: the rapid rate of production of new knowledge and innovation, the use of new information technologies, the reduction of labour costs and the possibility of partial and/or total delocalisation of production costs, shorter process and product live cycles, and the increasing relevance of a quick delivery to customer needs.

These elements of the new production system place unprecedented reliance upon a favorable national macroeconomic environment, adequate physical infrastructure, a literate and skilled workforce, and an adequate institutional framework which includes the legal system, the financial system, export promotion and technology support. Competitiveness transcends the boundaries of the firm, and a systemic approach to economic policy-making is a requirement in the definition of new development strategies.

Current global economic rhetoric is peppered with the importance of “competition” and “competitiveness”. These words seemingly represent more than just a behaviour modality in the context of economic markets; they are taken to be the ultimate goal of enterprises, States and society<sup>14</sup>. Yet, competition raises problems for private enterprise. With the advent

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<sup>12</sup>See UNRISD, *States of Disarray, the Social Effects of Globalisation*, 1995.

<sup>13</sup>See BRADFORD, Colin. *Redefining the State in Latin America*, OECD, Paris, 1994.

<sup>14</sup>For a good example of the Bible of Competition, see Michael Porter, *The Competitive Strategy, 1980* (or “The Comparative Advantage of Nations”, 1990).

of the World Economic Forum (Davos), the *World Competitiveness Index* was forged by economists in 1989. The Index covers 34 countries and uses 330 assessment criteria to measure the international competitiveness of private companies<sup>15</sup>. A high level of competition in industrialised countries has meant that market concentration has significantly increased. The WTO Report (1996) identifies 102 “poorer countries” to have participated in 1980 in 7.9 per cent of world export and 9 per cent of world import, whereas the figures for 1990 were 1.4 per cent and 4.9 per cent, respectively.

Competitiveness also raises coping problems for local and national actors. Since economic issues overwhelm many other policy priorities, the promotion of globalisation and liberalisation produce harmful social effects. These include: marginalisation and social exclusion, destruction of security nets, over-use of natural resources, and increasing technological and economic disparities between rich and poor countries. Presenting globalisation as the exit to current economic and social crisis proves to be unrealistic because revolutionary changes in technology and economic organisation have led to the onset of “jobless growth”. New jobs tend not to be created in sufficient numbers to restore full employment.

The current economic process driven by market forces in many developing and transition countries is rooted in enabling technologies that provide organisations with a wider range of alternatives with which to react and respond to the fundamental market forces<sup>16</sup>. These alternatives end up causing downsizing, organisational restructuring, unemployment and precarious jobs. For instance, due to technological improvements, but also to organisational restructuring, General Motors had a loss of 250,000 jobs between 1978 and 1993, AT&T lost 180,000 jobs between 1981 and 1988, and General Electric 170,000 between 1981 and 1993<sup>17</sup>. Would this mean that the dominant mode of employment since the Industrial Revolution, based on a stable, waged position with clear-cut job descriptions, has reached its limits? Do global trends challenge the concept of full employment and conduce to the so-called “end of work”? Are globalisation processes promoting new forms of

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<sup>15</sup> See Ricardo Petrella, “L’Evangile de la Compétitivité”, in *Le Monde Diplomatique*, Manières de Voir, 18, May 1993, pp.14-15.

<sup>16</sup> GULLEDGE & HASZKO, *The Information Technology Enabled Organisation: A Major Social Transformation in the U.S.A.*, Discussion Paper, MOST Programme, number 14, 1996.

<sup>17</sup> International Labour Conference, 83rd session, 1996, Report V, *Employment policies in a global context*.

self-employment according to which the individual worker can be considered a one-person enterprise selling a variety of services to a certain number of purchasers?

The rapid growth in world trade is yet another aspect of economic globalisation. Since 1984, the volume of world trade has grown faster than the world output (World Bank, 1995). As a result, export to GDP ratios have increased in a majority of OECD countries and in developing countries (mainly in Asia and Latin America). This trend has been fuelled by the wave of trade liberalisation across the world and the development of regional trade arrangements, and it can be expected to continue with the establishment of the World Trade Organisation.

In 1994, the growth of world output of goods and services picked up sharply. Widely viewed as the beginning of a recovery period for the world economy, the volume of world merchandise exports expanded at its fastest pace in nearly two decades. The 9½ per cent increase in trade was nearly triple the growth of output in 1994 and nearly triple the growth of merchandise trade in 1993. Volume data are not available for commercial services, but the estimated 8 per cent increase in the value of trade in commercial services - compared to a stagnation in 1993 - also points to a recovery in 1994. This is so even though the expansion was below the 13 per cent increase in the value of merchandise trade. Each of the three broad merchandise groups - agriculture, mining and manufacturing - recorded faster rates of growth in the volume of both output and trade in 1994. With an estimated world output growth rate of 3.5 per cent a year over the coming decade, global trade integration as measured by the ratio of trade to GDP is expected to continue rising at about 2-3 per cent a year<sup>18</sup>.

More than the volume of global trade, liberalisation policies throughout the world have developed significantly. A review of economic reform in developing countries since 1985 reveals a relatively liberal trade regime for East Asian countries as a whole as early as mid-1980s<sup>19</sup>. Policies have since focused on real exchange rate depreciation, and direct inducements to exporters initially, with reduction in quotas and tariffs on imports of final goods later. Early in 1990, all the countries considered, with the exception of China and Vietnam, had moved onto a second stage. In Latin America, reductions in trade barriers have

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<sup>18</sup>Data from World Bank, *Globalisation and Liberalisation: Effects of International Economic Relations on Poverty*, April 1996.

DEAN, J., DESAI, S. and RIEDEL, J. (1994). *Trade Policy Reform in Developing Countries since 1985: a Review of the Evidence*. Washington D. C.: the World Bank, Discussion Paper number 267.

been very large and in some cases surprisingly rapid. Large tariff cuts and incentives to exporters were promoted. In Southern Asia, some progress has been made in reducing quotas, although less than in other regions; tariff reductions were limited until 1991, but then accelerated in India and Bangladesh, in parallel with foreign exchange reforms. In Sub-Saharan Africa, there has been some (incomplete) foreign exchange reform, and quotas have been reduced; but there has been virtually no change in the level of tariffs.

A broad variety of well-defined measures has given effect to liberalisation policies. In countries with economies in transition, the change of regime has required the disengagement of the State from production of goods and services across virtually the whole economy, and the establishment of the institutions and legal frameworks appropriate to the functioning of a market economy. In economies that relied mainly on private enterprise to organise production, the role of the State has been reduced and revamped. In both transition and market economies, these moves have resulted in the privatisation of State enterprises. In market economies there has also been extensive reduction in government regulations guiding private-sector activity, and some revamping of regulations to meet emerging needs, as in the areas of finance and environmental protection, while in most transition economies there is a need to put in place or strengthen regulatory regimes. In all countries, however, ensuring that prices are a true reflection of relative scarcities and giving freer rein to the energies of private enterprise were seen as essential ingredients of successful economic policy. This, in turn, reflected renewed emphasis on the role of privately-owned production units (firms, farms, co-operatives and family businesses) as the most effective and efficient means for organizing economic production.

In the developing world, liberalisation has been taking place in a variety of circumstances. In the dynamic economies of East and south-east Asia, liberalisation has in some cases been proceeding at a deliberate pace, with government measures to open markets to foreign competition and reduce support for the private sector being put in place gradually, as industries in the sectors in question acquired the necessary competitive strength in international markets. In other Asian countries, liberalisation was more rapid. In all cases it took place against the background of high growth rates. In Africa, liberalisation has tended to be more hesitant, while in Latin America it has generally gone forward at a brisk pace. In both Africa and Latin America liberalisation has taken place as part of a policy response to low

growth and, in some countries, financial crisis. Liberalisation has, however, proceeded at different speeds and in different ways as far as trade, investment and finance are concerned. Investment liberalisation has proceeded in a much more uneven manner<sup>20</sup>.

It is true that in many cases there will be short or medium-term social costs from economic liberalisation, but there will also be gains that are long-term compared with the alternative of protectionist policies. It seems likely that the overall impact of globalisation and liberalisation on the economic prospects for developing countries as a whole could be mildly positive over the medium-term. Trade liberalisation in the aftermath of the Marrakech Agreements is expected to produce significant overall benefits in the long run<sup>21</sup>.

The concrete current situation discloses, however, that there are real limitations to the benefits to developing countries. First, globalisation and liberalisation benefits tend to be concentrated in a relatively small number of countries, whose economies are fundamentally richer and more industrialised. Second, these potential benefits may be off-set by important costs, for instance, in the field of trade, where benefits of incremented access to export markets in the long run are off-set by adjustments costs (consumption is to finance investment, frictional unemployment, etc.). Third, costs are also related to competition among developing countries to secure benefits from liberalisation, mainly through export promotion and economic efforts to attract investment flows. A very important fourth aspect concerns the distribution of costs and benefits between different income levels (for example, in job creation). This relates in fact to economic and social policies which are necessary to compensate unequal income distribution by sole market forces.

The challenge for all concerned must be to manage the transition to a more open market economy at a pace and in a manner that minimises social costs and that is supported

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<sup>20</sup> While virtually all developed countries have liberalized their regimes for inward and outward foreign direct investment (FDI), especially over the past 30 years, most developing countries and those of Central and Eastern Europe have joined in this process only recently. Such liberalisation has been uneven, however, as far as sectoral coverage is concerned. Liberalisation of trade and investment has been influenced by the expansion and intensification of regional integration efforts, which have continued even after the successful conclusion of the Uruguay Round and the establishment of the World Trade Organisation (WTO). The weight of this factor is best measured by the fact that trade among the members of regional groupings already accounts for almost half of world trade. See Report of the Secretary General of UNCTAD to the 9th Conference, 2 January 1996.

<sup>21</sup> The Final Act embodying the results of the Uruguay Round, signed by ministers in Marrakesh on 15 April 1994, is 550 pages long and contains legal texts which spell out the results of the negotiations since the Round was launched in Punta del Este (Uruguay) in September 1986. The Final Act covers areas such as "market access negotiations" (individual countries make binding commitment to reduce or eliminate specific tariffs and non-tariff barriers to merchandise trade) and "initial commitments" on liberalisation of trade in services (also recorded in national schedules).

by strong compensatory policies towards those who are most adversely affected by the structural adjustment programmes<sup>22</sup>. How can the Nation State minimise social costs when its struggle for a greater share in the world trade is motivated by “competitiveness”? How is the State to avoid fierce competition that is produced by liberalisation both within and between nations? How to challenge the notion of competition when it is at once based on increased productive efficiency, on lower salaries, expanding unemployment and poverty?

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<sup>22</sup>This is particularly true if we consider the example of East Asian countries (Japan, South Korea, Taiwan) which developed mainly through State intervention mechanisms and protected national economies.

## The financial dimension

Global capital mobility is a fundamental aspect of the process of integration into world market economy. Financial transactions link people and markets internationally as never before. Financial globalisation enhances speculation in the world casino, draining away capital which could have financed productive investment and helped create jobs<sup>23</sup>. We live a historic period of the decoupling of the financial economy from the real economy. Figures are very impressive: twelve hundred billion dollars are traded every day on the foreign exchange markets, 83 times more than the volume of world trade. The five largest stock exchanges in the world capitalise eighteen thousand billion dollars<sup>24</sup>.

The wanderings of volatile capital expose the so-called emerging markets to risks like the crisis Mexico went through in 1994. In fact, capital volatility as an important aspect of financial globalisation is made possible by the absence of concise international regulation of the capital markets or an efficient set of national policies to protect the real economy from speculative bubbles in domestic capital markets.

In 1994, Deutsche Metallgesellschaft lost over 1.3 billion dollars as a result of speculative activities in the financial derivatives market (this implied a fundamental restructuring of its activities, including the manufacturing side). The net result was the loss of 10,000 company jobs in Germany. In December 1994, Orange County, the county with the highest mean income in the US, but with large pockets of poor neighbourhoods, lost 2 billion dollars in the derivatives market and went virtually bankrupt. The level of local public services (social, educational and environmental) is likely to be dramatically affected for years to come. On 26 February 1995, one of Great Britain's oldest and most respected merchant banks (Barings) collapsed in the face of an estimated total accumulated debt of 900 million pounds.

Generally speaking, financial globalisation has three complementary dimensions. Firstly, it requires more integration among national financial systems, mainly from developed countries and a small number of the so-called emerging markets. This integration process is

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<sup>23</sup> SACHS, Ignacy (1995). Searching For New Development Strategies: The Challenges of the Social Summit, MOST Policy Papers Series, number 1, 48 p.

