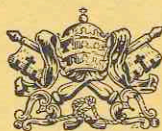


ISSUES ON INTERNATIONAL DEVELOPMENT AND SOLIDARITY

Proceedings of the Study Week
Science for Development in a
Solidarity Framework

Edited by:

ALBERTO QUADRIO CURZIO
*Chairman of the Faculty of Political Science
Catholic University
Milan, Italy*



PONTIFICIA
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SCIENTIARVM

EX AEDIBVS ACADEMICIS IN CIVITATE VATICANA

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The opinions expressed with absolute freedom during the presentation of the papers and in the subsequent discussions by the participants in the Study Week, although published by the Academy, represent only the points of view of the participants and not those of the Academy.

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CONTENTS

<i>Presentation</i> by G.B. Marini - Bettòlo	XI
<i>Allocution of the Holy Father, John Paul II</i>	XIII
<i>Forewords</i>	XIX
I - Croire au Développement, by Card. R. Etchegaray.....	XXI
II - Toward a Solidarity Culture, by Mgr. P. Rossano.....	XXIII
III - Opening Remarks, by Prof. G.B. Marini-Bettòlo.....	XXVII
A. QUADRIO CURZIO: <i>Introduction on Development,</i> <i>Interdependence and Solidarity</i>	XXXV
I - Some references to the <i>Sollicitudo Rei Socialis</i>	XXXV
II - The nature of the 1963 and 1989 Study Weeks.....	XXXIX
III - Issues on international development and solidarity.....	XLV
IV - The debt problem and international development.....	XLVII
V - Global interdependence.....	XLIX
VI - Sectors, factors and solidarity	LI
VII - Concluding remarks.....	IV

- PART 1 -

THE DEBT PROBLEM AND INTERNATIONAL DEVELOPMENT

1.1) J.A. KREGEL: <i>Internal and external aspects of the international debt problem</i>	3
1 - Economic individualism and economic solidarity.....	3
2 - The limits on the law of the market.....	4
3 - The "law of motion" and economic solidarity.....	5
4 - The "law of the market" applied to relations between private banks and sovereign nations.....	6
5 - Is there a market solution?.....	9
6 - Has there been a case of "market failure"?.....	11
7 - Helping the market with internal and external solidarity.....	12
8 - A proposal for the "external" debt problem.....	13
9 - ... And for the "internal debt" problem.....	14

1.2) M.A. QURESHI: <i>The international debt strategy according to the World Bank's perspective</i>	17
1 - Introduction.....	17
2 - Capital transfers to developing countries.....	17
3 - The debt problem and international capital flows	19
4 - Debt strategy to restore growth.....	20
5 - Prospects for progress.....	20
6 - Conditions for debt crisis resolution.....	22
7 - Reviving private capital flows	25
8 - Concluding remarks.....	26
1.3) M. CAMDESSUS: <i>Economic interdependence from the IMF's perspective</i>	29
1 - Introduction.....	29
2 - Industrial countries.....	30
3 - Middle-income developing countries	33
4 - Low-income developing countries.....	35
5 - Centrally planned economies	37
6 - Concluding remarks	38

- PART 2 -
GLOBAL INTERDEPENDENCE

2.1) E. GRILLI: <i>The new terms of Western economic activity toward the East and the South</i>	43
1 - Introduction.....	43
2 - Economic adjustment: the model	46
3 - Adapting the model to developing countries.....	47
4 - Adapting the model to modified planned economies	49
5 - Economic adjustment: the responses of the West.....	52
6 - Middle-income highly indebted countries	53
7 - Low-income countries	57
8 - Eastern European countries	59
9 - North-South-East: what remains to be done.....	61
2.2) E.V. IGLESIAS: <i>International economic cooperation: a Latin American perspective</i>	65
1 - Introduction.....	65
2 - The Latin American economic situation and its prospects for the nineties	67

3 - The crisis of the external debt and negative resource transfer	69
4 - Conclusions.....	71
2.3) O. BOGOMOLOV: <i>International cooperation from the Soviet point of view</i>	
1 - Introduction.....	75
2 - The effects of technological progress	76
3 - Differences between world areas:	
3a) East and West.....	80
3b) North and South.....	80
4 - The new image of the world economy.....	81
5 - What can bring disorder into the world economy?.....	84
6 - The decline of the US leadership	84
7 - The debt problem in Southern countries.....	87
8 - The crisis of Stalinism.....	88
9 - Miscalculations and threats.....	90
10 - Overcoming isolation from the world economy.....	92
11 - Western support?.....	92
12 - What is required to strengthen international economic security?.....	94
13 - Concluding remarks.....	96
2.4) A. COSTA: <i>Assistance to the Soviet Union: what needs to be done</i>	
1 - Introduction.....	97
2 - Gorbachev's policy dilemmas.....	98
3 - Economic policy in the short/medium term	101
4 - Structural policies in the longer term	103
5 - Annex: Assistance to the USSR - operational aspects	107

- PART 3 - SECTORS, FACTORS AND SOLIDARITY

3.1) J.N. BHAGWATI: <i>The role of GATT and the necessity of cooperation in international trade</i>	117
1 - Introduction.....	117
2 - Rise of unfair trade	118
3 - Issue of managed trade:	120
3a) Managed trade anyway?	121

3b) The "Japan-is-different" argument.....	121
3c) High-tech support?.....	122
4 - Aggressive unilateralism.....	123
5 - Concluding remarks.....	124
3.2) R. PRODI: <i>The industrial system and solidarity</i>	125
1 - Introduction.....	125
2 - International solidarity.....	127
3 - The successful story of South Korea.....	129
4 - The case of North Africa.....	130
5 - Central and Latin America.....	130
6 - The problem of Eastern countries.....	131
7 - Concluding remarks.....	133
3.3) A. VALDÉS: <i>Agriculture and the need of solidarity</i>	135
1 - Introduction.....	135
2 - On the relationship of nutrition and income: the statistical evidence.....	136
3 - The framework.....	137
4 - Policy implications.....	142
5 - The distinction between urban and rural populations.....	144
6 - Concluding comments.....	145
3.4) E. NOEL: <i>Solidarity for agriculture promotion</i>	149
1 - Introduction.....	149
2 - Agriculture modernization.....	150
3 - The EC endeavours.....	152
4. - Conclusions.....	154
3.5) F. MAYOR: <i>The UNESCO's proposal: Education and training within the framework of international cooperation</i>	155
1 - Introduction.....	155
2 - The lack of resources.....	156
3 - The problem of science teaching equipment.....	157
4 - The project.....	158
5 - Concluding remarks.....	159
3.6) G.B. MARINI-BETTÒLO: <i>Solidarity for environmental protection and water resources</i>	161
1 - Introduction.....	161
2 - Cooperating to fight pollution.....	162
3 - Solidarity for the environment protection.....	164

4 - Energy and environment.....	165
5 - The case of fuel-wood.....	167
6 - Water and development	169
7 - Concluding remarks	173
 3.5) L. PASINETTI: <i>Unemployment and the</i> <i>"principle of solidarity"</i>	175
1 - Foreword.....	175
2 - Modern societies as the outcome of the "industrial revolution".....	175
3 - Involuntary unemployment	176
4 - Three types of involuntary unemployment.....	177
5 - Institutional failures and the emergence of the "principle of solidarity".....	178
6 - Mainstream economics and the efficiency/equity separation.....	179
7 - The possibility of alternative economic theories.....	181
8 - A model of pure production	182
9 - The three types of involuntary unemployment considered within the two alternative schemes.....	184
10 - Features of the pure production model and an important implication.....	187
11 - A methodological shift.....	189
12 - Back to the Papal pronouncements.....	190
13 - Concluding remarks on the question of interference with economic theory	191
 <i>Curricula Vitae of Participants</i>	195

PRESENTATION

G.B. MARINI-BETTÒLO

President of the Pontifical Academy of Sciences

From the 23rd to the 27th of October 1989, the Study Week *"Science for development in a solidarity framework"* was held at the seat of the Pontifical Academy of Sciences in the Vatican.

At the end of the Study Week the Holy Father John Paul II addressed an allocution to the participants during a special audience; the allocution, which gave a particular relevance to the Study Week, is published in this volume. Those who attended the Study Week have sent a warm and deferential message of gratitude to the Holy Father, stating that the ideal setting provided by the Pontifical Academy of Sciences had enabled them to discuss problems of great seriousness in a quiet atmosphere of intellectual freedom. They expressed the hope that their efforts would contribute, however modestly, to the progress of science and to an improvement of the human condition.

Along these lines the Study Week also had the attention of S. E. Cardinal Roger Etchegaray and of Archbishop Pietro Rossano, whose speeches given at the Study Week are published here.

The Study Week was organized under my direct supervision by Professor Alberto Quadrio Curzio and by Rev. Ing. Renato Dardozi, with the special help of Mgr. Martin and with relevant contribution by Fr. Gianpaolo Salvini S.J..

On the Study Week we have already analitically reported in a booklet called *"Science for development in a solidarity framework"*, edited by myself and Alberto Quadrio Curzio for the Pontifical Academy of Sciences in 1990.

This volume, instead, is the final outcome of the Study Week and presents a very different structure as compared to the booklet. This is due to the results of the discussion during the Week and to the

scientific evaluation of the editor of the volume, Alberto Quadrio Curzio, who has privileged the economic aspects of the Week itself, leaving aside some contributions we reported on in the 1990 booklet.

* * *

Before closing this volume, thanks are due to the Centre of Research in Economic Analysis, International Economics and Development Economics (CRANEC) of the Catholic University of Milan for the collaboration in the whole initiative.

Thanks are also due to those who have collaborated in the technical secretariat of the Study Week (M. Maggioni and G. Colangelo) and in the editing of this volume (L. Sioli).

ALLOCUTION OF THE HOLY FATHER
TO THE PARTICIPANTS IN THE STUDY WEEK,
HELD IN SALA DEL TRONO, PALAZZO APOSTOLICO,
VATICAN CITY, ON 27.10.1989

ALLOCUTION OF THE HOLY FATHER

Your Excellency, Mr President, Distinguished Members of the Academy

1. It gives me great pleasure to greet all of you who have participated in the Study Week organized by the Pontifical Academy of Sciences on the theme "Science for Development in a Solidarity Framework". The topic which you have addressed is indeed complex, and will certainly require the sort of further study which only eminent scientists like yourselves can provide. Nonetheless, the topic is one of vital importance for the solution of one of the most urgent problems facing today's world: that of a development which can take place within a framework of genuine solidarity among peoples and States.