<sup>24</sup> Data from PIOT, O. (1995). *Finance et économie - la fracture*, Le Monde-Éditions/Marabout, Paris.

not a new phenomenon, since it began in the 50s with the convertibility of the European currencies, was then amplified in the 70s with the Euro-currencies markets, and was finally accelerated by financial deregulation in the 80s. Technological development, mainly in the field of informatics, has played a major role in this process. Secondly, there is an increasing competition among financial markets. Thirdly, the internationalisation of the production of financial services increases substantially as new financial instruments and strategies are defined by institutional investors <sup>25</sup>.

Over the past 10 years, the volume of international financial transactions and the integration of financial markets of both developed and developing countries into the global financial system has proceeded at a more rapid pace than has the world-wide integration of other markets. The internationalisation of portfolio equity investment involves not only transactions on stock markets by non-resident investors but also the buying and selling by investors on their local stock markets of the shares of foreign companies. The equities of many developing-country firms are now listed on stock exchanges in OECD countries, and there has been a rapid increase in the trading of such securities since the beginning of the 1990s, especially those issued by Latin American entities.

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<sup>25</sup> GONCALVES, Reinaldo (1994). "Globalização Financeira, Liberalização Cambial e Vulnerabilidade Externa da Economia Brasileira" [Financial Globalisation, Liberalisation and External Vulnerability of the Brazilian Economy], in Renato Baumann, ed. .0 *Brasil e a Economia Global*, Rio de Janeiro, Campus.

## **The technological dimension and the emergence of a global culture**

The current revolution in the so-called fourth sector of world economy, the *Global Information Infrastructure*, relies for its mainstay on the convergence of telecommunications, informatics and the mass media. The most widely acknowledged factors promoting the globalisation of both production and finance are the recent advances in information technology; technical progress that has led to a steady decline in the costs of international transportation of goods and people and of international communication; and technological progress in manufacturing which makes it feasible to decompose production processes. The scope of the international division of labour, as well as of international financial transactions, has consequently been considerably widened. The sharp decline in international transport and communications costs and the possibility of decomposing production processes have not only made a vast number of goods and services which were formerly non-tradeables into tradeables, but have also accelerated the process of internationalisation of production and of services, including cultural ones. At the same time, the drop in the costs of international communications and recent progress in information technology have opened vast possibilities for international financial flows.

Perhaps the most important single factor permitting the rapid globalisation of production has been the revolution in semi-conductor, microchip technology and its application in combination with technical advances in telecommunications. With the ability to transmit virtually unlimited amounts of data at very low costs, firms can easily diversify geographically the various stages of production without losing managerial control. This technology has thus allowed firms to move beyond economies of scale and to exploit economies of scope, or to combine large-scale production with particularised production for individual market requirements <sup>26</sup>.

These new information technologies (NIT) are the fundamental support for the development of globalisation processes. Differently from previous technological waves, this new frontier created by NIT seems to be without limits, from both the perspective of knowledge expansion and of information access. Technological advance, telecommunications

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<sup>26</sup> UNCTAD, Report of the Secretary General to the 9th Conference, 1996.

development, global transport strategies are thus part and parcel of this process. New technologies have vastly increased the amount and variety of available business information and drastically reduced its cost. In 1988, for example, the first optic fibre telephone cable started operating between the Americas and Europe, with a total transmission capacity of 40,000 simultaneous calls (three times the capacity of copper cables). In 1989, a similar cable was installed in the Pacific. This technological progress in telecommunications has resulted in dramatic cost reductions. Between 1970 and 1990, the cost of a three-minute call between London and New York fell (in constant 1990 US dollars) from \$31 to \$3, and the number of international calls has increased steadily: during the 1980s telecommunications traffic was expanding by 20 per cent a year<sup>27</sup>.

The speed, price and the character of communications have thus been altered by computer technology. The world market of new information technologies (computers, components, software and services) is developing very quickly: 8 per cent every year. In 1994, the world industry of NIT corresponded to around 430 billion dollars, concentrated for 80 per cent in Germany, the USA, France, Japan and the United Kingdom. Of the global estimated market in 1993, only 7.1 per cent originated from non-OECD member countries<sup>28</sup>.

The development of global media has also been very much influenced by NIT, and its role in the globalisation cultural processes is extremely relevant. The written press is being completely transformed by computer systems and the INTERNET. The number of television sets and videos all around the world was of 298 million in 1970, 556 million in 1980, 801 million in 1990, and 855 million in 1993. Between 1970 and 1993, the number of television receivers per 1,000 inhabitants grew from 219 to 390 in Europe, from 1.4 to 26 in Sub-Saharan Africa, from 58 to 165 in Latin America, and from 0.9 to 35 in Southern Asia<sup>29</sup>.

Mass media constitute a fundamental support for cultural uniformisation and construction of standardised patterns and behaviors. Global marketing and publicity consecrate a global cultural standard, and TV sets (as radio receivers, cinema, music) are a means to convey the global message. The injurious aspect of this global message in

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<sup>27</sup> UNRISD, *States of disarray*, op.cit., page 29.

<sup>28</sup> The increase in the development of NIT is currently higher in the South, particularly in Latin America and Eastern European countries. The increasing impact of information technologies on the modalities of international trade also offers important opportunities for developing countries and their integration in international trade. See Pascal Renaud & Astrad Torrès, "Une Chance pour le Sud", *Le Monde Diplomatique*, Manière de voir, hors-série, October 1996.

<sup>29</sup> Data from UNESCO, *Statistical Yearbook*, 1995.

relationship to the traditional means of communication is that it uses them almost autonomously. The global message is conveyed through different technological supports, not only through highly advanced techniques.

The global images and places, such as the fast-food, the Hilton (and other five-star hotels), supermarkets, airports, tourist towns (Acapulco, Aruba, Saint-Tropez) do not belong to any local territory, but to a global context which ignores cultural identities and local differences <sup>30</sup>. Just as Jean-Chesnaux has compared the “hors-sol” while a category of modernity to the dissociation of the object from its natural milieu, its social context and its historical and cultural background, we can consider that global images and objects are “deterritorialised”, and do not pertain to any local or national identity <sup>31</sup>.

In this connection, English is used as *lingua franca* of global cultural markets, particularly through new information technologies. This may induce isolation of developing and least developed countries, which do not have the necessary infrastructure for the full development of NIT. By shrinking distances and allowing instant communications, NIT also help to sustain deep inequalities within and between countries. These technologies behave as a *sine qua non* of globalisation logic, and are an exclusion threat or risk for technologically retarded countries that are unable to draw multiplying benefits afforded the current users. Considerable investments are required to improve access, as well as the management of indigenous knowledge and human resource development.

In the market perspective, these inequalities prevent millions of traders from realising their competitive advantages. While merchandise trade has benefited from the adoption of international standards at various stages of commercial transactions, no equivalent exists for the exchange of business information. However, the use of standards is a fundamental requisite for an efficient use of information technologies. Business information mostly tends

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<sup>30</sup> It is true that already in the 60s McLuhan had brought about the idea of a *global village*, of a new brain integrating sense and sensibility with the upcoming of an electronic and high-technology-based universe. Different expressions have been forged to label this trend towards cultural globalisation (or *transculturalism*): *first world revolution* (Alexander King), the *third wave* (Alvin Tofler), *the informatics society* (Adam Shaff) or *the amoebic society* (Kenichi Ohmae). These metaphors must be understood in light of specific and objective historical conditions, which together indicate that this process is still under construction. See ORTIZ, Renato (1994), *Mundialização e Cultura [Globalisation and Culture]*, São Paulo, Editora Brasiliense, 234 pages.

<sup>31</sup> From the point of view of production, signals of deterritorialisation are really obvious: a Mazda sports car is conceived in California, financed by Tokyo, its prototype is created in Worthing (England) and is finally assembled in the USA and Mexico, by using electronic components made in New Jersey and Japan. Production processes is fragmented due to the competition enhanced by market liberalisation.

to flow to and from developed countries. Developing countries are for the most part passive recipients rather than active sources of business information, even of that directly concerning them. A truly global trade system requires trade information flows that do not bypass the majority of the world's population. Efforts are needed in the standardisation of business information and in the closing of existing gaps in its availability, both in terms of physical access and of cost.

Moreover, our coping capacity to understand, absorb and use these NIT does not get along with their increasing expansion. The more complex the information or the technical system, the more dependent we become upon specialists to process, analyse and even manage them. In fact, not only is the dimension of technical systems changing, but also their speed of transformation and dissemination at the global level. Technology conditions more than ever before economy, history and culture.

The NITs are at once characterised by the ever multiplying complexification of products and services and the perpetual transformation of markets. As to the research agenda that the MOST Programme would like to foster, it should be emphasised that the development process of NITs is itself without precedent and it scathes the study of many disciplines: it is so, among others, with economics, philosophy, sociology, and the language disciplines.

The fundamental issues that the social sciences concern themselves with are employment, the modes of expression undertaken by work, education, the virtual nature of communication and its democratisation, etc. Social science analysis must be called upon to fathom the NITs and to identify explanatory social and economic phenomena. Examples of such phenomena are the constant evolution of technologies, the incessant pace of innovation, the growing production of immaterial goods through the development of services (knowledge is acquiring a marketed value), strategies for diversification and homogenisation of activities, as well as strategies for the deliberate ending and retrenchment of societies, the affectation of profits from speculation and productive investments alike, the internationalisation of competition. Aside from being an instrument of change, technology is then also the penholder of market influence and profit rationality. Complexity arises as a consequence, so that one is left not with linear cause-effect relations; rather these are characterised by a tight interdependence.

## The social effects of globalisation

Economic liberalisation and deregulation have weakened the possibilities of national institutions and actors to sustain equitable development strategies and universalistic welfare policies. What has been defined as globalisation trends has created additional difficulties in the realisation of (1) income distribution strategies through an expansion of employment; (2) access of the poor to the productive assets both through redistribution of existing assets and helping the poor to create and possess new ones; (3) social safety net policies.

The overall package of reforms (trade and financial liberalisation, privatisation and deregulation) induces an increase of open unemployment and /or of informality, and thus an increment of income inequality. Budgetary cutbacks in social services have also occurred in many developing countries, in particular in Africa and Latin America. Following the reductions initiated in the early 1980s as part of the stabilisation and adjustment measures to cope with the foreign debt crisis in most countries in those regions, the levels of social service funding per capita, adjusted for inflation, still generally remain below the levels attained in the 1970s. Both quality and, to a lesser extent, coverage have declined as a result. In some countries, already inadequate social infrastructure, in areas such as health and education, has likewise deteriorated. As a consequence, national governments have been obliged to reallocate existing social expenditure so as to increase efficiency and equity: for instance, primary education (instead of secondary and higher education), and curative health care (instead of preventive care) would be privileged <sup>32</sup>.

These are but some of the new social features and effects related to the development of globalisation and liberalisation. We do not intend to present them all in this paper. For organisational and practical reasons, let's take the example of NITs. It is well-known that the apparition of the MT is accompanied by that of new social ordering, scaling of cultural landscapes, and the influence exerted on human perception and thought. The most conspicuous facet of the evolution of these technologies is bound to be tied to their dissemination and modes adopted in their reorganisation of communication systems, not only within but also between organisations. The result, for instance, is one of having to alter one's

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<sup>32</sup>For this particular last point, see UNRISD, "States of Disarray", *op. cit.*, p. 51 & ss.

vision of enterprise, its physical, informational, and decision-making building blocks; our conception of hierarchy “in private and public sectors; and, finally, linkages between the production of material and other non-material goods. In the years when information and automation were being developed and spread, social fabric overran hierarchical and separatist structures in its organisation, and it eventually took on a meshed structure with global scale and human complexity.

In UNESCO’s perspective, the human agency behind the evolution of NITs forces upon us in the least to put together a review of the study areas of training, jobs, and employment. A new angle and a much stretched perspective is to be adopted in studying the evolution of development thinking. It is not our intention to study these matters as a part of this preliminary document, for this would both insult the end of the exercise and by far exceed our capabilities. On the subject of employment, for example, if one leaves aside the catastrophic forecasts of impending collapses in house of cards fashion (taking technological innovation to be synonymous with job hungry machines, for instance), one still has to deliberate the threats posed by technologies that turn on the society that built them. New investment and employment openings certainly have appeared directly as a result of the spread of NITs:

1. telework: the first studies on this phenomenon were undertaken for the US in the 60s, and for France in the 80s. This sector can give birth to several offshore societies of different types. Each of these has notably specialised in long distance management, or in rendering informational the requests of managers wanting to exploit the offer of cheaper labour. The premise underlying the functioning of this sector is not the simple spread of communication technologies (telephone, fax, computer and modems), it is instead the radical organisational reform of institutions and enterprises, in which the central office functions but as a facilitating and co-ordinating agency.

2. telematique: the instrument offers wide reaching possibilities for installing servers that feed out data that is of social science, educational, tourist and technical ilk.

3. social and medical tools: health services stand to gain much - e.g., long distance diagnosis techniques or clinical examinations taken by people in far comers that are economically poor.

4. laboratories and virtual schools: live or other dialogue with experts is likely to trigger research efforts by the receiver (the role of the teacher alters as s/he withholds and emphasises choice in tailoring her effort towards the student). Equally, brain drain in poor countries can be slowed by contact established between students or practitioners with likened interests.

According to the Nora Minc (1978) report, the informatisation of work tasks should translate to the sinking of about two and a half million jobs by the year 2000. In all evidence, we are witnessing levels of unemployment that bear strange resemblance to the report's speculations. Certain professional categories have indubitably been affected by the informational reforms, others like till attendants, telephone receptionists, or, special task factory workers have been blitzed.

Fundamental questions that have to be asked in relation to the interaction between social development and the global development of information technologies, and questions too that constitute an essential element in the mandate of UNESCO are: 1. Democratisation of access and communication through NITs; 2. Exclusion risks for poor countries incapable of exploiting benefits; 3. Studying the processes scratched into the ferment as NITs reform organisations, redeployment of actors, redefinition and upturning of innovations; 4. Studying the means the NITs use to redefine cultural landscapes, and influence thinking; 5. Fostering the expansion of information produced by developing countries to circulate in INTERNET and similar systems; 6. Researching virtuality and the apparition of a new society and a new man; 7. Fostering the new modes of training and cognition offered by the NITs.

## **The political dimension,**

Rapid changes in the world economy towards liberalisation and deregulation influence directly the definition of development policies. During the past decade, liberalisation has been the hallmark of economic policy throughout the world. Virtually all governments have taken significant steps to widen the role of private enterprise in economic activity. In some countries - for example the former centrally-planned economies - this constituted a veritable change of regime. For others - for example a number of Latin American countries - it constituted a major shift in the philosophy and approach towards fostering development. In still others - for example some European economies - it constituted an adjustment of the role of government in a mixed economy. Mainly liberalisation is reshaping the conduct of business and trade, and presenting new challenges and opportunities for all countries. The challenge is particularly strong for developing countries which are relatively weak players in this process, and the weakest among them face the risk of marginalisation.

Even if it is not fully accepted as a given state, globalisation has definitely reduced the power of the state to manage its economic affairs. There is been a clear erosion of political sovereignty in the current liberalised and globalising world economy. Internationalisation of currency markets has made it more difficult for central banks to control the money supply. Integration of bond markets has made it more difficult for the State to determine nominal rates of interest and the term structure of interest rates. Transfer pricing by translational corporations has made it easier for enterprises to shift their profit tax liabilities from countries where taxation is high to countries where it is low. Similarly, the ability of large firms to locate their fixed investment almost anywhere in the world has reduced the power of the State to regulate industry be it through taxation, the imposition of minimum wage legislation, environmental controls, or health and safety provisions.

The current debate on globalisation raises fears that the sovereignty of the Nation State is being undermined. It is true that if we understand sovereignty as the ability to exercise strict control without outside interference, then the State is clearly experiencing a shift in the definition of its main roles, particularly because there remain very few purely “domestic”

issues. That is the case of tax policy, economic and technological regulation, environmental protection, or even labour and social protection legislation's.<sup>33</sup>

With market mechanisms now playing an increasingly important role in the development process, the role of government is progressively shifting towards providing an appropriate enabling environment for private enterprise, and facilitating and fostering the establishment and expansion of private business. This is not necessarily a passive or indirect role. A number of Governments in both developed and developing countries have successfully pursued proactive policy interventions to influence the savings and investment rates; to promote the efficient functioning of markets; to improve access to international markets and the diffusion of technology; to promote core capacities in manufacturing and services; and to create the best possible conditions for the competitiveness of their firms. Such policies are particularly important for developing countries, where enterprises need to build up their capacities in order to participate fully and effectively in international markets and production. In these countries the promotion of small and medium-sized enterprises is often a particularly important component of Government policies to foster development<sup>34</sup>.

Appropriate Government policies or interventions may also be required to deal with market failures or deficiencies associated with the consistent inability of markets to deal with the phenomenon of externalities. An important example in this regard is the inability of markets to ensure on their own the environmental sustainability of economic activity. Markets and the associated accounting systems (market prices) often fail to recognise natural resources, which notably include all environmental resources, as assets, or to value properly resource-based goods and services, or the costs and benefits associated with external effects of production and consumption activities. In the absence of Government intervention, and well defined property rights for public goods, or goods to which access is generally open, such as clean water, clean air, biodiversity, etc., those environmental assets tend to be treated as free goods in the economic production process and consequently over-used in production activities. In these cases, especially where the sustainability of environmental services is

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<sup>33</sup> See OECD, 1996, "What Challenges and Opportunities for Governments?", Public Management Office, 18p.

<sup>34</sup> Governments need to encourage entrepreneurship, to promote human resource development to develop and maintain internationally oriented infrastructures, and to ensure the free flow of information. Governments also need to assist the main actors in the market - producers and consumers - to adapt to the demands of a more competitive market-place, by facilitating training and the availability of enterprise-support services.

endangered, there is a clear need for Governments to intervene in order to create the conditions for the internalisation of those external costs associated with such over-use.

It may be noted, however, that in some cases Government intervention has worsened the situation, for example by underpricing certain resources either by providing them below their marginal cost or by subsidizing private producers. The lessons of this experience are twofold: first, the market system by itself sometimes provides incorrect signals and misleading information and therefore needs to be complemented by necessary Government intervention; secondly, such Government intervention should seek to ensure that levels of benefits and costs reflect the fullest information about scarcity and price, rights and responsibilities, actions and consequences. The use of such information by society is a necessary precondition for an effective human interface with the natural environment and for the promotion of sound management of natural resources and sustainable development. Non-governmental organisations can play a positive role in this regard <sup>35</sup>.

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<sup>35</sup>See UNCTAD, Report of the Secretary-General, op.cit.

### Box I: State and regulation of technological innovation

The battle between man and technology will not be truly played out until such time as men are undeceived by their limitations, heedless of the magnitude of power afforded them by technology. Accordingly, the contemporary garb for the irresistible unfolding of history would surely not be that of technology. To circumscribe technology, regulate it, control its evolution, allay its pace, adjust its course, and tame its nature: such is the miracle play of the XXI century, especially so in regard to the new information technologies. Modern day man has a relationship with science and technology that inevitably incorporates politics, it may therefore be seen as a form of regulation that does not inhere necessarily in the scientific community's work. In fact, it is from this incorporation that the notion of "technology assessment" is cultivated.

It can be seen that well before the industrial revolution, the State would have exercised interventionism, in enrichment and in blight, often voluntarily, leaving entrepreneurs and enterprises with rules of conduct, but also parapets to contain the conditions and consequences of technological change. Today's novelty lies elsewhere still: up until now, technical activity and, more importantly, scientific research could wilt without fear of incrimination or complicity in disastrous consequences tied to them; unless contrary proof was evidenced, their reputation held them as virtuous.

Today, the benefit of doubt is barely accorded them, and the fact of almost proving one's innocence beforehand requires one to review the issue of what constitutes acceptable risk. Clearly, the new information technologies have brought on new risks (informational crimes, viruses, and spying), but one's perception of them alters as capitalist and layperson lenses are worn in turn. The overriding risk is perhaps that of being blinded by a single winning perception, and that alone one solution is brought to bear on the ensemble of risks. In illustration of the earlier mentioned notion from which technology assessment was cultivated, the move to question the worth of running collective risk is a move out of the cleanly technical domain and into the political fields where choice and value axes are wielded.

It is incumbent upon us to recognise that, if technology is well and right our destiny, the beast is itself not unfathomable by man: the business is still one determined by human agency. Else, as ever and more so now, the business is a political one and its determination is still in the hands of the nation state; whence the responsibility that UNESCO may exercise in political apprising and the manoeuvring of the social in relation to technological changes.

Placing to one side the exceptional circumstance of war, in which traditional social and political mechanisms as well as liberties are put on hold, why not be acquiescent of decisions that are routinely taken in numerous areas without forewarned discussion? This is so even in peace time, that is to say when liberties have not been strangled by necessity. The onus on democracy is not that of preventing the such from happening, rather to equip itself with the control and balance rigging that will allow different organisational tiers to correct and so too withdraw arbitrariness - i.e., regulation of collective interests by order of the interests of but a few. The « right measure » is surely hard to affix from a tendency either towards the technological regulation paradigm, the democratic one worried by individual and collective interests, and the technocratic one that is adhering of economic and industrial strategic compromise and trade-offs.

In short, the discourse on technological regulation can in no way be abstracted to a technical debate dealing in technical-based issues; the debate is always a political one that invites choice in culture and identity, as well as a standpoint on economic and social development. The regulation of technological change is thus not the domain of a few, a party, or a grouping; it is a long term process in which design must accommodate participation of the largest number.

## The case of environment : coping strategies

Human influences are changing the amounts and the manner in which global environmental cycles are stored and interact. These changes in fluxes and sinks are also observed at the global level. Urban air pollution, atmospheric transport and acidic deposition, depletion of the ozone layer, climate change, biodiversity preservation and utilisation, deforestation are but some of the environmental issues closely related to global decision-making. They are obviously also linked with economic and development policies. Environment participates in globalisation processes both as a dimension (in the sense that environmental issues are global in scope and scale) and as an active component of other dimensions (in the sense that economic decisions cover a range of spatial scales from local/regional to global, clearly interrelated with environment).

The notion of a *shared biosphere*<sup>36</sup> indicates the vulnerability and interdependence of the total system in the envelope of atmosphere, upon which more and more of industrial man's activities have been impinging. Environmental problems are transboundary phenomena ("global commons"), and the coping strategies they suggest lie beyond the effective protection of individual governments. The global interdependence of airs and climates, for instance, require a new capacity of global decision-making and global care.

Considerable efforts have been made in creating a system of international environmental governance to achieve global sustainable development, mainly through the management of cross-border environmental disputes and protection of the global commons. Treaties and protocols now govern the human activities related to the atmosphere, the oceans, biodiversity, Antarctica, trade, etc. These international regimes do not contain provisions for hierarchical enforcement of rules, but they do reduce transaction costs and provide information that facilitates multilateral co-operation.

Global environmental issues relate typically to problems of collective action. Potential beneficiaries of the solutions needed to be put into practice in environmental problems cannot be excluded from jointly supplied public goods (as the atmosphere, the oceans, etc.). And with regard to renewable resources, overappropriation can lead to the destruction of the resource

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<sup>36</sup> Expression from B. Ward & R. Dubos, *Only One Earth*, 1972.

itself. This implies that the economist (whose typical policy advice is “to get the prices right”) and the politician (whose tendency is “to get the institutional incentives right”) have an additional difficulty in designing coping strategies for global environmental problems, be they at the local, the national or the international level. Decision-makers must take into account a diverse series of factors influencing the environmental politics and economics: the number of actors involved, the heterogeneity among actors, the heterogeneity of capabilities, the heterogeneity of preferences, the heterogeneity of information and beliefs, which to some extent determine exogenously the implementation of objectives by institutions designed to deal with specific collective-action problems. Figure III below summarises the whole set of intervening variables and participating actors in the definition of coping strategies to face global transformations (not only environmental, but also economic and technological).

Thus, with regard to the far-reaching globalisation movements we described hereto, at least three options are theoretically possible for actors to identify their coping strategies. Firstly, they can take up the challenge of globalisation as it is, while trying to better the national position by joining in the game of international competition. This remains the principal choice by economic operators (mainly translational enterprises), and the majority of States. Secondly, they can act to change the world system in a direction which would favour a more equitable globalised development. Very few actors assume this responsibility at the international level nowadays. Thirdly, they can stand aloof from such a world system (“delinking”), bearing all the risks of political isolation and economic distress which accompanies this trend<sup>37</sup>. These are three possible ways for actors to cope with global changes, although we consider that only the two first seem to be viable from both the economic and the environmental perspectives.