2. The Church has always had a special concern for the full development of peoples, as is evident from the impressive body of her social doctrine. This is particularly true in our own day, when this issue has taken on such immense proportions. Indeed, throughout its long history, mankind has never known an era of prosperity even vaguely comparable to that which the world in this second half of the twentieth century has come to enjoy. And yet, this prosperity, on closer analysis, has proved to be distorted and unbalanced. It is a prosperity which benefits but a small proportion of mankind, while leaving the majority of the world's inhabitants in a state of underdevelopment.

Development has thus given rise to very serious problems which the Church could hardly fail to address. These problems are not only of the political and economic order; they likewise involve the moral order. In effect, what is at stake is man himself. And the Church's primary duty is to make her voice heard in every problem where man comes into play—in his dignity as a human person; in his right to free association in view of a better and more humane growth; in his right to freedom.

3. In essence, the Church has chosen to intervene in the problem of development for two reasons. First, she desires to *proclaim God's plan for mankind* as that plan emerges from Christian Revelation, which has its culmination and definitive expression in the teaching of Jesus. But the Church also desires to offer a "reading" of the problem of development *in the light of the Gospel and the natural moral law*

which she has the duty both to safeguard and to apply to changing historical situations.

In doing this, she hopes to make evident the distortions and injustices which do harm to human persons, to indicate their causes, and to point out those principles and courses of action necessary for a balanced and just development. This, in fact, is precisely what Pope Paul VI attempted to do in 1967 with his great Encyclical *Populorum Progressio*. In the twenty years that have passed since that important document was issued, great changes have taken place in the world. In some areas, signs are present which allow some hope of resolving the problem of development. Yet, in other areas, the lack of progress towards development has reached truly catastrophic proportions. For this reason, I considered it my duty to take up the teaching of Pope Paul VI and to develop it further in my Encyclical *Sollicitudo Rei Socialis* of 30 December 1987. I am very pleased that this Study Week echoes an important theme of that Encyclical.

In the Encyclical, I noted that the conditions of developing countries "have become notably worse" (op. cit., No. 16) because of "a too narrow idea of development, that is a mainly economic one" (ibid., 15). The developed countries bear responsibility for this, for they "have not always, at least in due measure, felt the duty to help" countries that are cut off from the world of prosperity (ibid., 16). I felt it necessary to "denounce the existence of economic, financial and social mechanisms which, although they are manipulated by people, often function almost mechanically, thus accentuating the situation of wealth for some and poverty for the rest" (ibid.). Moving beyond merely political or economic readings of the situation — as important and as valuable as these may be — and making a theological reading of those mechanisms or processes, I went on to speak of certain "structures of sin". Two factors in particular have contributed to creating, fostering and reinforcing these "structures", thus making them even more capable of conditioning human conduct: an exclusive desire for profit and the thirst for power which aims at imposing one's own will upon others. "Obviously, not only individuals fall victim to this double attitude of sin; nations and blocs can do so, too. And this favours even more the introduction of the 'structures of sin' of which I have spoken. To diagnose the evil in this way is to identify precisely, on the level of human conduct, the path to be followed in order to overcome it" (ibid., 37).

4. What, then, is the path to be followed?

It is the Church's task to awaken consciences and invite them to

face the fact that today, like Lazarus at the door of the rich man, millions of people are in dire need while a great part of the world's resources are employed in areas which have little or nothing to contribute to the improvement of life on this planet. The Church has forcefully affirmed that solidarity is a grave moral obligation, for nations as well as for individuals.

The virtue of solidarity finds its deepest roots in Christian faith, which teaches that God is our Father and that all men and women are brothers and sisters. From this belief flows Christian ethics, an ethics which excludes every form of selfishness and arrogance and seeks to unite persons freely in pursuit of the common good. Christian ethics gives rise to the conviction that it is unjust to squander resources which might be necessary for the lives of others. Today a new awareness of this moral imperative is needed, given the present conditions of such large portions of the human race.

Solidarity also leads to the collaboration of all social groups, which are thus called to look beyond the horizons of their own self-interest, making solidarity a "culture" to be fostered in the formation of the young and made evident in new patterns of behaviour. Indeed, only a widespread "culture of solidarity" will permit that exchange of goals and energies which seems so necessary if a truly humane level of life upon this earth is to be reached.

5. Practically speaking, what must be done if the principle of solidarity among individuals and peoples is to take more widespread root? The Church, for her part, cannot offer technical solutions to the problem of underdevelopment as such, since she has neither the mission nor the ability to state those contingent ways and means by which human problems of the political and economic order can and should be resolved. At this point, the role of the sciences comes into play.

It is here that we find the real significance of this Study Week and of other similar undertakings aimed at developing the directions charted by the Encyclical. Their object is to analyse and study more intensively — making use of an interdisciplinary and scientifically tested approach — the cultural, economic and political causes of underdevelopment; to identify with a rigorous and precise analysis the processes that perpetuate underdevelopment; and to suggest models of development which can be considered workable in present historical circumstances. Such analysis seeks to indicate the ways and proper times to intervene, the conditions, means and tools necessary for passing from underdevelopment to a balanced development, that is, a "development in a solidarity framework".

6. Among the many problems which must be taken into consideration, there is one in particular which I would like to bring to your attention. It is the problem of the international debt, a debt which weighs heavily, at times with devastating consequences, upon many developing countries. It is not a problem which can be seen in isolation from others; rather the debt problem is intimately connected with a host of other issues, such as those of overseas investment, the equitable working of major international institutions, the price of raw materials, and so forth. I would only observe that this problem, in recent years, has become a symbol of already existing imbalances and injustices whose burden is often borne by the poorest segments of the population, and it points to an apparent inability to reverse a baneful process which seems at times to take on a life of its own.

The Holy See has already had occasion to address this problem on an official level (cf. Pontifical Commission "Iustitia et Pax": *At the Service of the Human Community: an Ethical Approach to the International Debt Question*, 27 December 1986). And yet, the Church continues to hear pleas of her Pastors in those countries which labour most under this enormous burden, a burden which seems without reprieve and which gravely compromises the very possibility of a free and positive development.

I have underlined the importance of this issue because, once it is dealt with equitably, competently and in a spirit of authentic solidarity, it has the potential to become a genuine symbol and model of creative and effective resolve in the face of the other complex and pressing issues of international development.

The solutions to these problems are neither simple nor close at hand; yet, once they are discerned with wisdom and courage, they foster hope for a world where solidarity would no longer be merely a word, but an urgent task and a conviction which bears fruit in action. The virtue of solidarity, practised at a deep and authentic level, will demand of all parties both a willingness to be involved and a deep respect for others. Only in this way will the great potential resources of the developing countries *be transformed* into a concrete reality that has much to offer to the entire world.

Distinguished Members of the Academy and eminent Professors: I have only wished to point out some of the more pressing issues and idea which you have been discussing during this Study Week. In expressing my hopes that your labours have been fruitful, I invoke upon all of you abundant divine blessings.

FOREWORDS

CROIRE AU DEVELOPPEMENT (*)

Card. ROGER ETCHEGARAY
President, Pontifical Council for Justice and Peace

Au terme de ce "study week" et avant le "round table" auquel je ne pourrais être présent, je voudrais simplement dire un mot pour remercier au nom du Conseil Justice et Paix l'Académie Pontificale des Sciences. En accueillant ces jours-ci des hommes si compétents, si disponibles, penseurs et acteurs du développement, l'Académie Pontificale a fait une sorte d'acte de foi dans l'homme, dans sa capacité à maîtriser les forces les plus complexes qui entraînent l'économie du monde vers les rivages toujours mouvants du développement.

Croire au développement, cela me paraît aujourd'hui le plus urgent, car beaucoup en arrivent à douter du développement lui-même face aux échecs constatés malgré toutes les décennies et les stratégies ingénieusement et généreusement déployées par la Communauté Internationale. Hier, avec Monseigneur Martin, nous recevions au Conseil Pontifical Justice et Paix les Evêques de l'Equateur en visite quinquennale auprès du Pape; ils nous disaient que la fameuse brèche ("gap") entre les riches et les pauvres, entre les peuples de la faim et les peuples de l'opulence, pour reprendre l'expression de Paul VI, cette brèche est plus béante que jamais, les disparités sont plus criantes que jamais. Aujourd'hui le développement exige des penseurs et des acteurs qui croient en l'homme et en sa promotion totale et solidaire, telle que l'a indiquée Jean-Paul II dans "Sollicitudo Rei Socialis". Je pense qu'une rencontre comme celle-ci, dans la diversité même des recherches, des idées, pourra aider le Saint-Père dans sa préoccupation constante de la "Chose Sociale", pour reprendre le titre de son encyclique. Le problème de la dette internationale aura été pour vous un bon révélateur, au sens chimique du mot, de l'état présent du monde dans ses aspirations les plus profondes et les plus humaines.

(*) This speech was delivered at the end of the Study Week. While part of its contents reveals such a character, the editor believes that its overall meaning can be useful also as a foreword to this volume.

TOWARD A SOLIDARITY CULTURE (*)

Mgr. PIETRO ROSSANO

Rector, Pontifical Lateran University, Rome

I would like to put forward a few ideas on the theme of a *solidarity culture*, taking what President Marini-Bettòlo wrote as my point of departure: Every development strategy and scheme is destined to fail, unless it is inspired by a spirit of solidarity and a profound respect for the identity of all people.

1. In his encyclical, *Sollicitudo Rei Socialis*, Pope John Paul II expresses the hope that those responsible for the good of society "may become fully aware of the urgent need to change the spiritual attitudes which define each man's relationship with himself, with his neighbour, with even the farthest-flung human community, and with nature" (n. 38), and paraphrasing Pius XII's motto "*Opus iustitiae pax*" he suggests "with the same precision and with the same biblically inspired boldness (cf. Isaiah 32,17; James 3,18): *Opus solidaritatis pax*".

Those compiling the Latin text of the encyclical found themselves in difficulty because there is no Latin term *solidaritas*: thus they rendered this recurring theme as "*Opus hominum coniunctionis pax*", or with words like "*coniunctio*", "*concordia*", "*consensio*", or "*solida nominum coniunctio*".