Contrary to what many reports attempt to prove, the translational market is not able to manage by itself natural and human resources on a socially and environmentally sustainable fashion<sup>38</sup>. Despite what many would think, the State *is* not circumspect by the

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<sup>37</sup> Samir Amin has traditionally defended the third hypothesis during the 1970s, and he still considers this “delinking” strategy in his article “The Challenge of Globalisation: Delinking”, published by the South Centre, Facing the Challenge, Responses to the Report of the South Commission, 1993.

<sup>38</sup> Some reports try to defend the hypothesis that jobs are not sufficiently created because growth rates are not high enough, and that the relative capacities of industrialised economies to create employment have not been affected since the first oil crisis of the seventies. High unemployment would be largely the result of slower growth rather than of the labour displacing effects of hyper-productive new technologies. See ILO, Geneva, 1996, Report V, Employment policies in a global context.

ideology of market efficiency. That's because globalisation economic, environmental and technological processes create new forms of integration and enhances competition as the basic rule among economic and social actors, but mostly they enlist new forms of exclusion : exclusion through the non-participation in the production/consumption economic schemes, exclusion through the lack of sufficient social services and security nets, exclusion through a culture based upon excessive and unsustainable consumption, exclusion from political decision-making, and finally exclusion from the common understanding of current events.

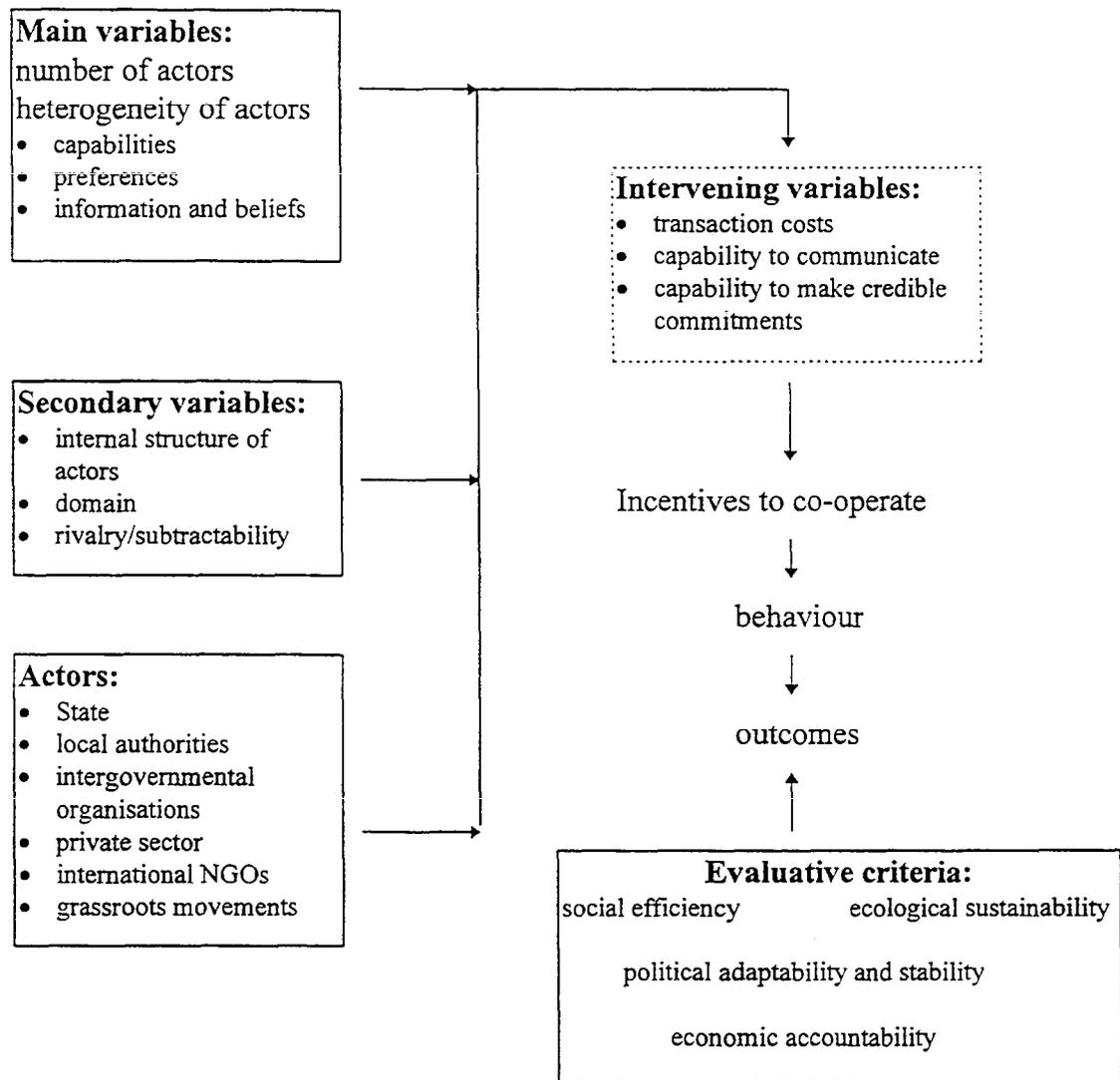
Rearticulating the spaces of development from local to translational passing through the regional and the national is a *conditio sine qua non* in the attempt to interconnect the macro-macro, macro-meso-micro, and micro-micro levels of decision-making. Coping strategies are to be focused not only on options and choices that actors (or players) make within the context of a particular payoff matrix or set of alternative payoff matrices. Changes in the nature and scale of goods and assets, the global context of households are also to be taken into consideration<sup>39</sup>.

Hence, a clear-cut analysis of globalisation processes should avoid the trap of establishing a competition between the two traditional schools of thought, one based upon the predominance of the State, and the other rooted in market economy. Even if the State is a minor actor in this current trend, the market operators still depend upon political actors (including macro and micro decision-makers) to redefine the rules and regulations of the political economy. Moreover, neither the State nor the market can alone tackle the problematic results of globalisation, which makes many economists revisit the notion of mixed economies. In fact, it is a mistaken to assume that State structures are inherently hierarchical and bureaucratic, whereas economic structures would be based essentially on market exchange: both State and economy involve complex compounds of market and hierarchy as well as the outcome of the interaction between politics and economics.

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<sup>39</sup> See *The Local-Global Nexus*, International Social Science Journal (UNESCO), number 117, August 1988.

Figure III: Coping strategies: actors and variables



Adapted from KEOHANE & OSTROM, *Local Commons and Global Interdependance, heterogeneity and cooperation in two domains*, Sage Publications, p.16.

Thereupon begins a whole intellectual process of rethinking the institutional framework in which development is conceived and achieved. As Ignacy Sachs puts it, “once the two extremes of pure market economy and the centralised economy are set aside, all the real situations that exist in the world belong to the category of *mixed economies*, characterised by a wide variety of labour, commodity and service markets, in which there operate private profit-making firms, public undertakings and more generally States at all levels, from the central to the local, the different agents of the social economy (co-operatives, mutual benefit

societies, associations and non-profit-making private organisations) and all the groups engaged partly in non-market economic activities carried out in the households”<sup>40</sup>. In the real world, most economic and political processes (including globalisation) involve either a mix of market and hierarchy or goods having mixed public and private characteristics.

### **Global transformations and coping strategies as a MOST research theme**

This segment of the paper will discuss the research agenda on “Global Transformations and Coping Strategies” which is one of the three main areas of the MOST programme. The other two areas are “Multicultural and Multiethnic Societies”» and “Cities as Arenas of Accelerated Social Transformations”. The writing will contain an effort to describe what the word coping refers to. Complementing the first segment of this paper which analyses the dimensions that characterise ‘globalisation’, the idea of coping in the context of local public action-oriented research will be the undivided focus here.

In order to accentuate the smack of the ‘local’, two lines of enquiry are pursued and each puts in evidence a certain amount of singularity in MOST’s work in relation to other UN and international agency research and development activities. The first line of enquiry is that of the kind of general reasoning and empirical evidence that characterise successful analyses of appraisal and investment decisions. The case of poverty and its purported linkages to resource degradation is brought up to illustrate the blend that may be adopted between applied micro economics and other social science thinking. The second line of enquiry pokes with necessary detail into methods used in modern benefit cost analysis. Examples taken from project development facility studies as recent as September 1996, and some general background, helps introduce the reader to what today bares scarce resemblance to traditional benefit-cost analysis. The methods, while examined rather generally, would appear accommodating of significant changes without large compromise on either theory, questionnaire design, or model specification issues.

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<sup>40</sup> SACHS, Ignacy (1995). *Searching For New Development Strategies: The Challenges of the Social Summit*, MOST Policy Papers Series, number 1, p. 30.

With reference to the poverty-resource degradation case, it is argued that in explaining causation one may like to construct a story of interrelationships which highlights the reinforcing and the ameliorating that happens. The case is amenable to this MOST theme's agenda. One may think of the case as a template for how different sorts of interrelationships need to be made obvious before a pattern can be accepted as governing the assembly of financial and other resources for remedying a problem.

First, as part of the explanation of 'coping' and 'coping strategies', a few examples of research are presented that have helped lay the building blocks for what prevents destitution and what is needed to strive in opposition to the injurious consequences of modernisation. Second, as per the two lines of enquiry, the remaining and end part of this paper is devoted to reasoning, modelling of evidence, and evaluation (used henceforth in the sense of modern day benefit-cost analyses, in particular as instruments for strengthening work on coping strategies). The potency of evaluation methodologies in such a context is unmistakable<sup>41</sup>.

Which people are we concerned with and what it is that they suffer? If we retain an idea of whom this is done for, then questions about the significance of what we are doing with our research will be answerable each step of the way. There are many classes of deprivation and vulnerability, which are we to emphasise? Research on « coping » is too urgent to be pondered and must be given to politicians to act upon. It must nevertheless present the working of the problem in relation to its causal antecedents.

While this working is being presented, linkages can be drawn between what is suffered and the relevant transboundary phenomenon described in theme three. Select a population, emphasise a pressing necessity, anatomise the working of the problem, subtract links with one of the phenomena, then act to help people amortise its effect on them. This is one way to study coping.

An alternative strategy would favour a study of a phenomenon like technological innovation in seclusion. Partly because soldering one's investigation onto people does not remove the conviction that the problem is still there. Contemporary scholarship would almost certainly encourage intuition and the pluralistic discord of sciences and their subdiscipline in such a scheme. It is understandable that attachment to certain standards and methods should

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<sup>41</sup> See, e.g., Myrick Freeman III (1994), « The Measurement of Environmental and Resource Values: Theory and Methods », Resources for the Future, Washington DC.

lead to concentration on problems amenable to those methods, but there is a tendency to define the legitimate questions in terms of the available methods of solution. Studying matters with economic methodology alone could tend that way.

Interesting things happen when new methods and appropriate standards have to be developed to deal with questions that cannot be posed in terms of the existing procedures of enquiry. This is the chance to produce or destroy belief, rather than provide us with a consistent set of things to say on New Information Technologies and suffering, and it happens by unrestricted focus on the phenomenon itself. Not so by painstakingly specifying the working of a poorly understood occurrence on some people affected by it.

The second strategy must be accompanied by a direct linking of the phenomenon and the suffering that it may provoke<sup>42</sup>, even in such simple a formulation. Large, relevant questions easily evoke large, wet answers. It belongs to the professional literature on social administration in the richer untried. Regarding the elimination of regular, persistent undernutrition or undernourishment, it would be irresponsible if time-consuming description and novelty were encouraged in research. Not to mention that political attention can be distracted from the core of the problem: human suffering of those here and now.

The orientation of research and public action must clearly depend on the feasibilities of different courses of action. The feasibilities relate to causal factors and the nature and power of agencies involved, on whom the design of instruments for solutions also depends. The administrative capabilities, political commitments and loyalties and power bases of the holders of political power, and the technical expertise of workers are among questions raised. Divisions among those who benefit from action relates to class, ownership, occupation, and more subtly to gender, community, and culture.

Feasibilities of different courses of action increase as we include business, NGOs, and civic and political organisations among actors. Indeed, such organisations have already played a part in actions that go beyond atomistic individual initiatives. The market mechanism too has been much eulogised and there has been much unhesitating admiration of private enterprise in redressing development. But, however central the role of free market incentives

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<sup>42</sup>The term suffering when associated with New Information Technologies (NITs) can be thought of as describing adversity encountered through submissive contact with NITs (economic marginalisation, loss of one's habitual cultural assertions) as well as the comparative disadvantages both productively and otherwise if one has little or no commandeering contact.

in the logic of public action, there remain a complex set of social incentives that returns a gleam to the curious, soiled visage of government support: public delivery of health care and education are hard to replace, and it is difficult to influence intrahousehold discrimination, encourage political parties and the news media to make reasoned demands, and inspire the public at large to co-operate, criticise and co-ordinate.