At this point we might recall what St Augustine had to say with regard to the term *Salvator*, which didn't exist in classical Latin because there had been no "salvation". Thus also there was no equivalent for the term "solidarity", or at least not as might have been given verbal form. From the Latin *solidus*, meaning compactness and cohesion, judicial language derives the terms: "jointly and severally binding" and "joint debt" which one honours together with others. From this

(*) This speech was delivered at the end of the Study Week. While part of its contents reveals such a character, the editor believes that its overall meaning can be useful also as a forward to this volume.

we arrive at being "in agreement with" and being "in solidarity with". I remember that Prof. G. Violardo, later Cardinal, told me how the idea of moral body in Roman law, developed under the influence of the doctrine of the "mystical body".

2. When it comes to solidarity, western culture is conspicuously lacking if compared with Asian and African cultures, for example, where the bond that ties men together, the cosmos and the Divinity, is felt with greater spontaneity. According to his biographers, Gandhi recited the beginning of the *Isa Upanishad* every morning, which says: "To the Lord belongs all that exists in the universe, animate and inanimate. Use nothing, therefore, unless you really need it, and know to whom it belongs". A profound sense of cosmic solidarity is expressed here, a social and economic solidarity that invites one to behave with restraint.

An African proverb effectively illustrates the bond of solidarity that unites mankind: "If you see a group of bandits attacking someone, do not say 'leave that man alone', but 'leave us alone'; and if you see a group of vultures profaning a corpse, do not say 'leave that corpse alone', but 'leave us alone', because all men are part of the same whole".

3. The kind of *science*, in particular, which has developed since the time of Galileo, has followed a path which someone once described as "perverse", because it has become abstract, fragmenting, objectifying, gauging and dominating, often detaching itself from the mysterious complexity of the cosmos, of man and society, and moving towards a point where it often loses contact with the totality of creation and with all that is spiritual.

Anyone who looks at the fragments of Empedocles' *Peri physeos* today, with his mythicizing and humanizing of the elements and cosmic forces, realises that in its vertiginous and admirable climb, science has lost something of its origins. Perhaps the Asian culture and the different course science follows there, might stimulate the West to seek a new equilibrium and to correct its own course by recovering a holistic vision which offers useful premises for solidarity.

Even more thought-provoking is a reflection on *western humanism*, which developed from the *individualistic root* of the Greco-Roman tradition. One of the archetypal books of our culture is the *Iliad*, with its exaltation of the hero, the strong man, the victorious in-

dividual. Christianity undoubtedly influenced the West with the inspiration of the *Agape*, but wherever Christian inspiration grew weak, a kind of libertarian and subjectivist humanism arose which obscured the sense of solidarity. Communism, capitalism, nationalism, colonialism: these are the ambiguous products of western culture.

4. There is still much that makes us feel nostalgic for solidarity. Writers like Albert Camus and Ignazio Silone have sought it desperately, as the only good thing left to man in the absurd and desperate condition in which he finds himself. This is why they abandoned the communist ideology, even though it wrapped itself in the rhetoric of solidarity, both because it was a selective, partial solidarity, which leaves space for hatred and class-struggle, as well as because it was a totalizing solidarity that humiliates the human person and destroys freedom and communion.

In the era in which we live, it would appear that time has come to boldly proclaim a culture of solidarity which surpasses anthropological, academic, humanistic and scientific models of culture, and instead acknowledges the link that binds together the entire cosmos and all that is in it, to the point where nothing is extraneous to us: from the protons and neutrons, to the mesons that are in the stars thousands of light years away, and yet are identical to those in the soil that we tread, and are within the circuits of our own bodies. Man's future on the earth cannot ignore such a culture of solidarity. Christianity is a prolific source for it, but its whole worth has not been fully expressed. Science and technology can raise the quality of life only in the framework of a solidarity culture that manages to integrate the nature of all cultures. The world needs to come to a strong sense of responsibility, therefore. This can be achieved through pressurising public opinion, working through schools and in education, in order to reach the spheres of scientific research, politics and economics.

OPENING REMARKS

Prof. G. B. MARINI-BETTÒLO

If we consider the title of the present meeting, the first part "Science for development" has been the object of the attention all over the world of many scientists, of learned bodies, of agencies for development, of international Agencies of the United Nations (UNESCO, OMS, FAO, UNDP) and, even in the last years, of the United Nations, through the special World Commission for Environment and Development (WCED). All these Groups, Commissions, Agencies and International Institutions, have produced a number of very important documents as well as a number of data and results which will be important and valuable for future decisions or actions.

It is a great pity that our colleague, Professor Abdus Salam, who is a great expert on the relationship between science and development, is not here today. Nevertheless I should like to quote what he has said recently on this point: "Creation, mastery and utilization of modern Science and Technology is basically what distinguishes the South from the North". (*)

The conclusion now, according to Salam, for future action could be "the joint endeavour in Science becoming one of the unifying forces among the diverse peoples of this globe".

The technical and economic aspects of the problem in these days have been thoroughly analyzed and the possible solutions accurately weighed in the frame of different scenarios, so that the present action for development could follow rather well traced guidelines.

The results so far obtained in this complex task by bilateral, multi-lateral and by the single Countries, Financial Institutions of International Bodies, or even by private voluntary initiatives like the Non-Governmental Organizations (NGO's), have so far not been completely satisfactory. Although some improvements in the situation

(*) Abdus Salam, *Notes on Science, Technology and Science Education in the Development of the South*, Third World Academy of Sciences, Trieste, 1988.

have been made, — in part neutralized by unexpected and unforeseeable events like wars, population displacements, unusual meteorological conditions, famine, etc. — new efforts are needed in order to promote development and the quality of life.

To penetrate the true spirit which should inspire cooperation for development, we should read with great attention the Encyclical *Sollicitudo Rei Socialis*. Many of you have had the opportunity to do so; therefore I will only quote a single point which, in my opinion, facilitates the understanding of the true meaning of solidarity and interdependence and their mutual relationship. "On the path toward the desired conversion, towards the overcoming of the moral obstacles to development, it is already possible to point to the positive and moral value of the growing awareness of interdependence among individuals and nations. The fact that men and women in various parts of the world feel personally affected by the injustices and violations of human rights committed in distant countries, countries which perhaps they will never visit, is a further sign of a reality transformed into awareness, thus acquiring a moral connotation.

"It is above all a question of interdependence, sensed as a system determining relationships in the contemporary world, in its economic, cultural, political and religious elements, and accepted as a moral category. When interdependence becomes recognized in this way, the correlative response as a moral and social attitude, as a 'virtue', is solidarity. *This then is not a feeling of vague compassion or shallow distress at the misfortunes of so many people, both near and far. On the contrary, it is a firm and persevering determination to commit oneself to the common good;* that is to say to the good of all and of each individual, because we are all really responsible for all. This determination is based on the solid conviction that what is hindering full development is that desire for profit and that thirst for power already mentioned. These attitudes and 'structures of sin' are only conquered — presupposing the help of divine grace — by a diametrically opposed attitude: a commitment to the good of one's neighbour with the readiness, in the Gospel sense, to 'lose oneself' for the sake of the other instead of exploiting him, and to 'serve him' instead of oppressing him for one's own advantage".

I think with this quotation I have made clear the true meaning of our meeting: that is the moral implication of development so far governed only by the rules of economy and the applications — not always respectful or adequate — of scientific results.

In this Study Week we will discuss *the problem of Science and development* in order to give in the spirit of the Encyclical SRS some suggestions for the new guidelines to follow in the promotion of development — which is not limited to the South — on the basis of the more recent results of natural, physical and economic sciences.

The present model of continuous uncontrolled development — which tends to concentrate more and more wealth in the already rich countries and to deplete the resources of the poorest ones — cannot continue. This model is in effect not respectful of the moral principles which should govern the world for a better distribution of the resources and, not even from an ethical point of view, of the needs of the future generation which are endangered by the present illogical consumerism.

These results indicate that the system of cooperation so far followed is not sufficient to cope with the real need of development.

The Catholic Church through its capillary organization and the contact with the people all over the world has felt this insufficiency for many years. The Encyclical letter by Paul VI *Populorum Progressio* of March 1967, and now the *Sollicitudo Rei Socialis* have brought again dramatically the attention of the world not only to the social aspects of development but mainly to the need of spiritual background in any initiative or action.

Pope John Paul II has indicated that in the present situation of underdevelopment in the world — which is not limited to the South but extends to all the depressed areas, even in Europe, and to the urban and social emargination — any economic or political programme is acceptable “provided the human dignity is satisfactorily respected and promoted”. Any solution or initiative should be bound to a new moral and spiritual approach to attain success.

“In order to be genuine, development must be achieved within the framework of *solidarity* and freedom, without sacrificing either of them under whatever pretext”.

This means that an alternative model of development should be adopted. The “sustainable development” has been proposed by WCE but in the present form cannot be put into practice. It involves substantial changes which relate to the economy and the quality of life of all the world; therefore detailed guidelines should be established in order to avoid unexpected reactions in the world economic system.

I believe that this will be very difficult if the spirit of solidarity does not support fundamental planning of our future.

Solidarity also means a better sharing of natural resources, the renunciation of many privileges for each of us in the world. To overcome economic difficulties, our present model of development has to be changed and this may imply privations for each of us, which may lead to a lower quality of life in industrialized countries.

On the other hand we would have relieved the dramatic conditions of millions of persons, actually in underdevelopment and made possible for them a livable future. This means that we have formed the basis for a better understanding in the world, that is for Peace. Paul VI mentioned in *Populorum Progressio* that "the new name of peace is development".

The role of science is fundamental in this context in order to overcome technical difficulties, to protect soil fertility from erosion, to control or eradicate endemic diseases, to find the solutions to delicate economic realities like the foreign debt or the financing of new plans of development.

The magnitude of the problems in my opinion can be at present overcome by an effort of solidarity, that is of good will, together with a higher input of Science and Technology. Solidarity cannot be represented by money, food or manufactured products to overcome exceptional situations. It cannot be confused with alms or gifts but must represent a full involvement of the donor in the problem to be solved together with the "recipient" and— if and when possible — in the spirit of "charity" in the evangelic sense of this word, that is beyond the immediate target of an economic return or a political benefit.

The efforts of world cooperation have been so far baffled by many obstacles, which constitute heavy realities to be removed, and are represented by the foreign debt which drains the best resources of developing countries, protectionism, the demographic dynamic of the world population and the migration movements which cause the concentration of an unsustainable number of people in unhospitable megalopolises, the present political, administrative and bureaucratic level of the structures of many countries in the great investments made in armaments in the south of a high percentage of their GNP.

I would like to quote some figures on this point. The present annual expenditure for armaments in the world is of 700 billion dollars; of these, 150 billion are spent by the developing countries. According to Salam in his booklet on Disarmament and Development, "among the 25 countries which since 1981 had to negotiate to reschedule their debt, six had spent more than one billion dollars each for arms import, in the five preceding years. Between them, the 25 piled up a

bill of 11 billion dollars for arms in that period. Among 20 countries with the largest foreign debt, *arms* imports between 1976 and 1980 were equivalent to 20 percent of the increase in the debt".

To overcome these obstacles the strategy should be multifaceted and requires an integration among the capacities of the various fields of science — both natural and economic. The available instruments which will be discussed here should be examined in the frame of the planned and of the market-economy and also in relation to the social doctrine of the Church and ethical principles.

The instruments which can be used to overcome these obstacles are the action of International Agencies, the international treaties and agreements and even private high level initiatives like the Brandt Commission; industrialization, that is the transfer of technologies and thus the training of the personnel at every level; new technological input to agriculture — use of selected plants for crops, fertilization techniques, mechanical energy input — as well as its financing, respect of the soil, etc., which involves an educational and formation programme for the operators at every level.

All the strategies and plans for development will be, in my opinion, a failure if they are not inspired and sustained by a spirit of solidarity and of *respect* for the identity of each country with its own historical and cultural characteristics and the fact that "people and individuals must enjoy the fundamental equality" (SRS 33).

The main factor which hinders development in the present is *poverty*. The Academy has considered this point in another study week a few years ago and has produced a document. I will now quote some points of this report which may be useful for our present work:

"The poverty in which over half of mankind lives and the persisting gap between the rich and the poor is not only a human tragedy, it is one of the greatest problems of our time. It is, in its daily manifestations, an economic problem, and in its essence, a moral problem relating to the right to human dignity on the part of the poor. We believe it puts in question the survival of the world, involving the inheritance to be passed on to future generations. A problem from which the rich countries cannot isolate themselves". Underdevelopment and the contrast between life styles of industrial and developing countries is a major underlying cause of economic, political and military tension and crisis. In such a climate it is easy to predict that difficulties and obstacles in the way of solving survival and development problems will flourish and further aggravate hostility rooted in other factors.

"Indeed this situation is perhaps most strikingly reflected in the vast amount of resources: financial, scientific, technological, industrial, now devoted to armaments. This drain has major implications. It critically reduces the flow of these resources, so essential to development; it impedes international cooperation and keeps it from growing into true partnership.

"The gap between rich and poor countries has its parallel within countries, especially within the poor ones where a strong middle class has not as yet developed and where small elites, with products and consumption typical of technologically advanced industrial societies live surrounded by a sea of poverty. Given the spread of information through television and the other mass-media, the poor majority have daily before their eyes the living model of what is possible with development, yet which cannot for them be reached in practice. This compartmentalisation is unacceptable. It ignores the fundamental interdependence of rich and poor countries and rich and poor people. It can only lead to increasing discontent as well as inefficient use of effort and resources.

"Once we have understood the implications of the issues, it becomes obvious that any solution demands a long-term approach involving a positive trade-off versus short-term and narrow-minded interests. It also requires cooperation between the rich and the poor, increasing interaction between North and South, within the South itself and, most importantly, general recognition of the real significance of this crucial insight".

To solve the huge problems, Science may have a very important role. We know, after some years of utopia, that "adapted technologies" and "traditional medicine" may represent only a first step towards a better use of natural and local resources, but that high technology promoted by scientific research is necessary for development of industry, communications, transports, but mainly for the prevention of diseases, housing and for an agriculture in condition first of all to supply adequate food to the populations.

I would like to explain this point better. Bioengineering and genetics may provide varieties of cereals resistant to the attack of pests, thus increasing the productivity of the crops even in the tropics, and reduce substantially the need of pesticides. Also nitrogen-fixing bioengineered microorganisms could reduce the quantity of fertilizers so far used.

Continuous research is needed to adapt our present knowledge to the particular conditions of each country or geographical area. In ef-

fect the difference of the habitats as well as of social and economic conditions, of the climate in the various regions of the world requires particular studies for each type of environment. The establishment of high level centres of research, centres of excellence and universities in the different regions of the developing countries, on the basis of the present experience, is indispensable, not only for the formation of local researchers but also for their direct involvement in the solutions of the problems of their countries, and the direct impact on the territory.

To obtain these results natural sciences and the new technologies are not sufficient because research and the adaptation of the results to development require large investments. We may also say that the lack of adequate funds for research and training due to the difficult balances of the states as a result of the foreign debt has hindered development so far.

The laws of economy are quite strict and even independent from man's will, but economic science may surely find models of development which can assure progress to every country, avoiding excessive *consumerism* by the industrialized countries. The economists may suggest new solutions for the present need of a better distribution of the resources among the people. This may be possible with adequate financial help, but also with new policies, first of all modifying all the measures, which like incentives, or the production of raw materials in competition with that typical of developing countries like sugar, makes developing countries' exports more difficult.

The new scenarios for a sustainable development have been suggested by the World Commission for Development and Environment of U.N. but up to now our knowledge of this important point has not been transformed into practical guidelines for action.

We are aware that 4/5 of humankind does not enjoy the resources and the benefits of the other 1/5, and this is not moral. Therefore any suggestions for future scenarios should bear in mind that we should comply not only with the laws of economy but also with the principles of ethics in a spirit of solidarity which underlines the interdependence of all the people of our world.

INTRODUCTION ON DEVELOPMENT, INTERDEPENDENCE AND SOLIDARITY

ALBERTO QUADRIO CURZIO

1. Foreword

As stated before, this volume is the result of “*Science for development in a solidarity framework*”, a Study Week due – as far as my collaboration is concerned – to three reasons:

a) one reason is the Encyclical letter: *Sollicitudo Rei Socialis* (SRS) (1987) of the Supreme Pontiff John Paul II;

b) another is the document issued in 1986 by the Pontifical Commission for Justice and Peace: *At the service of the human community: an ethical approach to the international debt question*;

c) a final, even though not new reason, is the attention paid in 1963 by PAS to the economic science.

I. SOME REFERENCES TO THE SOLLICITUDO REI SOCIALIS

2. An Invitation to Scientists and Technologists

First of all, it is important to notice that many times the SRS talks “to lead people to respond with the support also of rational reflection and of the human sciences, to their vocation as responsible builders of earthly society” (SRS, 1).

This idea, which is implicitly a recommendation to scientists and technologists, is part of a complete system of thought of which we point out, among the many, two propositions:

a) “the social concern of the Church (is) directed towards an authentic development of man and society which would respect and

promote all dimensions of the human person" (SRS, 1);

b) "the Church does not have technical solutions to offer..., does not propose economic and political system or programmes, nor does she show preference of one or the other, provided that human dignity is properly respected and promoted" (SRS, 41).

So the SDC proposes ethical principles as well as problems to the "responsible builders of earthly society", and addresses invitations to analysis and action.

I believe that scientists and technocrats should respond and should have responded during the Study Week to the suggestions within a framework consisting of at least three principles, namely:

- development;
- interdependence;
- solidarity,

which find a specific consideration in the SRS.

3. *Development*

Going back to the Encyclical Letter *Populorum Progressio* (1967) of Pope Paul VI SRS points out that in a context of "continuity" and "renewal", the problem of development is not limited to social and economic aspects. It also has, in fact, "ethical and cultural character" to which are connected "principles for reflection", "criteria of judgment", "directives for action" (SRS, 8).

In other words, "true development *cannot* consist in the simple accumulation of wealth and in the greater availability of goods and services, if this is gained at the expense of the development of the masses, and without due consideration for social, cultural and spiritual dimension of the human being" (SRS, 9).

Many are the consequences of this principle. Among them:

— "[in] the examination... of the contemporary world [the SRS notes that] development *is not* a straightforward process, *as it were automatic and in itself limitless*, as though, given certain conditions, the human race were able to progress rapidly towards an undefined perfection of some kind" (SRS, 27);

— "although development has a *necessary economic dimension*, since it must supply the greatest possible number of the world's inhabitants with an availability of goods essential for them 'to be', it is not limited to that dimension" (SRS, 28);

— “development which is not only economic must be measured and oriented according to the reality and vocation of man seen in his totality, namely, according to his *interior dimension*. There is no doubt that he needs created goods and the products of industry, which is constantly being enriched by scientific and technological progress. And the ever greater availability of material goods not only meets needs but also opens new horizons. The danger of the misuse of material goods and the appearance of artificial needs should in no way hinder the regard we have for the new goods and resources placed at our disposal and the use we make of them” (SRS, 29).

These principles are certainly worthwhile of deep reflection as a basis of action for any scientist gifted with good-will.

4. Interdependence

Interdependence is another cornerstone widely considered in the SRS as the following passages testify:

— “therefore political leaders, and citizens of rich countries”.... “have *the moral obligation*, according to the degree of each one's responsibility, to *take into consideration*, in personal decisions and decisions of government, this relationship of universality, this interdependence which exists between their conduct and the poverty and underdevelopment of so many millions of people” (SRS, 9);

— “however much society worldwide shows signs of fragmentations, expressed in the conventional names First, Second, Third and even Fourth World their *interdependence* remains close. When this interdependence is separated from its ethical requirements, it has *disastrous consequences* for the weakest.

Indeed, as a result of a sort of internal dynamic and under the impulse of mechanisms which can only be called perverse, this *interdependence* triggers *negative effects* even in the rich countries” (SRS, 17);

— “it is already possible to point to the *positive* and *moral value* of the growing awareness of *interdependence* among individuals and nations”... “It is above all a question of *interdependence*, sensed as a *system determining* relationship in the contemporary world, in its economic, cultural, political and religious elements, and accepted as a *moral category*” (SRS, 38);

— “*interdependence* in itself demands the abandonment of the

politics of blocs, the sacrifice of all forms of economic, military or political imperialism, and the transformation of mutual distrust into *collaboration*. This is precisely the *act proper* to solidarity among individuals and nations" (SRS, 39).