In the first segment of our discussion paper, we introduced an amalgam of numerous implementing actors, heterogeneity of preferences and other matters which mean co-ordination is uncertain (Please refer to Fig. III). The orientation of research - i.e. topic, emphasis and methods - as well as instruments designed need to be decided in terms of these actors. It is argued above that this should occur after one has pinpointed topic, emphasis, and methods in relation to people we have chosen to be concerned with.

Further, the slant suggested in this segment of the paper was towards a ranking of sorts among people with problems. Thus, let us take the example of an economics study of people's « coping » or striving in opposition to the bad consequences of technological innovation. Consultants in an NGO decide to look at unemployment in urban business sectors. Given the type of autonomous research encouraged under the MOST programme, whether this will do justice to one facet of a difficult subject will be the responsibility of the consultant.

Why did the consultants not elect to study the effect of technological innovation on landless wage labourers? Would they not benefit more from the political attention? They possess no means of production except their own labour power, which they try and sell for a wage in order to earn an income adequate for buying food. They are particularly vulnerable to changes in labour market conditions caused by technological innovation. Theirs is the rough end of the stick when there is a decline in wages vis-à-vis food prices, or an increase in unemployment.

Having touched on aspects of research propensity, what does the word « coping » exactly refer to? The havoc that is caused - debilitated people, death, enfeebled and devastated societies - by famine and chronic hunger is the first form of suffering that comes to mind from among any number of social or economic problems. It is certainly the most urgent. This and consequences of market and policy failures are errors that belong to the province of competition-based globalisation. To a degree the same can be said of the past, but the growth

of political power has introduced a scale of massacre and despoliation that makes the efforts of private bandits seem truly modest.

Policy and market failures in this sense are attributable to individuals who play roles in political, military, and economic institutions. Equally, and often inseparably, the effects are attributable to voluntary and coalesced pacts that involve national governments, international financial institutions, and the breadth of global commodities assessed in the first segment. Aside from offenders with originality and whose personalities are large enough to transcend the boundaries of their public roles, the committed mistakes do not seem to be filly attributable to the individual himself. The mistakes can so ravage the lives of individuals that pejorative adjectives may be used to personify those guilty. The ordinary soldiers, executioners, secret policemen, and bombardiers of today are less manifest.

Less manifest and elusive, one may find it hard to attach the blunders to the blunderers. It is partly in virtue of the official role in which they were committed. But it is also because there is no question of illegitimate release from moral constraint for certain vast impersonal forces. These include such things as economic doctrines which require that tools of production overcome their reluctance to see their communities and families destroyed; the non-economic impact of stabilisation and structural adjustment reform policies whose most important advocates are international financial institution (IFIs); the one quarter to one half of total world trade that is conducted within North-based translational corporations (TNCs)<sup>43</sup>; the co-ordination provided to the TNC's internally-managed trade by international banks and investment firms that dominate production, commerce, and the conditions of life; other orchestration by nation states groupings and IFIs, and their corporate-financial constituencies; and, any number of other less recognisable/unintended offspring (some of these described as 'global images' in the first segment of the paper) from the interests of similar architects of state and international policy.

Responsibility is hard to figure out, but so is the nature of the blunder. Social science theories are likely to say that the effect on people of recognizable things like regional agreements to liberalise trade, or, reforms required to modernise economies under structural adjustment programmes are ambiguous. As concerns the first example, consider the actual

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<sup>43</sup>Daly and Goodland (1992), «An Ecological-Economic Assessment of Deregulation and International Commerce Under Gatt », Draft, S-5043, Environment Department, World Bank, Washington DC.

problems with Article XXIV of GATT (only 6 of 69 working parties came to a conclusion about external trade barriers and rules governing them, something more than crucial if one considers the case of lost sugar exports for the Philippines). Using the second example, it is important to emphasise that measures of social effects of adjustment policies are likely to vary with methodology and the period chosen for the analysis. In a review of the social consequences of adjustment in seven country studies carried out by the Organisation for Economic Co-operation and Development (OECD), the counter-argument is offered that adjustment policies do not automatically increase inequality or produce negative effects on the poor since their impact varies widely from case to case <sup>44</sup>.

Nevertheless, where improvement in family standards was detected, corrective policies were undertaken by the government in order to mitigate the social costs of adjustment. The cases applied to Indonesia, Malaysia, and rural areas of Morocco and Ghana. Morocco had specific food aid programmes for the poor, and educational and health services were not reduced as a whole, because real wages for public employees fell in the same proportion as budget cuts. Ghana had a specific programme to mitigate the social costs of adjustment. Therefore it is not clear from the evidence that social improvement was a consequence of adjustment itself, or the result of specific social policies.

The effect on people of adjustment loans as interpreted via their effect on natural resources can be equally ambiguous. Because they shift economic activity in the borrowing country, structural adjustment loans are argued to cause environmental degradation. Empirical studies have examined the effect from different aspects of the environment, each of which affects people's earnings and livelihood: e.g., forestry (Vincent, 1994), agriculture (Southgate and Pearce, 1988), for single country experiences (Repetto and Cruz, 1992), or, the WB itself for 83% of its programmes (Sebastian and Alicbusan, 1989). Together, they illustrate that macroeconomic and sectoral policies have indirect impacts and that these are largely unexpected and ambiguous <sup>45</sup>.

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<sup>44</sup> Please see Young, Carlos EF (1993), 'Economywide Policies and their Effects on Rural Poverty and the Environment' (mimeo), London: University College London, Department of Economics.

<sup>45</sup> See Southgate, Douglas and David W Pearce (1988), « Agricultural Colonisation and Environmental Degradation in Frontier Developing Economies », Environment Department Working Paper n.9, Washington DC, The World Bank; Vincent, Jeffrey (1994), *The Tropical Timber Trade and Sustainable Development*, in Brown, Katrina, and David Pearce (eds) 1994, « The Causes of Tropical Deforestation », London: University College London Press; Sebastian, Iona and Adelaida Alicbusan (1989), « Sustainable Development: Issues in Adjustment Lending Policies », Environment Department Divisional Paper n. 1989-6, Washington DC, The

For example, structural adjustment loans lowered the price of some food crops that are environmentally damaging: maize, rice, and sorghum in Panama, and cotton, foodgrains, and tobacco in Turkey. Although the motives for these price reductions was not environmental - their principal aim being to reduce public expenditure - their effects were probably environmentally beneficial. Seldom are matters clear. As a result, indirect or system effects have prompted interest in the use of computable general equilibrium models (CGE) in Thailand and Morocco, for example, where agricultural water use and trade policies were linked. The model used in Costa Rica managed to explain how deforestation was worsened by introducing minimum wage legislation<sup>46</sup>.

So, even the recognizable is difficult to analyse. A simple look at responsibility and causation showed this. Both are such an important part of explaining how to help people out of hardship. It is therefore not comforting to read the WB saying in an internal document reviewing its structural adjustment operations: « adjustment is not a painless exercise, and some groups are bound to suffer, at least in the short run »<sup>47</sup>, although it is an admission of responsibility and fits in with their recent placing of poverty relief as a top priority.

It may be gathered that the fear of nonsense has had a powerful inhibiting effect. Scientists in different fields have tended to proceed with caution and load themselves with the latest technical equipment. Thus, CGE along with ‘integrated assessment’ and its ‘cybernetic’ and ‘reflective’ reasoning can go a long way in explaining responsibility, causation and other aspects of the problem of coping<sup>48</sup>. Yet at the local level, it may be a good start for MOST research to look into basic notions of what prevents destitution. It is shown in what follows that there is much need for technically sophisticated methods to support such work.

Leaving aside responsibility and causation for the time being, what are these basic notions of what prevents destitution? An important step towards a better understanding of the issues involved has been studied by the “Hunger and Poverty” project of the World Institute

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World Bank; and, Cruz, Wilfredo and Robert Repetto (1992), « The Environmental Effects of Stabilisation and Adjustment Programmes: The Philippines Case », Washington DC, The World Bank, Environment Department.

<sup>46</sup> See Munasinghe and Cruz (1994), a Economywide Policies and the Environment Emerging Lessons from Experience », Washington DC, The World Bank.

<sup>47</sup> World Bank (1992), pp 116, « World Bank Structural and Sectoral Adjustment Operations: The Second OED Review », Washington DC, The World Bank.

<sup>48</sup> See Mesarovic MD, McGinnis DL and DA West ( 1996), « Cybernetics of Global Change: Human Dimension and Managing of Complexity », Management of Social Transformations *Policy Papers 3*, UNESCO, Paris.

for Development Economics Research (WIDER)<sup>49</sup>. Elementary concepts propounded by the project refer to entitlements, endowment and exchange, extended entitlements, co-operative conflicts, and capability and living standards. To this may be added important work that has been case studied in the field of knowledge systems which describes the meshing of uncertainty, powerlessness, disembeddedness, and the contradiction between needs and poverty<sup>50</sup>. Finally, there is a great deal of work on the fact that issues are not about the disfunctioning of one institution but about the coherence of the different institutions regulating a given society - i.e., of governance.

If tools for coping are to be developed around a clear expression of these basic notions, and cogent arguments to fix them together, there will have to be an unwillingness to brush aside empirically unsupported intuitions. Also, it should be recognised that once tools are deployed, that neither a purely economic or political solution will do. Local participation, for instance, is no panacea, for it does not resolve the integration of the community with the larger society<sup>51</sup>. For this same reason, there is some reservation in prescribing tools in the final section of this paper.

Sophistication in methodology accompanies discussion of instruments. Standard economic theory for measuring changes in individuals' well-being was developed for the purpose of interpreting changes in the prices and quantities of goods purchased in markets. This theory has been extended in the past fifteen years or so to public goods and other non-market services such as environmental quality and health. Modern static and life-cycle models of willingness to pay are constantly used to provide a basis for measuring increases in the incidence of disease, impairment of daily activities, and reduced life expectancy.

Published data are available for several categories of degrees of activity impairment. "Restricted activity days" are those on which a person is able to undertake some, but not all, normal activities; "bed disability days" are those in which a person is confined to bed, either at home or in an institution, for all or most of a day; "work loss days" are those on which a

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<sup>49</sup> Jean Dreze and Amartya Sen (1989), « Hunger and Public Action », World Institute for Development Economics Research (WIDER), as available on the Internet: <<http://www.reliefnet.org/doc/hpa0.html>>

<sup>50</sup> Banuri T and A Marglin (1993), « Who Will Save the Forests », Zed Books, London.

<sup>51</sup> See Banuri T and F Amalric (eds, 1992), « Population, Environment and De-responsibilisation: Case Studies from the Rural Areas of Pakistan », Sustainable Development Policy Institute, Working Paper Series no. WP/POP/1992/1, Islamabad.

person is unable to engage in ordinary gainful employment (US Department of Health, Education, and Welfare) <sup>52</sup>.

The measures described are for morbidity, and much work has been done to define what constitutes an adverse health effect. The measuring techniques in economics are both direct in the sense of relying on interviews and indirect in that they will rely on observing household choice and behaviour with related goods. Results from either or other methods altogether can reinforce the findings of any single one. These are powerful both in standing up to scrutiny and in producing money figures that speak to politicians. As economic theory stands, so long as the individual perceives changes they undergo, the methods will be acceptable from an economics perspective. From the standpoint of the functioning of the methods, individuals need not even express or reveal a willingness to pay to avoid the effect or receive compensation to experience it. This leaves enormous room for tools to ‘measure’ different forms of adversity that people undergo, as well as hemming macroeconomic work with that, for example, of regulation and governance in political science. A proper discussion of the subject is contained in the final section on instruments as coping strategies. The point of entry is economic studies for World Bank and other applied economics projects, and it is argued that the welfare economic theory and accompanying field work and econometrics can be rather accommodating to the above-mentioned hemming.

Let us then first look at concepts put forward under WIDER’s “Hunger and Poverty” project. ‘Entitlements’ refers to the set of alternative bundles over which a person can establish command. An example would be one’s own grown food, or alternative bundles bought with cash exchanged with the original set. The idea is explained by reference to the fact that the mere presence of food in the economy, or the market, does not entitle a person to consume it. ‘Extended entitlements’ describe the broader form of accepted legitimacy rather than legal rights enforceable in a court - e.g., having frost claim on fish and meat in the family.

‘Endowment’ and ‘exchange’ are ideas that refine entitlements by adding to their understanding the fact that an entitlement depends on what a person owns initially, and what they can acquire through exchange. A labourer’s labour power and a landlord’s holding of

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<sup>52</sup>See Myrick Freeman III (1994), « The Measurement of Environmental and Resource Values: Theory and Methods », Resources for the Future, Washington DC.

land are considered initial holdings that can be used to establish entitlements in the form of holdings of alternative commodity bundles through trade.

Co-operative conflicts refers to the coexistence of congruence and conflict of interests in many different fields of social relations. Whether it is in intrafamily divisions or at more aggregate levels of interaction, the notion is important for targeting public action. In a drought, or at any other time when resources are stretched between many, public intervention will be more efficient in imposing equity, for example, if it recognises which interests are conflicting and who is benefiting unfairly.

The characterisation and analysis of ‘capabilities’ helps extend living standard notions well beyond income, or wealth, or utility. Formally, a person’s capability is a set of alternative functioning bundles, representing the various alternative ‘beings and doings’ that a person can achieve with his or her economic, social, and personal characteristics. This contrasts vividly with the idea of entitlements which are sets of alternative commodity bundles, contingently related to need fulfilment rather than being valued for themselves. The focus here is on human life as it can be led.

The implication of WIDER’s focus on these notions is primarily one of clarifying the purpose of public action in different fields even though the focus in their treatment is on combating hunger. One particular consequence of looking at matters this way is that attention is broadened from the command over food, or say income as compensation from a dam displacement. We are reminded that a person’s capability to avoid undernourishment, or marginalisation through displacement, also depends crucially on the person’s access to health care, medical facilities, elementary education, drinking water, and sanitary facilities.

The broadened perspective has bearing on accurate evaluation of administration, logistics, and in helping the restriction or ‘targeting’ of entitlement protection processes in supporting selected groups. The motive here as elsewhere and always is that of ensuring the greatest economy of resources by withholding support from less vulnerable groups. The creation of possibilities for better evaluation and targeting comes because a picture of the functioning and regularity of root causes is relied on. The picture less complete without the emphasis given **to the** above described notions. MOST research can be used to create possibilities for improved intervention by stressing such notions in its analysis of local consequences of economic, technological, and environmental phenomena.

The notions provided by Banuri and Marglin (1993) are rather difficult to characterise<sup>53</sup>. Partly because they are complex and partly because a careful evaluation of their applicability through case studies is required for a proper vignette of their work<sup>54</sup>. These are notions that constitute the termed de-responsibilisation process, namely the erosion of concern for public matters. For environmental responsibility and social responsibility alike, the things that make up de-responsibilisation are important to consider in the coping context.

The first of these is 'uncertainty' and it is argued to be born out of modernisation, itself created to free individuals from the tyrannies of scarcity and uncertainty. In a study of rural communities in Pakistan conducted for the United Nations Research institute for Social Development<sup>55</sup>, the process of market-building and state-building which integrate more expensively and intensively people into a larger political and economic framework is argued to have created uncertainty. Uncertainty was said to be the result of economic forces (notably changing prices), irregular availability of supplies (e.g., fertilisers in the irrigated village of Chuk 323), inconsistency of government policy and a dubious judiciary. The study likens the often heard 'it is the role of the government' to the Muslim's 'Insha Allah' or to a Christian's crossing of himself, a mix of fatalism and a way of dealing with growing uncertainty.

'Powerlessness' is really the same phenomenon as that of marginalisation (discussed in the upcoming case offered on poverty and resource degradation). Aspects of the argument that local participation lead to better management are worth reconsidering in the context of relinquished concern for public matters. One aspect focuses on monitoring: a smaller unit of management will necessarily be better at the local level because the flow of information is smaller and more manageable, and the quality of information is better; the simple reason being that there are less intermediaries between those who experience a problem and those who have the power of making decisions. Monitoring by those who have direct access to the resource also reduces the risks of corruption.

'Disembeddedness' refers to the argument that the perception of reality itself is different and incommensurable to out-of-context forms of knowledge<sup>56</sup>. In other words, there is a

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<sup>53</sup> T Banuri and A Marglin(1993), « *Who Will Save the Forests* », Zed Books, London.

<sup>54</sup> See T Banuri and F Amalric (eds, 1992), « *Population, Environment and De-responsibilisation: Case Studies from the Rural Areas of Pakistan* », Sustainable Development Policy Institute, Working Paper Series no. WP/POP/1992/1, Islamabad.

<sup>55</sup> Banuri and Amalric, 1992. As above.

<sup>56</sup> See Banuri T (1990), *Modernisation and Its Discontents: A Cultural Perspective on the Theories of Development*, in Apfel Marglin, F, and Marglin, S, eds., « *Dominating Knowledge* », Oxford: Clarendon Press.

knowledge form that is intrinsically lived, in contrast to one which is easily disembeded and easily communicable. It is the lived form naturally that is hard hit by but does not provide much defence against the 'one-dimensional' modern life style and the projects of those who benefit from it. People will have their own favourite example of a tradition, or language, which is blotted by modernisation, itself incompetent in fostering a better system of self care for the very people it was intended to benefit. The argument is usually that a generation or two will suffer, but the ones thereafter will be thankful.

The final element of what is thought to constitute de-responsibilisation is drawn by its author from the writing of Karl Polanyi. The contrast between non-capitalist societies and ones that are is drawn to make clear how the problem of subsistence, and correlatively of scarcity, are dealt with differently. The problem is on the one hand the responsibility of the community, not that of the individual, whose prior strategy it is to remain part of the community for political and not economic reasons. The individual acts to safeguard his social standing, his social claims, his social assets, and large catastrophes show interests to be threatened collectively, not individually. The problem of subsistence is dealt with quite differently under the ideology that relative scarcity is alleviated through individuals competing in the economic arena, and that this competition benefits all participants.

In sum, coping refers to striving in opposition to that which threatens the integrity of the various 'beings and doings' that a person can achieve. Research that helps coping may like to build a story of interrelationships between causal factors that highlights the ameliorating and reinforcing that happens. The causal factors may be tough to identify sometimes, or at least to convince people of their direct role, but research at the local level can achieve a great deal by fixing basic notions together to help the design of tools for public action. The basic notions borrowed from the above authors are often very subtle but the technical apparatus for valuing their impact on people (in the sense of providing monetary evaluation to help benefit-cost analysis of social policy), on the economy, or other effects is available. This valuation kit is likeliest to have had most spent on it directly as a result of the Exxon Valdez oil spill, for example. This and other practised and applied macroeconomics has made for a strengthened tradition in resource evaluation and modelling. However, this does not prevent the business of evaluation being sensitive to temperature, humidity, and coughs. This makes the very exercise of evaluation for sensitive rural populations, in which people spend US dollars 180 per annum

per capita, answerable in all kinds of ways to mathematical, welfare-theoretic, econometric, and other specialised issues. This is in no uncertain terms a responsibility reserved for conditional multinomial logic or elaborate contingent valuation models, rather even for seemingly benign ordinary least squares regressions on the subject of 'social capital' 57.

Nothing less than a good story (see following paragraph for meaning) that answers how different things cause each other and are interrelated is required to evict doubt. Problems of measuring and defining the different things precede the story, and the story itself has to offer much empirical testing of the proposition that it makes. At least, this is the way it goes in economics. One of the odd features of anti-growth literature (e.g., Daly) is that it has little such testing to offer on the proposition that growth is the main culprit in environmental degradation, along with population growth (although not all anti-growth people are anti-population growth).

Economic modelling of all sorts offers a manner of storytelling that can evict doubt 58. In fact, economic policy that eschews well-tested models is thought often doomed to being considered wasteful and sometimes totally ineffective. But, like other speculation it is something that will wilt in the face of evidence. It is nevertheless a good example of a category of "story of interrelationships" earlier referred to. Another category lies a step closer to how things cause each other and are interrelated. The idea is no longer to simply decompose impact into its constituent parts. We will take the example of what can go into particularizing an answer to the questions: "does poverty cause environmental degradation? or is environmental degradation (one of) the causes of poverty?" It is shown - as a prelude to a filler discussion that awaits them in the following section - how valuation tools enter the picture. Drawing on theoretical experience with policy design is encouraged (see upcoming reference to W Baumol's arguments).

The probable answer to the questions is that both cause each other and that both are also interrelated with population change, or at least rapid population change 59.

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<sup>57</sup> Deepa Narayan and Lant Pritchett (1996), « Cents and Sociability: Household Income and Social Capital in Rural Tanzania », Fourth Annual World Bank Conference on Environmentally Sustainable Development World Bank, Washington DC.

<sup>58</sup> See example of IPAT model (Impact-Affluence-Population-Technology), F.L. Mackellar, R. Chen, D. Horlacher, W. Lutz, A. McMichael, V. Mishra and A. Suhrke, Population and Global Climate Change, in G. Yohe and R. Cantor, Human choice and Climate Change, CUP, forthcoming.

<sup>59</sup> See David Pearce and J Warford, *World Without End: Environment, Economics and Sustainable Development*, Oxford University Press, 1993; S Mink (1993), *Poverty, Population, and the Environment*, World

The following picture may be put together as an example of the functioning of the poverty and environmental degradation story. Poverty causes pure time preference rates. These produce a “mining” of the resource stock available to the poor, in an analogy with the Hotelling Model<sup>60</sup>. Also, they produce less “surplus” for reinvestment in conservation practice. Also, there is less access to credit for investment in conservation. The poor may also have fewer technical options - e.g., if they have been pushed on to marginal lands incapable of sustaining output growth (see the marginalisation hypothesis below). Poverty causes higher risks. The poor lack the power and ‘connections’ to obtain goods and help (see the example of the lumberdar, or tax collector, behaving as middleman between state and people, arbitrarily providing that which benefits him)<sup>61</sup>. Most importantly, they tend to lack land and resource rights, so that they can easily be dispossessed. This contributes to short term horizons. Poverty also implies that one is less able to ensure against stress and shocks to food systems: one will try first to sell stored assets, perhaps to borrow.

Of course, there is evidence of poor communities managing their natural resources well so that there has to be ‘something else’. It is argued that a cocktail of factors needs to be present before poverty gives rise to environmental degradation<sup>62</sup>. Such factors include absence of, or poorly defined, land and resource rights; external threats to continued occupation of productive land; absence of credit institutions. Also, if population is introduced into the picture, then high fertility rates can be viewed as a ‘rational’ outcome of a household cost-benefit decision in a poverty context: the idea of children as labour, old age insurance, and more births as insurance against infant mortality. Pro-natalists like Boserup hold hypotheses that see population growth stimulating technological change (Machakos example) which raises the standard of living<sup>63</sup>. The hypotheses are disputed by the anti-natalists who see population growth as dissipating capital, including natural capital, thereby reducing the basis for sustainable growth in incomes. Examples include the reduction in fallow periods,

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Bank Discussion Paper no. 189; E Boserup (1981), *Population and Technological Change*, University of Chicago Press, Chicago; and, an econometrics hypothesis test with findings contrary to Boserupian hypotheses in the February 1996 issue of the *Journal of Environmental Economics and Management* (JEEM), Association of Environmental and Resource Economists (AERE).

<sup>60</sup> See A Ulph and M Folie, (1980), ‘Exhaustible Resources and Cartels: An Intertemporal Nash-Cournot Model’, *Canadian Journal of Economics*, vol XIII, p. 645-658, and references for the seminal 1949 piece by Harold Hotelling.

<sup>61</sup> Banuri and Amalric, 1992. As above. The example for Brazil is perhaps that of the ‘colonel’.

<sup>62</sup> Class notes from 1996 MSc Environmental and Resource Economics lectures, Professor David Pearce, Department of Economics, University College London.

<sup>63</sup> E Boserup (1981), *Population and Technological Change*, University of Chicago Press, Chicago

subdivision of land, need to move to marginal lands, increased demand for fuelwood, water, diversion of women's time for 'unproductive' work collecting water, health impacts of child bearing, reduced education due to its cost, biases against female children.

The example of the functioning of the poverty and environmental degradation story serves to explain several points. The point about the usefulness of fixing basic notions (like those of Dreze and Sen, and Banuri and Marglin) together to conduct social science research at the local level. The point about the availability of technical apparatus for valuing impacts, as well as monetary evaluation, and need for both these things in producing a condense, convincing effort. The point about highlighting the ameliorating and reinforcing that goes on in the interrelationships. And, finally, the point about not giving into appearances and relying on theoretical experience with policy design.