From these sentences, scientists are invited to reflect on the worldwide consequences of actions and policies.

5. Solidarity

The principles of development and of interdependence have the fundamental consequence of "the duty of solidarity" (SRS, 9). Therefore:

— "in a world divided and beset by every type of conflict, the *conviction* is growing of a radical *interdependence* and consequently of the need for a solidarity which will take up interdependence and transfer it to the moral plane. Today perhaps more than in the past, people are realizing that they are linked together by a *common destiny*, which is to be constructed together, if catastrophe for all is to be avoided" (SRS, 26);

— "collaboration in the development of the whole person and of every human being is in fact a duty of *all towards all*, and must be shared by the four parts of the world: East and West, North and South; or, as we say today, by the different 'worlds'. If, on the contrary, people try to achieve it in only one part, or in only one world, they do so at the expense of the others" (SRS, 32);

— "in order to be genuine, development must be achieved within the framework of *solidarity* and *freedom*, without ever sacrificing either of them under whatever pretext" (SRS, 33).

6. Principles and Applications

These principles — which are enclosed in an Encyclical Letter characterised by a strong unity — certainly form an important reference also for economists' analysis.

Indeed, being scientists and technicians does not imply forgetting principles. On the contrary, one of the constant aims of economists should consist in combining principles with technical analysis and policies. The Social Doctrine of the Church does not aim in fact at tech-

nical solutions. Nor does the quoted document on "international debt" of the *Pontifical Commission for Justice and Peace*, which nevertheless gives an extremely good example of the way ethical principles may be utilized on very concrete problems of our age. In such a document a clear utilization of broad historical and economical reflections leads to general conclusions of policy.

We could say, from a methodological point of view, that this document is an intermediate step between the Ethical Doctrine of the Encyclical Letter and the technical applications, which is the task of economists.

"The best way to tackle these serious issues would seem to be in a global perspective which would be at the same time an ethical approach. For this reason, it would seem necessary to highlight the ethical principles applicable to these complex situations before considering the particular choices that those concerned may be led to make, either in emergency situations or in the medium or long term.

The present text has made use of many studies on the international debt that have already appeared. Ethical in nature, this global perspective allows all the responsible parties, be they persons or institutions, on both a national and international level, to carry out a reflection, adapted to the situations that are within their competence" (Pontifical Commission for Justice and Peace, *At the service of the human community: an ethical approach to the international debt question*, p. 10).

Therefore, the document which will certainly be considered during the week — represents also an important methodological step in order to connect SDC with the economic science.

II. THE NATURE OF 1963 AND 1989 STUDY WEEKS

7. *The 1963 Study Week: Econometrics and Development*

We already said that the PAS has paid important attention to the economic sciences.

I refer, of course, to the work *An econometric approach to development planning* which originated in the 1963 Study Week.

The merits and success of that week are manifold. Let us mention only two of them:

— it has contributed to the recognition of economics as a science. PAS had such an intuition of intellectual potential at that time, that the speakers participating in the week numbered among them not only Frisch and Timbergen who received the first Nobel Prize in economics in 1969, but also five other economists who later received the same scientific recognition: Allais, Haavelmo, Koopmans, Leontief, Stone;

— it has combined two instances, the first one relating to methodological aspects, and the other to the specific problems studied.

From the methodological point of view the week pointed out, in a very systematic way, the high standard of statistical and mathematical formulations in economics.

Regarding the problems studied, the week pointed out that economic policy cannot only be based on rigorous techniques. This depends on the fact that similar techniques are not meaningful when the objectives to be pursued and the historical situation on which the policies should be applied are rather obscure.

The conclusions presented in the “Final statement” of the Week are so clear that we propose reading it (or the very comprehensive synthesis elaborated by Professor Marini-Bettòlo in the volume *The Activity of Pontifical Academy of Sciences. 1936-1986*) in order to receive a synthetic overall view of the arguments discussed within the Study Week:

“At the conclusion of this Study Week, we should like to thank the President, Members and Chancellor of the Pontifical Academy of Sciences for their initiative in arranging an international discussion of the problems of Econometrics and for their generosity and hospitality in putting at our disposal their exquisite and unique Casina di Pio IV.

In the course of this Study Week, we have had the opportunity to review and discuss many recent developments in the following branches of our subject: macro-economic decision models and development planning; optimal growth models; the problem of uncertainty in the development programming; the influence of real capital on the growth of the real national income; fiscal policy and economic growth; regional planning; cost-benefit analysis; statistical tools useful in econometric planning; the foundation of dynamic econometric models in probability theory, and estimation procedures for econometric models.

In addition to discussing the prepared papers, we also considered the paths that future research might profitably follow. Throughout

our meetings, many different points of view were expressed and opinions varied considerably on a number of subjects; but general agreement was reached on the following statement and proposals.

Although, as an organised science, Econometrics is barely a generation old, it has already made substantial progress and is attracting more and more attention and interest throughout the world. In the last analysis, this achievement is probably due to the effective learning process which results from combining theories developed by means of mathematics, and thus sharing in the clarity, rigour and power of that subject, with observation of the real world, reduced as far as possible to quantitative terms. Iteration between theory and observation is leading in Econometrics, as in the other branches of science, to a systematic body of verifiable knowledge about the real world.

Since the Study Week was concerned with the applications of econometric analysis, our thoughts on the desirable directions of future research necessarily ranged over a wide area. They can conveniently be summarised under three heads: the analysis of the economy; economic objectives and instruments of control.

A number of important areas of analysis were mentioned as particularly deserving further study; the role of capital accumulation in economic development; the relationships of education and of scientific research to economic growth; the desirability of introducing to a greater extent than hitherto a regional dimension into econometric models so as to connect the economic structure of a nation with that of its constituent regions; and the urgency of developing techniques of quantitative analysis suited to the less advanced areas of the world. Emphasis was also placed on the need for the systematic testing of theory against facts in the construction of explanatory, forecasting and planning models, and on the importance of publishing the results of such tests. (Only in this way can the experience of one country serve as a guide to further studies in other countries).

Our discussion brought forcefully to our attention the need for both empirical and theoretical analysis of the social objectives of economic development, comparable in purpose and quality with current research into technological conditions and economic relationships. Social objectives cannot be deduced scientifically, but they are data that science must take into account in fostering economic development. We still have unduly primitive tools and methods for ascertaining and describing even approximately the objectives of any country or any group within it. For example, we have no effective way of determining how a community acts when it tries to reconcile two

competing goals such as a high rate of future economic growth and a high level of present consumption. Progress in this direction would not only be conducive to better planning for given goals, but would also contribute to a clearer formulation of these goals and to an improved level of political discussion of them. This in turn would lead to a more intelligent and satisfactory selection of such goals.

Our discussions also made clear the need for a better understanding of the capabilities as well as of the limitations of various economic policy instruments which governments can use when pursuing their short and long-run goals. Research on the nature of the instruments available has been neglected in favour of research on more narrow economic problems, such as production functions and market behaviour in the private sector. This neglect has led to the adoption of goals that could not be attained by means of the available instruments and to the overestimation of the effectiveness of some instruments. In short, more research is needed into what governments can and cannot do in trying to foster economic development and stability.

An aspect of economic development which we feel cannot be over emphasized is the "race" between increasing productivity and increasing population. Most of the research discussed at the Study Week was concerned with one aspect or another of productivity; yet measures for influencing the rate of population growth may contribute at times even more to human welfare than measures for influencing productivity. Much work, theoretical and empirical, sociological, physiological and economic, is needed on the population problem. Econometricians can contribute especially through theoretical studies on the relationships between economic development and population growth and empirical studies on the effectiveness of various measures for influencing population growth. They can also contribute by assisting in the improvement of vital statistics and other demographic data under the difficult conditions prevailing in under-developed countries.

Econometrics is a powerful tool of scientific analysis. It cannot determine what economic policy should be carried out, but it can work out in a rigorous way the consequences of specific hypotheses and observations. Thus it can help considerably in the successful functioning of an economic system by bringing about a better understanding of the system and an increase in the flow of information available to those who operate it.

This is true whatever the political environment in which that system works and whatever degree of development it has reached.

Naturally, continued improvement depends on the general recognition of the new science by society at large and on the additional resources, both moral and material, that may be expected to accompany this recognition". (Signed by: Allais, Boldrini, Dorfman, Fisher, Frisch, Haavelmo, Isard, Johnson, Koopmans, Leontief, Mahalanobis, Malinvaud, Morishima, Pasinetti, Schneider, Stone, Theil, Wold) (Pontificiae Academiae Scientiarum Scripta Varia n. 28, 1965, pp. 1247-1250).

8. How Have "Economic Sciences" and "Facts" Changed Since then?

Since 1963 economics has made further progress but not such to modify substantially the scientific statute (except for very few contributions) laid down by the week of PAS. A simple, but clear-cut, proof of this is that Allais has received the Nobel Prize in 1988 and Haavelmo in 1989 for works they have done before 1963.

Perhaps it would have been reasonable to expect more progress in economics with respect to its forecast and policy decision capacity.

Although it is not possible here to analyse the causes of a certain degree of dissatisfaction, we can however mention two problems:

— the first is that some misleading beliefs are probably diffused among people and economists who are convinced that the progress of formalized methods in economics would, *ipso facto*, produce progress of economic policy interventions.

On the contrary it should never be forgotten that economics is a "social science" which has to deal with phenomena not always clearly measurable and with human beings' behaviour which cannot be equalized to natural phenomena.

Therefore it is true that economics is, among social sciences, the one which has reached the highest degree of mathematical formalization (in such a way following a path similar to that of physics among natural sciences), but it is also true that this has not changed its nature of being a social science;

— the second problem is that in the period going from 1963 through 1989 the changes in the economic worldwide situation have been gigantic. This has put economics in a very difficult position. Using a simplification, which at first sight might appear paradoxical, we could say that an economic science fundamentally built on the prob-

lems of the industrial revolution and society had to face the problems of "technological and financial revolution", of under-developed countries and now of the crisis of the economies in the socialist world. More recently economics and economic policy had to face the crisis of the seventies and the adjustment of the eighties.

Given these premises, I think that we are allowed to say that "economic science" has managed pretty well but certainly not in a complete and satisfactory way.

9. The 1989 Study Week: Stylizations, Policies, Methods

The previous considerations have suggested to organize this Study Week in a very different way from that of 1963. Leaving aside very formalized technical aspects (which had already been considered in the week of 1963), the 1989 week has emphasized problems and solutions.

This approach is also economic science because economics is a complex science including "principles", "theories", "analyses", "policies". All these elements are interrelated but, according to the situations, one or the other can be stressed.

The present historical moment suggests emphasizing the stylized historical analysis, principles and policies in order to understand ways to "govern" the changing world situation. This aim needs the contribution, among many, of different types of economists: those of the academic world and those of the policy world.

On this basis the structure of the Study Week clearly appears from the program.

Let us remember, once more, that the cornerstones consist of the following principles: development, interdependence, solidarity.

More precisely:

- the *global profile* considers the worldwide economic problems in an essential way, with special attention to developing countries and planned eastern economic systems;

- the *specific profiles* consider three main obstacles to cooperation and development: international debt; protectionism; unemployment. The dimensions of such problems and of their further negative consequences require the maximum effort for their overcoming.

Only in this way the best use of all *resources* for the benefit of

human beings can be possible. The attention goes immediately to the most important resource: human beings can be possible. As is well known human beings can also be considered as "an original resource", since they constitute the basis and the aim of any economic activity. The problem of relationship between human beings and natural resources (in quantity and quality) is one to which much attention must be devoted.

But such attention is founded only if the increasing role of all *other resources or tools for development* are considered: agriculture, industry, technology, services, science, research, organisation and so on.

In such a way a profile of the relationships between resources and instruments in order to better satisfy *human needs* could emerge. Among these, particular attention has been devoted to education, health, food and nutrition.

These and other problems assume specific and high priority in developing countries and eastern countries. Towards them industrialised countries should and could do very much, without damaging their already very high living standard.

Synthetically: the scientific and organisational model of the Study Week is to alternate general pictures (global profiles, fundamental resources, big world economic poles) with specific pictures (obstacles, tools, needs).

III. ISSUES ON INTERNATIONAL DEVELOPMENT AND SOLIDARITY

10. A Multidisciplinary but Unitary Approach

This collection of essays is due to economists, and only one of the papers is due to a natural scientist. But also this one has shared an approach according to which economics has to do with the behaviour of human beings and can in no way be compared to physical sciences or natural sciences; besides, it concerns problems and issues which are often not measurable, and therefore it remains a social science.

The particular characteristics of economics as a complex social science made up of different but complementary components have been clearly shown, and in this it can be contrasted with its reductive, technical version: "economicism".

Economics, which is always based on ethical *principles*, is formulated in *theories* which may be very technical and formalized, it needs thorough historical *analyses* and must in any event lead to actions of *economic policy*; that is, to courses of intervention where choices of values are necessary.

11. A Background of this Volume

Before going briefly into the essays of this volume, let us stress a conclusion which came out quite clearly from our discussions, though not expressed in any complete or explicit form: an underlying conviction of many of the relators concerning the direct causes of the present imbalance between the developed and the underdeveloped world. At the present time we are also paying for the consequences of two different but equally dramatic shocks which have put the entire world economic system in a state of great difficulty.

The *first shock* (early 70s) determines — and at the same time is determined by — a sharp increase in the price of raw materials and petroleum. Many of the less developed countries (LDCs) which are producers of raw materials benefit greatly by the situation through the acquisition of considerable debtor positions with the private banking systems of the developed countries (DCs). A debt liability of such dimensions (extended to a large number of countries, even those which are not exporters of raw materials) is facilitated by the financial centres of the developed world which can find no alternative ways of employing the disproportionate flow of cash coming from the OPEC countries as a result of the cyclical crisis the internal economies are going through.

The *second shock* is exactly in the opposite direction. The new monetary policy adopted by the DCs (characterised by high levels of real interest) and the powerful technological innovation of substituting and saving oil and raw materials wipe out in a very short time (during the 80s) the *shortage revenue* of the LDCs, giving rise first to a recession of the internal economies, and leaving them with an increasing foreign debt, which is still linked inescapably with the internal development process of these countries.

IV. THE DEBT PROBLEM AND INTERNATIONAL DEVELOPMENT

12. The Origin of the Debt Problem

The origin of the debt problem, therefore, (as an aggravating source of underdevelopment) lies in a number of causes which can be found jointly in the industrialized and developing countries. If then the responsibility for this situation is a common responsibility of the world economic and financial system, it cannot and must not be "unloaded" onto one side only, even less so onto the side which is most at a disadvantage.

13. Jan Kregel: he pursues a basically theoretical kind of reasoning; his analysis concludes, however, with the presentation to the audience of a series of concrete measures for the resolution of a grave international problem.

His attention, in fact, is concentrated almost exclusively on the foreign debt of the LDCs and I think it significant and appropriate that we should consider this problem no longer as a specific obstacle but as a fundamental feature of North-South relations and in some ways of East-West relations as Nell.

In a very technical report he holds that:

— There is an "external part" and an "internal part" of the international debt.

— The external part, in his opinion, was caused chiefly by a policy of sharp rise in the interest rate, which brought about the enlargement of the debt of the LDCs. He concludes that this policy was brought into being by the monetary authorities of the industrialized countries for their specific internal needs and that on that account, since they are responsible for this policy, these countries must take on a considerable part of the costs of such a policy. This is his thesis regarding the external debt. For this reason he proposes that the private banks, which are creditors of countries which will never be in a position to pay their debts, should hand over these credits to the public banking system (for example, the Federal Reserve Bank for the private banks of the United States) at a low discount rate, in that they are not responsible for the problem itself.

— As regards the internal dimension of the international debt, he limits himself to two brief comments and a problem-oriented conclusion.

— The falling standard of living of the peoples of the LDCs is caused by the situation of the heavy foreign debt; we can say that the citizens pay the obligations incurred by their governments with falling standards of living.

— On the other hand, in the industrialized countries, savers who have deposited their savings in the banking system (so that it might make shrewd use of them) find themselves subject to high risks of a non-return of credits and in some cases even of a bank crash.

— Therefore, if we go down to the level of the individual agents, both in the industrialized countries and in the LDCs, we observe the presence of subjects who are in considerably difficult conditions as a result of decisions taken at a higher level of responsibility (government, monetary authorities, bank management). The requirements of the above mentioned subjects are legitimate requirements, but how can they be reconciled with a prompt solution of the problem of the international debt?

14. Moeen Qureshi: he tackles the problem from the World Bank's perspective: therefore, his three chief reflections express the point of view of an operator of economic policy:

— The great dimension of the international debt does not allow for uncertainties concerning the need to reduce it.

— The international debt is a common responsibility of both industrialized and developing countries.

— There is a specific need for commitment of the international banking system and in particular of the public banking system: World Bank and International Monetary Fund.

He then enters into a series of technical aspects that apply these general principles and which, in my view, are in harmony with the reflections contained in the document of the Justice and Peace Commission. Debtors and lenders share a common responsibility to the unfolding of events and a cooperative solution to the debt crisis has to be shouldered by the parties in accordance with their strength.

15. Michael Camdessus: he produces the IMF's perspective and formulates a thesis, apparently simple, but in its substance of extraordinary importance and innovation:

— He says that the International Monetary Fund will support all the national policies which aim at reaching an increase in internal welfare in the long term. He says, in fact, that he is convinced that "a pol-

icy which shows itself to be good for a country in the long term is equally good for the world economy as a whole". He moreover backs up with evidence the preceding remark, providing a series of data which demonstrate that certain economic policies are shown to be advantageous for all participants in the world economy, making specific references to the effects of policies aiming at lowering the protectionist barriers.

He confirms that at the present time the International Monetary Fund is making a great effort to convince the different countries of this fact. For whoever knows the course followed by the IMF in past years, a stand of this kind seems even more interesting.

— In his speech he then devotes particular attention to the problems of Poland and Africa, two emblematic cases: Poland as the most advanced point of the passage from a planned and collectivist economy to democracy; Africa as the example of an area which is suffering conditions of underdevelopment and regression probably unique at this moment on a planetary scale, and which needs a large programme of aid both on the part of individual governments and on that of the international organizations.

V. GLOBAL INTERDEPENDENCE

The first part of this book shows then that the present world situation is that of *interdependence*: such an issue is dealt with by the second section which underlines the need of cooperation between the different world areas (North-South, East-West).

16. Enzo Grilli: he speaks of a global outline of the North-South and East-West relations.

— Grilli presents a very thorough analysis of how a theoretical model of open economy (with tradable and non-tradable goods, with a competitive market and flexible prices) can be applied concretely to the different political and economic situations of the world (Eastern block countries, LDCs with an average income, LDCs with a very low income etc.).

— He furthermore outlines the corresponding economic policies of adjustment to the above-mentioned model. The policy interventions in his report include both autonomous and internal measures in the country in question, and related international measures with explicit

reference to the aid of developed Western countries in favour of the areas in transition: the East (from planning to market) and the South (from underdevelopment to development).

17. Enrique Iglesias: he gives a vivid and realistic picture of the Latin American situation made up of light and shadow, of present problems and hidden potentialities.

— He declares, in fact, that in the last 7-8 years these countries have made extraordinary efforts to achieve reforms which allow for the overcoming of some of their structural economic rigidities.

— In the second place he stresses that Latin America has made efforts to open up to international trade, so as to become integrated in the world economy.

— Thirdly, he points out that for the first time in history, the whole of South America is moving towards, or is already governed by, democratic systems.

— He concludes, nevertheless, that the adverse external conditions, both in international trade (protectionist practices on the part of the developed countries) and with regard to the problem of the foreign debt, may be such as to prejudice the whole positive potentiality of the situation in Latin America. The risk of a close-down from the outside and of internal populism is in fact always present.

18. Oleg Bogomolov: he concentrates his report on four main points:

— First of all he states that the movement of ideas is much faster than the movement of goods, or of the transformation of the productive apparatus; in other words, he states that the desire for democracy and for participation is not governed by the laws of international commerce.

— The second statement is just as clear and definite: all the participants in the world economic system must have equal opportunities (all countries, large and small, without distinction of strength or size); this, he goes on, is the indispensable condition for achieving the "perestroika" of the world economy.

— He then spends some time analysing the internal situation of the Soviet economy and goes fully into the question of the reforms which characterize the present economic policy of the USSR. In this context he states that in the spelling out of the reforms, before the introduction of market principles (such as self-financing of companies,

free competition, private enterprise, etc.), a beginning would have to be made by facing the problems regarding the agricultural sector (which represents today one of the major items of deficit of the Soviet trade budget), allowing greater freedom to agricultural producers who are still bound by a series of heavy bureaucratic requisites, both unproductive and conservative.