These points will not be unnecessarily laboured. A lot of research already takes them into account. First, the point about fixing the various notions together. Doing this provides a tighter rationale for explaining what pushes the poor to be marginalised or to degrade their natural resources at a fast rate. To this effect, identifying the middleman or other factors influencing de-responsibilisation in a local population can assist intervention once it is made. The idea of entitlements is a deep and coherent one for organizing facts. What was earlier termed lacking 'land and resource rights' or 'connections', or, even 'household cost-benefit decisions' come to be seen as having a unitary source, displaying apparent multiplicity (as they do in most economic analyses) only in its application. Capabilities and endowments, or co-operative conflict, bring attention to altogether different concerns. For example, in figuring out where to intervene and emphasise targeting, assessing administrative and logistic matters, and so on.

### **Economic evaluation as a coping strategy**

The rest of this segment of our paper will look at economic evaluation as a coping strategy. The modifications required for each of the earlier mentioned 'mathematical, welfare-

theoretic, econometric, and other issues are not taken up in this part of the paper <sup>64</sup>. The point about availability of technical apparatus can be understood in different associations <sup>65</sup>. In its association with the empirical testing of relationships, one knows that factors like influence or connections, or, large family size as insurance and its result for economic productivity, can be included in ordinary least squares regressions through the use of dummy variables. This is often carried out <sup>66</sup>. Another association deserves fuller articulation because of its potential for actuating work on aspects of coping that are done in halves.

This relates to the growing experience with the theory and methods for indirect benefit estimation such as those used in property value models, hedonic wage models, valuing longevity and health, or in the recreational use of natural resource systems. Despite the seeming association with 'environmental matters', the following sections (in all their soporific wealth) should be given the benefit of doubt, carefully read, and thought of as practicable business for sociologists, anthropologists (i.e., fields other than economics), and, yes, even people altogether bored with seminary fidelity. Welfare economic theory, the household production framework in particular, has been greatly strengthened by the attention it has recently received. The household production framework is based on the assumption that there is a set of technical relationships among goods used by households in the implicit production of utility-yielding final services. In resource economics, examining household production technology is but one approach to gaining knowledge of the relationship between demands for market goods and the value of environmental quality change.

The purpose of the preceding discussion is to say that one can use many if not all of these methods for inferring individuals' values, not for environmental amenities, but for different forms of technology that are introduced in peoples' living environment, for peoples' attitudes towards project implementing agencies or the government, for the non-monetary benefits of substituting language and habit or being sparing in one's exercise of it. While the contingent valuation method is most flexible for such applications, repeat sales methods, dose response functions, travel cost methods, etc. are available for varied applications and are

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<sup>64</sup> Dehlavi A (1996), *The World Bank, Its New Environmentalism, and Applied Macroeconomics*, Paris: Lecture Notes, University de Paris IX, Dauphine (mimeo).

<sup>65</sup> The reference to 'technical apparatus' made above in relating example of the Exxon Valdez oil spill.

<sup>66</sup> See for eg, recent issues (1996) *Journal of Environmental Economics and Management* (JEEM), or, *Contingent Valuation Method Journal*, Association of Environmental and Resource Economists (AERE).

mutually reinforcing of results produced <sup>67</sup>. The application of the discussion for MOST research is argued in the following section. As far as the poverty and environmental degradation story goes, the methods can be used to substantiate parts of Boserupian or any other hypotheses.

These methods have had many years of field testing in the USA (both in regular cost-benefit analyses, litigation work, and in the work of the Environmental Protection Agency), the WB spends on them in project work (for environmental applications see Carson et al (1995), for value of time of women carrying water in Ghana see Whittington et al (1990), or for choice of sanitary technologies in Pakistan or Burkina Faso see A Altaf ), and the Exxon Valdes spill made fortunes for people like R Carson of UCSD for his pioneering work in contingent valuation work, but it also meant that the method itself has had more than a decent chance to evolve into a complex and useful tool <sup>68</sup>.

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<sup>67</sup>, Freeman, 1994. As above.

<sup>68</sup> See D Whittington, X Mu and R Roche (1990), *Calculation of the Value of Time Spent Collecting Water: Some Estimates for Ukunda, Kenya*, World Development, Vol 18, No 2, pp. 269-280; RT Carson, NE Flores and NF Meade, (Draft, November 15, 1995), *Contingent Valuation: Controversies and Evidence*; see later footnotes for A Altaf studies.

*Box 2: Economic Evaluation as a « Coping Strategy»*

When the 'environmental revolution' arrived in the 1960s, economists were ready and waiting. To all appearances, the economic literature contained a coherent view of the nature of the pollution problem together with a compelling set of implications for public policy. Soon, advances in 'benefit estimation' and 'sampling theory', and computerised data management were combined with principles in macroeconomic theory to produce credible results for determining economic benefits from projects and legal damage compensations, for instance. The ability of economics for rendering an adequate accounting of 'non-use values', in particular, has become the hallmark for judging its success as a social science.

Moreover, pollution/other positive and negative externalities and their measurement through net benefit evaluation have become a standard textbook case of the application of the principles of microeconomic theory. The growing experience of the World Bank and other development assistance agencies in practical applications, especially in less developed countries, has fuelled this confidence in economics as a tool for pushing decision. This fact alone merits the concern that is given by regulation and governance political scientists to macroeconomic approaches to measuring values.

Two characteristics of the methods used by macroeconomists invite attention: (a) whether the data come from observations of people acting in real-world settings where they live with the consequences of their choices, or that the data comes from peoples' responses to hypothetical questions of the form 'what would you do if.....?' or 'would you be willing to pay.....?'; and, (b) whether the method yields monetary values directly or whether monetary values have to be inferred through some indirect technique based on a model of individual behaviour and choice (e.g., competitive market price, simulated markets). The literature on the subject is rather specialist in nature, strewn with names of mathematics and welfare theoretic principles, and a great deal of academic and practitioner experience with modelling and econometrics, sampling and design issues, and policy analysis.

The derivation and theoretic/practical justification of utility maximisation problems, underlying preference assumptions, and integrability conditions are all part of a day's work in the microeconomist's life. This succeeds his/her growing experience with field work in which contact is made the real-life counterpart of a digital number, and precedes his/her accurate computerised modelling and application of benefit-cost rules. It is at this point that econometrician colleagues may like to interpose on the topic of how a variable was constructed, how a curve was calibrated, how variables behave and whether this is acceptable given their clumping, not to forget the nature and quality of data itself clumped and deserving of scrutiny of past and prevailing trends in markets and matters impinging on the results. Analysis of results and their subsequent integration in policy to solve a pressing problem is also his/her responsibility, this because macroeconomists have grown to be experts in similar ways for such equally narrow categories (without getting into particular applications) as pre-income tax issues in fiscal policy. Time alone may cost a great deal of money and needless suffering in work that can easily make visible the invisible opportunity costs of resource investments.

If this were not enough to exact attention, US federal government, developing country, and international agency sanctions for evaluation and modelling exercises has almost come and gone. At a time when the United States is in the 'throes of isolationist tendencies' (I Serageldin, vice president of environmentally sustainable development at the World bank in an interview with the Washington Quarterly), the World Bank has long devised its amalgamating tongue for what macroeconomic evaluation and modelling has gone errantly and modestly changing the poorest people's lives: 'Social Capital'. The UN is about to join to create a healthy and much invited repartee for a field in which economists still are dismayed at their modest impact.

Third, the point about highlighting the ameliorating and reinforcing that goes on in the poverty and environmental degradation story. This is a point that, from another perspective, fits hand in glove with valuation methods. The methods should be used in the telling of the story to either confirm or allay the importance, for example, of health and resource productivity in ameliorating poverty, or of capital dissipation and the weight that should be attached it. The rather normative tone used betrays allegiance to the economic concept of opportunity cost, well worth pursuing if one feels that any intervention in any field of work could be improved and money saved for other interventions.

Several theoretically sound methods are often used to consider various forms of complementarity and substitutability relationships in indirect calculations. But one can also infer individuals' values for environmental amenities other than by observing their choices of quantities of market goods when they are assumed to make optimal choices subject to income, and other constraints. Willingness to pay information, which is the crucial piece of information required from such exercises, can be obtained from a variety of methods that have in common their source of data for analysis: individuals' responses to hypothetical questions that take the form, What would you do if...? or Would you pay...? Compensating surplus measures can be obtained by the contingent valuation method, the term conventionally used to refer to approaches based on this form of question.

Fourth, the point about relying on theoretical experience with policy design. This is a point that is stated well by WJ Baumol<sup>69</sup>. Baumol's work seeks to emphasise both undervalued theoretical contributions as well as those products that have been taken for granted and have precipitated policy failure. The argument made in this paper is that MOST's theme 3 research should contract and cover particular topics, and that it should hone in on the trend of building stories that expound interrelationships. It is in this expounding of relationships that it is well worth thinking over the theoretical contributions which Baumol discusses: (1) counterintuitive observations which serve to bring out unexpected relationships unlikely to be recognised by unaided common sense (e.g., "negative net-energy output" or "energy-destroying activities disguised as energy sources"); (2) the uncovering of significant

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<sup>69</sup> Baumol WJ, (1991), 'Towards the Enhancement of the contribution of Theory to Environment Policy', *Environment and Resource Economics*, vol 1, p.333-352.

exceptions (e.g., the paradoxical result that subsidies will successfully reduce emissions of all given firms while simultaneously increasing those of industry); (3) the derivations of relationships of general validity (e.g., discovering that imposing an emissions charge of appropriate magnitude will not always lead to socially optimal quantity decreases in the targeted detrimental externality).

A more detailed discussion of the background and potency of valuation methods follows. The example of the World Bank's applications is followed but not without reason. The potency of the valuation tools as coping strategies are concerned is that of being able to assist policy-makers and their advisors in evaluating trade-offs (read 'opportunity costs') in the domain of social policy.

It has been natural to refer to the activity of measuring changes in economic values of service flows as benefit-cost analysis. But since the 1950s when the techniques of conventional benefit-cost analysis were being developed and refined, there have been significant changes in the nature of the problems being dealt with and the analytical tools that have become available. The use of broader terms such as "resource evaluation" (environmental and natural resource issues), "morbidity benefits/mortality risks" (health status), or "property" and "recreational" valuation now illustrate the amendments and expansions to benefit-cost methods that have occurred.

Because policy choices about natural resources or health status are made in a political context and are likely to involve comparisons and trade-offs among variables for which there is no agreement about commensurate values, monetary benefit and cost data will not always be the determining factors in decision making. But benefit and cost estimates are an important form of information. Their usefulness lies in the fact that they use easily understood and accepted rules to reduce complex clusters of effects and phenomena to single-valued commensurate magnitudes, that is, to rupees. The value of the benefit-cost framework lies in its ability to organise and simplify certain forms of information into commensurate measures. The results obtained in managing opportunity costs are obvious.

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<sup>70</sup> See for example the US Army Corps' old method for estimating the benefits of flood control projects: calculating the reduction in the costs of replacement repair, and cleaning up after a flood for each possible flood stage, multiplying the monetary damages by the probability associated with the level of flooding, and summing across all possible flood stages (Freeman, 1994). Of course, we would now add to the repair and cleaning costs some monetary measure of the loss of utility associated with the flooding events.

Over the last two decades, various valuation methods have attracted an increasing amount of attention in the environmental economics profession and the broader environmental policy community. At the country level environmental issues have become increasingly significant in energy, agriculture, urban, industry and transportation sector work. Valuation techniques are used by analysts in connection with an economic-environmental integration that has been significantly enhanced by Bank analysis<sup>71</sup>. Among the Banks' developing country project work, it is now common to combine standard welfare economic theory with advanced benefit estimation and sampling theory, computerised data management, and participatory methods to suggest economic benefits from improved water services, or, to determine compensation for resettlement or lost rights.

The Bank's recent concern with social capital and 'showing convincingly the process of [its] accumulation and depletion, and how to measure both its investment levels and its returns' will involve valuation<sup>72</sup>. Already there may indirectly however be goals or loan conditionalities addressing social and human development in agriculture, forestry, energy, trade and industry<sup>73</sup>. The WB may nevertheless be far from prepared to include social capital as an explicit component of its loan conditions in adjustment operations, moral and political reasons may already oppose defining the concept in the academic literature.