— He concludes with a statement which I think must be reported exactly because of its enormous importance: "Moral motives are beginning to exercise a growing influence in international relations. The dimension of this influence is directly proportionate to the growth of the conscience of peoples, to the progress of culture and of education, to democracy, to the achievement of human rights".

19. Antonio Maria Costa: his blend of academic formation and operational commitment characterizes him as a witness to describe and comment on the great transition which the political and economic systems of the East are going through at this time.

— First, he underlines the need for the Soviet Union to stabilize its macro-economic aggregates in the short-run, helped by Western countries through credits, loans and debt rescheduling.

— Second, he points out the urgency for the Soviet Union to carry out the economic reforms in the long-run, both at the factor market level and at the institutional level. Such reforms need to be matched again by the Western support, from both the public and the private sector. However, help should be given only if radical reforms towards democracy, disarmament and the market actually take place.

— He concludes focusing his attention on the specific contents of such a Western support, analyzing both systemic forms of help for the Soviet economy and specific forms of help for its key production sectors.

VI. SECTORS, FACTORS AND SOLIDARITY

The third section concerns special issues relating to sectors, factors and solidarity within the economic framework. They seem to be particularly important since on the one hand "exact" sciences offer the potential for a major contribution to the progress of humanity, but on the other the extent of such contribution largely depends on economic choices.

20. *Jagdish Bhagwati*: his intervention concerns the problem of protectionism (among other things one of the causes of the aggravation of the international debt). He puts forward a series of problems:

— How can the rules of GATT be reformed (GATT was instituted for the very purpose of limiting protectionism), rules which are showing their age, taking into account great innovations, as for example the increase of the international movement of services and the problems relating to the international trade of high technologies (patents, licences, know-how etc.)?

— The second statement begins with the observation — in some ways positive, in others disquieting — of the decline in the United States leadership on the scene of international trade (which he has defined as the "declining giant syndrome"). What country, or area, can substitute the USA in this role of guiding the system of international trade? The absence of a leader could in fact both ensure a multipolarity and more widespread control of the respect of international rules, but it could also add dangerous factors of instability to the global scene. He answers the question by describing the reasons why Europe and Japan cannot become the dominant parties: Europe, because it has the problem of '92 and the new relationship with the Eastern block countries; Japan, because it does not have the right mentality for this role of leader and builder of a system of world rules. Japan, he says, "has the characteristic mentality of the merchant, and of a pretty aggressive merchant on the foreign markets". So he describes, if we read between the lines, a piece of history, the history of the last fifty years (from the end of the second world war), of the will and the action of a country (the USA) which won the war and rebuilt the international system, but which is no longer able to sustain the role of leader and guarantor of the international trading and economic system.

— The only non-problematic conclusion in his report is the statement that protectionism — with its numerous classified non-tariff barriers — must disappear, even if only gradually, because it is particularly damaging to the developing countries, but more generally to the whole world economy.

21. *Romano Prodi*: he discusses the theme of *industry, technology and services* bringing therefore not only his academic qualifications but also the professional experience of seven years in the industry. He subdivides his report into two parts: a more general part and a more specific one. In the general part he deals with what he calls the three temptations, supplying an answer for each:

— Regarding the supposed conflict between solidarity and efficiency he answers that, in his opinion, there is no conflict between these two forces to the extent to which, keeping an objective of solidarity in mind, a choice is made. He gives great emphasis, therefore, to the need for making a choice, for not getting held up when faced with the alternatives for fear of making a mistake;

— He opposes the thesis that science produces civilisation: it is civilisation that produces science and technology;

— As to the temptation to pessimism — originating in the failure, from the end of the war until today, of so many enterprises in the field of solidarity, aid and assistance — he stresses the need for a positive reaction. Prodi also expresses the conviction that local human resources must be helped (and by this he means particularly the developing countries) to organize themselves, to produce goods and services, to satisfy the needs of their own populations, in a context of international cooperation;

— Among the more specific considerations, he gives particular emphasis to the inner capacity of the individual peoples of the developing countries for going along an autonomous road to development being at the same time integrated in the global international system.

22. *Alberto Valdés*: he covers the issue of food. He is another personality who combines academic and practical knowledge.

— Speaking from a series of specific aspects, Valdés presents the thesis of the fundamental interdependence of the basic needs: food, health and education. Education, in fact, generates health because it makes possible a whole series of measures which lower considerably the mortality rate, especially infant mortality. The correlation between the level of education of the mother and the drop in the infant mortality rate is a valid example of a process of this kind.

— In the second place the presence of positive feedbacks existing within the dynamics described above is shown; education, in fact, gives higher levels of productivity, and higher levels of productivity in agriculture mean further increases in the levels of food and of education.

— In conclusion he then emphasises the unified character inherent in basic needs and the consequent necessity for a corresponding unitary approach to these issues which will inspire integrated interventions and policies which are not sectorially distinct and separate.

23. *Emile Noël*: he concentrates his attention on agriculture and on the problems linked to world farming dynamics. These themes follow immediately on that of human resources, since agriculture is the essential and primary instrument for the satisfaction of certain essential needs.

— As regards European agriculture he stresses that a particular policy of heavy subsidies to internal agriculture has negative effects on exports, and therefore on profit, of the developing countries.

— As regards the farming system of the LDCs he stresses that in many cases those less developed countries able to export farm products, since they have no part in the fixing of prices of these same farm products (that is to say, they are "price takers") can be, and are in fact, seriously damaged by the violent fluctuation in the prices of farm products on the international markets. This is particularly true of those countries specializing in the production of one or a few products (monocultures) and which are particularly exposed to the above-described constraints.

24. *Federico Mayor*: he emphasizes the problem of science, research and education, agreeing with what had already been expressed by Prodi; in particular he states that:

— Education, science and research cannot proceed along separate paths;

— In the developing countries cooperation is just as necessary as an autonomous national policy of support of scientific activity and of research.

25. *Giovanni Battista Marini-Bettòlo*: his intervention is linked to that of Noël and also, going back a little, to the general discussion on human resources. Marini-Bettòlo deals with the issue of natural resources and in particular with environment and water. His thesis is very well developed and very precise, with a series of specific technical analyses, but it can be summed up this way:

— There is no incompatibility between economic development and conservation of the environment, as long as a correct time-frame is chosen; in other words, provided our temporal horizons are sufficiently wide, we see perfectly well that the weakening of the foundations of natural resources today will produce negative results on economic development in the future, and we also see the need for greater investments in the future to reconstitute the foundation of natural resources. This seems to me the crucial thesis of his

intervention which he then demonstrates with a series of very clear and well-developed propositions.

26. *Luigi Pasinetti*: he deals with the problem of unemployment (the other great obstacle to development). He takes as a starting-point the problem of unemployment and then goes on to deal with more general problems of economic policy.

— Pasinetti first refers to the various types of unemployment (structural, cyclical, frictional), observing that this is a problem taking on gigantic proportions, even in the industrialized countries. He maintains that there are some economic theories (which we might call "closed") which are incapable of making room for principles of solidarity and for rules of economic policy aimed at overcoming the problem of unemployment. He presents this type of economic theory by referring to what we economists call the models of pure exchange. On the other hand, he says that there are other more "open" economic theories, in the sense that they contain models better able to take into account principles of solidarity and economic policies aimed at overcoming unemployment. These last may be defined as mixed models of production and exchange.

VII. CONCLUDING REMARKS

The conclusion of the Study Week, based on a state of mind rather than on an analytical reexamination of the contributions, is the impression that all the participants share the spirit of the Encyclical Letter — even though from different points of view, sometimes even from different experiences, from different cultures, sometimes even from different religions and creeds. I will now recall the three points on which the Study Week has been in continuous and convinced agreement:

- the recognition of a world which is ever more *interdependent*;
- the perception of the necessity on the one hand and the possibility on the other that this interdependence may be lived in conditions of *solidarity*;
- the conviction that an *authentic human development* can in no way be limited to the mere satisfaction of material needs.

A Study Week is an opportunity to meditate and debate: many interesting aspects came out during the discussion, but unfortunately

the debate cannot be reported here because its amplitude and complexity would require a huge publishing work.

Anyway, we would like to thank all relators and participants who took part to the Study Week with cleverness and interest for trying to answer these questions:

- where are we?
- where are we going?
- how are we going there?

And then:

- where do we want to go?
- how do we want to go on?

These are the same problems that the Encyclical Letter submitted to scientists and technocrats who have used the tools of their knowledge keeping into account — as SRS points out — that “as we well know, time maintains a constant and unchanging rhythm. Today however we have the impression that it is passing *even more quickly*, especially by reason of the multiplication and complexity of the phenomena in the midst of which we live. Consequently, the *configuration of the world* in the course of the last twenty years, while preserving certain fundamental constants, has undergone notable changes and presents some totally new aspects” (SRS, 4).

And scientists have also shared the conviction that while this time is passing “There is no justification... for despair or pessimism or inertia. Though it be with sorrow, it must be said that just as one may sin through selfishness and the desire for excessive profit and power, *one may also be found wanting* with regard to the urgent needs of multitudes of human beings submerged in conditions of under-development, through *fear, indecision* and basically, through *cowardice*. We are *all* called, indeed *obliged*, to face the *tremendous challenge* of the last decade of the second Millennium” (SRS, 97).

— *Part 1* —

THE DEBT PROBLEM
AND INTERNATIONAL DEVELOPMENT

INTERNAL AND EXTERNAL ASPECTS OF THE INTERNATIONAL DEBT PROBLEM

J.A. KREGEL

I. Economic Individualism and Economic Solidarity

There is a long tradition in economics which seeks to establish that it is sufficiently similar to the natural sciences to be restricted to positive statement and description of abstract and immutable laws. It is these economic laws which the economist investigates in the same way as the natural laws which are the subject of physics or chemistry. Despite the fact that the operative agents are human beings, the enunciation of economic laws is presented as being completely independent of any social, political or moral connotation. Indeed, the economic scientist eschews the temptation to confuse what he believes to be good or morally right about the operation of the economy in which he lives and the implications of the operation of the economic laws which he can but discover and describe. Should he succumb to temptation and try to influence their operation because of a moral judgement about their results he can only make things worse, for this would be equivalent to trying to defy the laws of gravity.