Be this as it may, the interest with social capital suggests that goals, conditionalities, and projects could be on their way to charging to include tighter social concepts. This could mean compiling databases on social capital<sup>74</sup> or producing impact assessments in projects that are attentive to a broader understanding of the human condition<sup>75</sup>. I wish to sharply

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<sup>71</sup> Mainly through regional and country specific studies. At the regional level, essential links between country-wide policies - specifically those relating to social issues, population, and poverty - and the environment have been identified in major studies for the Africa Region and in a recent stocktaking of environmental initiatives (see WB, 1989 Sub Saharan Africa: from Crisis to Sustainable Growth. or Cleaver and Schreiver 1991 the Population, Agriculture and Environment Nexus in Sub Saharan Africa, Africa Region Technical Paper)

<sup>72</sup> I Serageldin (1996), Journal of Public Affairs, Vol III, Issue 2.

<sup>73</sup> Warford J, et al (1994), *The Evolution of Environmental Concerns in Adjustment Lending: A Review*. Working Paper no. 65, Washington DC: World Bank. In this study 81 loans were examined, representing about 65 percent of total adjustment lending during FY88-FY91 period and including forty-seven structural and thirty-four sectoral adjustment loans in 58 countries. Other loans were excluded because the study was concerned with implications for the environment alone and those remaining were mainly financial sector adjustment programmes considered to have no direct or traceable links.

<sup>74</sup> Concepts of 'poverty and equity' may feature as is suggested by Serageldin (Serageldin, 1996- pp 201).

<sup>75</sup> A WB (April, 1996) workshop to discuss the issue of measuring social capital explored ideas drawn from studies on 'micro/macro-institutional approaches', studies of 'trust', search for 'patterns', the 'residual approach', the 'price relatives' method, and the 'investment' method, among others (Serageldin, 1996- pp 198). While Serageldin talks in his paper of investing in human capital for economic development, he also considers the 'glue that holds society together' and human well being in general.

contrast impact assessments that involve descriptive analysis from enumerators or analysts doing, say, public opinion polling concerned with peoples' attitudes and opinions (usually on preferences over public or mixed private-public goods) and translation of these into monetary values. They could, as opposed to survey techniques, just as well be inferring a market demand function from the demand for surrogate commodities, but so long as willingness to pay (WTP) information is gathered it is no longer description but 'valuation' of some form<sup>76</sup>.

As far as projects are concerned, the WB often has to rely heavily on WTP information. Examples from WB urban sanitation planning abound<sup>77</sup>. A wide range of sanitation technologies may be available, however, not all of them may be technically feasible or wanted in a given project area. Thus, to be responsive to consumer demand and preferences, planners must first find out which technology or service options are technically feasible in a given project area. Planners also must make preliminary recommendations on the feasible technologies to use and the prices to charge for them in each different parts of the project area. A key input information required for making these recommendations is how coverage is likely to vary in different parts of the project area with changes in fees or tariff rates for each of the feasible technologies. This piece of information is known as the willingness to pay function.

Planners require such information also for controlling congestion or overexploitation of resources<sup>78</sup>. Whether it is the Travel Cost, Contingent Valuation, or other methods, it is increasingly being recognised that omission or misspecification of the opportunity cost of time will bungle what is frequently the greatest real cost to the individual, greater than the monetary cost of travel or related expenses presumed to be the predominant component in the

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<sup>76</sup>Please refer to Freeman, 1994 -as footnoted earlier, for an explanation of the term 'willingness to pay' and its centrality, in terms of data analysis, in the business of evaluation.

<sup>77</sup>For a survey of methods see Whittington D and J Davis, 1993, 'A Review and Assessment of Techniques for Systematic Client Consultation. A Report to the WB; for applications see: Altaf MA and JA Hughes, 'Willingness to Pay for Improved Sanitation in Ouagadougou, Burkina Faso (WB, forthcoming), Whittington et al 'Willingness to Pay for Improved Sanitation in Kumasi, Ghana: a Contingent Valuation Study', WB, 1991; Lauria DT, D Whittington and K Choe (1993), 'Household Willingness to Pay for Improved Sanitation Services in Calamba, Philippines. A Report for the WB', Whittington D, DT Lauria and K Choe (1993), 'Household Willingness to Pay for Improved Sanitation Services in Davao City, Philippines. A Report for the WB'.

<sup>78</sup>See imputation of a demand curve from travel cost data to estimate the effect of raising entrance fees in Sodwana Bay National Park, A Dehlavi (1996) 'Benefit Estimates from Continuous Demand Models: Sodwana, South Africa'; MSc thesis supported by the Centre for Social and Economic Research on the Global Environment (CSERGE) and the Natal Parks Board (NPB), South Africa.

price of activities<sup>79</sup>. Attention is now falling on other social aspects that are all relevant to ‘cost-efficiency’, ‘responsiveness to consumer preferences’, and ‘accountability’<sup>80</sup>. And now, fortuitously, ‘social capital’ will no longer be dealt with via its qualities or relations, but as independently existing, there for the measuring and the graduating with allowance for irregularities. The allowance will be vastly extended if the World Bank co-operates with specialised agencies and seeks cost and time effective social science inputs into otherwise rather dry mathematics and statistics, some consultancies, some deregulation to NGOs, and altogether rather tentatively conducted policy design and conduct.

In reflection of their maturation, the travel cost and contingent valuation methods, the US federal government has listed in 1973 the first as an approved procedure as part of principles and standards for evaluating water projects and the second in 1976<sup>81</sup>. The DC Court of Appeals has sustained the Department of Interior’s conclusion that the second method was a ‘valid, proven technique’ which, incidentally, since the 1989 Exxon Valdez spill into Prince William Sound, has been regularised and made very lucrative by the Department of Commerce’s National Oceanic and Atmospheric Administration and the \$100 million in criminal fines and \$900 million in natural resource damages<sup>82</sup> that it is competent to urge. Importantly, the successes of valuation methods for development and environmental projects in the less developed countries has been recently documented and studied<sup>83</sup>. To the WB, the ability for economics to render an adequate accounting of non-use values<sup>84</sup> surely has become the hallmark for judging its success as a social science. The Bank is ready to

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<sup>79</sup> See research supported by the Infrastructure and Urban Development Department of the WB and the United States Agency for International Development’s Water and Sanitation for Health Project (WASH): (Whittington, Mu and Roche, 1990) ‘Calculating the Value of Time Spent Collecting Water Some Estimates for Ukunda, Kenya’. Notice that after presenting two procedures for estimating the value of time spent hauling water (the conditional multinomial logit model and revealed preference), the paper concludes abruptly as it must on the policy implications for the choice of service level based on a value which turns out to be the market wage rate or more for unskilled labor. Other studies, expensively financed for similar ends will corroborate the results and WB or USAID projects will be made more efficient and be legitimised in the eyes of western trained scholars.

<sup>80</sup> The earlier footnoted study in Ouagadougou calibrates religion and habit among reasons for choice of technology for on-site sanitation systems. Depending on the study population and the nature of the project, direct survey or revealed preference methods could use much subtler social-behavioral variables (have done in a JEEM 1996 article on investing in children as a part of one’s insurance and productivity strategy).

<sup>81</sup> WM Hanemann (1992), notes on history of environmental valuation in the USA, Department of Agriculture and Resource Economics, University of California, Berkeley.

<sup>82</sup> Repayments for the latter to be made by Exxon Valdez without interest up until 2000.

<sup>83</sup> DW Pearce, D Whittington, S Georgiou and D Moran (1996), *Economic Value and the Environment in the Developing World* Edward Elgar, Cheltenham, for United Nations Environment Programme (UNEP), Nairobi.

<sup>84</sup> Warm glows that people get from knowing that things exist that they may never visit, or, the general consent expressed by a community over wanting to preserve a particular tradition over benefits gained by some importunate reform. Both examples of measurable nonuse values, both hotly contested descriptions.

derive policy implications from valuation and extending it to human capital evaluation must be a welcome move 85. --

[1] The premise underlying the possible use of valuation in social science is that the economic values of people's achievements of their capabilities can be a valuable part of the information base supporting social management decisions. This premise is substantiated by the WB's concern with defining human capital and measuring it. It is also substantiated by issues currently being studied by the authors in the areas of applied macroeconomics and regulation and governance in political science.

[2] The WB may not be in a hurry to implement its work on defining, measuring, and using measurements of social capital. Yet it is nothing short of bizarre that non-market valuation methods and appraisal methodologies, including travel cost, hedonic pricing, unit day values, and contingent valuation, currently go errantly compelling action and one falls to one's lot as it is determined that time saved by not having to haul water to more distant sources may be put to more productive uses like child care, wage employment, agricultural labour, and food preparation, or, that compensation for dam displacement is set at Y rupees based on a procedure run by a few economists and an anthropologist.

[3] At present, the World Bank will lead research on social capital that will render project applications and guide national development (environmental and social) policies. Methods that have firmly been relegated to a superior position in economic theory and practice as means of rationalizing decision in conditions of conflict through a single scale on which apparently disparate considerations can be measured, added, and balanced have gone unchecked for their consequence. Who is to throw in, interpose abruptly when someone's fate is too quickly decided, or remark parenthetically as policies and accompanying methods are forged?

[4] This is a pressing question whose answer should be envisaged in unison between agencies who fund the support of social management decisions, those who research it, those troubling units about which social management problems arise, namely individual persons, individual human lives each of whom has a claim to consideration, and of course those to

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85 Andrew Steer, as head of the WB's Environmental Division, presented the Bank's vision of Social Capital as one of four forms of capital to international economics practitioners early in 1995 at Harvard University's Kennedy School of Government.

whom they leave their interests to be pursued and protected - the politicians, planners, and advisors.

## Conclusion

The following section that ends this paper will make explicit in some amount of necessary detail the working of valuation theory and its application. This is done in order that the reader is acquainted with an obscure yet important aspect of the current valuation work that is in vogue.

In economics theory, welfare changes for non-marketed goods such as services obtained from recreational use of coral reefs (read 'from attending meetings in your village/community where you can discuss common issues such as health and education', e.g.) have been defined as the area underneath the appropriate Hicks-compensated demand curve for the non-marketed good. However, this function cannot be estimated from direct observation of transaction in this good.

The degree to which inferences can be made about changes in some parameter of social quality (switching over from resource economics to social capital discourse),  $q$ <sup>86</sup>, can be drawn from some market observation, as well as the appropriate techniques to be employed for this exercise, both depend on the manner in which  $q$  enters individual utility functions - producing utility indirectly as a factor input of a utility yielding marketed good, appearing as an input in the household production of utility yielding marketed goods, or an argument in the individuals' utility function and thereby producing utility directly. The rest is taken care of by the Slutsky matrix of substitutability terms being semipositive and negative semidefinite, and some other details, so that demand function systems then succumb to exact measures, be integrated to yield the expenditure function, in turn needed for deriving the indirect and direct

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<sup>86</sup>For example, trust and social cohesion in village family and other ties being negotiated as collateral in place of money for the very same type of transaction.

utility functions. Willigs' bounds can always be used when all is too complicated, but there is no escaping.

Whether the relationships can be implicitly or explicitly be modelled as involving a form of household production, or that some other form of relationship exists between  $q$  and market goods is something that could be selected and participated in even at this level of detail and earliness in valuation exercises depending on how delicate the subject happens to be. Note that models that assume a set of technical relationships among goods bought on the market by households and the implicit production of a service that finally yields utility to an individual need not be about putting money value to people, and so summarily dismissed as an immoral undertaking. Economic valuations exercises already use values for many sensitive things, emphasising some and not others, all based on what they are free to do or have been ill advised over.

Such important areas as specifying preferences by structural restrictions of perfect substitutability, weak substitutability, perfect complementarity, and weak complementarity and commodity separability conditions are areas in which heated debate should be encouraged. This may be done in an adversarial fashion, along the lines of the Chomsky Skinner debate over the responsibility of intellectuals or in amicable fashion to ensure a positive outcome. A mix would be good. Certain values need not be examined at all, some may and so work needs to be performed with care. Practitioners and consultants need to get used to consulting as well as being consulted.

There are other equally crucial points of engagement in valuation work where the middle course steered by the authors' current research between technical assistance and traditional project appraisals fits neatly with the experience of MOST, the offices of UNESCO, and other cost effective UN expertise and organisation. These relate to issues in model specification: time concepts when there is something other than a static analysis, biases of all forms, and aggregated data use and consequences for decision-makers' self images along with the actions that they will regularise and valuation that they will trust. There remain inexpensive political and sociological accompaniments to the assembly at the site of macro and micro policies, be it for pre-tax incomes in fiscal policy, or, micro variables such as precipitating credit relief, and this in particular offers opportunities for disproportionate policy impact.