Advocates of this positivistic approach to economic theory trace its origins back to the modern founder of the subject, Adam Smith, who is supposed to have declared the fundamental law of economics that the economy is best served by the operation of perfect competition in free markets, or what we may call the "law" of free competitive markets. The theory shows that this law, which is the result of the independent actions of autonomous individuals who "are not guided by the social good", but are "greedy and self-seeking" "in pursuit of their own ends", leads to the efficient organisation of production in the economy in the sense that no greater output producing greater satisfaction for any individual could be produced with any other organisation of the resources available to the economy. The law of the market

is thus also the basis of non-intervention in the operation of the economy; since pure egotistic self-serving behaviour is the best that can be achieved, any attempts to make society conform to goals produced by non-scientific moral precepts can only make things worse.

This approach to economics also implies that each individual should be judged according to his competitive performance in the free market. If his actions are rewarded by the market with a profit he is judged to have rendered a positive contribution to the welfare of society as a whole, if he makes losses he is being punished by the law of the market as inefficient and wasteful; he is to be expelled from the economy. But, not only is the individual who fails to meet his commitments expelled from the market, he is also expelled from society: in the words of Balzac in *Eugenie Grandet* "to fail is to commit theft" and punishment, in addition to legally enforced restitution of the amounts owed to the lender, is to be expected. This was the logic behind debtors prisons.

2. The Limits on the Law of the Market

This conception of the basis of economics in the law of the market was also dominant in the 1920s and the 1930s. One of the most highly respected scholars of the origins of economics, Jacob Viner, objected to its origins being traced to Adam Smith. He noted that Smith's work is replete with exceptions to the operation of the law of the market based on individual interest as expressed in the "invisible hand". Instead he suggests that the postulate of natural liberty, with its corollary, the economics of free and fair competition, is so qualified by Smith with exceptions: Smith's position is that of a qualified inductive theory to be tested by the facts, and therefore to be prescribed only where the facts justify it.

This view, which is also supported by Lionel Robbins and Warren Samuels, suggests that there is an active role for intervention in the free affairs of individuals, indeed, there is a full fledged classical theory of economic policy which seeks to create and preserve those conditions in which the free competition of self-seeking individuals will in general produce the desired results. It is interesting to note that it is precisely in the area of money that Smith finds one of these exceptions: "To restrain private people, it may be said, from receiving in payment the promissory notes of a banker, for any sum whether great or small, when they themselves are willing to receive them; or, to re-

strain a banker from issuing such notes, when all his neighbours are willing to accept them, is a manifest violation of that natural liberty which it is the proper business of law, not to infringe, but to support. Such regulations may, no doubt, be considered in some respect a violation of natural liberty. But those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be, restrained by the laws of all governments; of the most free, as well as the most despotical. The obligation of building party walls, in order to prevent the communication of fire, is a violation of natural liberty, exactly of the same kind with the regulations of the banking trade" (Smith, 1776, p. 324).

It should also be noted that Smith never suggested the type of blind, selfish individualism presumed by this theory. When Smith tells us that we can only expect individuals to act according to their self-interest, he also notes that the best way to get the results that you desire is precisely not to follow your own self-interest, but to satisfy the interest of others!

3. The "Law of Motion" and Economic Solidarity

It was in the 1920s and 1930s that conditions arose in most Western countries which represented a clear danger to what Smith called the "security of the whole society" and in which the general application of the law of the market was challenged in a debate between Hayek and Keynes. Keynes' observation that there was widespread "poverty in the midst of plenty", that there was widespread economic shortage in the midst of unused means of production, suggested that the free competitive market process was not organising production in the most efficient way possible.

The debate was complicated by the fact that each of these great economists identified a different threat to security as the most dangerous. For Hayek it was the impact of post-war hyper-inflation on the accumulated wealth of the middle classes, which eventually led to the loss of liberty as Fascist governments emerged from the inflationary chaos to dominate European countries. For Keynes it was the impact of post-war unemployment which would eventually lead to the loss of liberty as Stalinist governments promised to satisfy the legitimate expectations of the working classes to a society which offered them a chance of survival.

They also differed over the causes. According to Hayek the causes

of the slump conditions were the failure to apply the law of the market in the area of banking and in attempting to rescue all firms rather than allowing "sound" firms to survive, leaving "unsound" firms to be driven from the market by bankruptcy. Keynes, on the other hand, pointed out that in conditions of widespread depression, even the most efficient entrepreneur could find himself in difficulties which were not of his own making. If the overall level of demand was the basic determination of profitability and success in the market, then the operation of the law of the market was subject to the prior condition that full employment prevailed. This condition clearly was not fulfilled in the Great Slump and thus actions to assure it became part of a policy which could be accepted within Classical theory. Full employment of labour and resources was seen not to be a natural result of the operation of the law of the market, but rather a necessary condition for its application.

Keynes' theory is built on a different interpretation of the Classical theory of Hume and Smith from that of the traditional theory. Rather than looking to the efficient exchange of goods according to the laws of the market, it looks to man. Hume, in response to the mercantilists, had pointed out that the real wealth of a community lies in its available labour, rather than in its accumulation of money. Gold only has purchasing power if there are products to be bought; it takes labour to produce them.

Keynes was more interested in assuring that labour was fully employed at satisfactory wages and believed that this was the only condition which would assure the stability of the value of money, while Hayek believed more or less the opposite. Keynes believed that continuous productive expansion was necessary to the survival of the economy; this we might call the law of expansion or motion of the economy in contrast to Hayek's law of the market.

4. The "Law of the Market" Applied to the Relations Between Private Banks and Sovereign Nations

In the policies to resolve the debt crisis of developing countries it is generally the "law of the market" which has been applied. But, rather than applying to individuals, it is now applied to entire countries. The failure to meet international debt obligations is thus assigned to deficient national characteristics and to a failure to observe free market principles in the organisation of the national economy,

although it is never explained how these same economies, with the same national characteristics, managed to produce exceptional records of growth and development in the 1960s and 1970s.

The underlying logic of the decision to treat the international underdeveloped countries' debt problem as one of illiquidity, and not insolvency, on a case by case basis, is still the simple formula of attempting to maximise repayment of principal, along with effective exclusion from further misuse of economic resources by refusing any further lending. The law of the market applied to entire countries thus strikes indiscriminately on these countries' citizens irrespective of their responsibility or personal qualities. The only active policies that have been introduced to resolve the problem have been to require the debtor economies to introduce more "market oriented" policies in order to receive additional lending from international institutions.

By 1985 it became obvious that this approach was solving the short-run problems only by storing up long-run difficulties; the Baker initiative may be seen as a recognition of the parallel importance of the "law of motion" with the "law of the market", of the necessity that an economy must grow if it is to be able to generate the quality and quantity of exports required to generate the foreign currency resources required to meet debt commitments.

In 1982 investments in the group of countries classified by the World Bank as Highly Indebted Countries fell by 13.1% in real terms, followed by a 21% fall in 1983 and 2.1% in 1984. Imports fell in every year from 1982 to 1984 at rates which roughly parallel the investment figures (-14.1% in 1982, -20.4% in 1983, and -1.1% in 1984). Per capita consumption fell by -2.2% in 1982, -4.1% in 1983 and -1.7% in 1984, while GDP fell by an average of a little less than -0.5% per annum over the three year period. Clearly, in these countries debt commitments were being met at the expense of building and maintaining productive capacity. The law of the market was working in that it was assuring repayment, current account balances had become positive in 1984 and 1985, yet it was clear that most debtor countries would become non-viable economies expelled from the market before full repayment was complete.

But the Baker initiative to combine the law of motion with the law of the market failed for two reasons. The first is that it came too late; in the three years of the application of the case by case approach the original indebtedness had continued to grow while the ability of the indebted countries to repay was continually declining precisely as a result of the repayment policies. Had the Baker initiative occurred in

1982 it might have had some chance of success. By 1985 the chance had already been lost to grow out of the debt problem.

The second is that the contribution of the developed countries was to be the guarantee of additional funds from both official institutions and the private banks to allow the resumption of the growth process. But this lending was not forthcoming. In 1983 net resource flows in the Highly Indebted Countries had become a net loss of resources of \$9.9 billion, in 1985 it was -\$26.5 billion. In 1986 the amount was virtually unchanged at -\$25.8 billion, and the average for 1987 and 1988 was about the same figure. Between 1984 and 1985 the net lending fell by over 50% and remained at about the same level (about \$6.0 billion) through 1988. Between October 1985 and the middle of 1988 the amount of gross new lending disbursed was less than \$20 billion, while net financial outflows from the LDC's to international institutions are currently running at above \$3 billion per year. In total these reverse resource transfers amounted to \$74 billion between 1985 and 1987, or 3.1% of the GDP's of the Highly Indebted Countries on the World Bank's definitions. Thus although there has been some improvement in LDC growth rates and current account balances this has almost all been at the expense of reduced investment and imports of investment goods from industrialized countries, i.e. the improvements have not been as a result of higher growth, but at the expense of future growth. Indeed, World Bank estimates show that the absolute amounts of the net reverse resource transfers are approximately equal to the reduction in investment.

But the failure of the banks to provide the additional lending under the Baker initiative does not mean that they were not taking action. They were using the reverse resource transfers to build up the loan loss provisions against their LDC lending. Between the end of 1983 and September 1986, for example, Citicorp had reduced the value of its outstanding loans to the top five Latin American debtors from 178% of its equity capital to 80%, Bank of America from 143% to 95%, Chase Manhattan from 201% to 101%, Manufacturers Hanover from 241% to 126% and J.P. Morgan from 136% to 69%.

This process has continued unabated despite the Baker initiative with the Citibank decision in May 1987 (after Brasil's suspension of commercial loan payments in February) to put an additional \$3 billion into loan provisions, a move which was followed, but in smaller amounts, by most of the other major banks.

Thus, the virtual disappearance of the primary market for LDC lending in the years, after the Baker initiative was supposed to revive

it, has also had a perverse impact on the secondary market for outstanding debt. In such conditions the discounts in the secondary markets for LDC debt no longer provide information about the expected debt servicing ability of the LDC's, but rather about the strength of the balance sheets of the private banks to withstand default.

An example of this perverse effect can be seen in the response of the market discounts of LDC debt, which averaged around 35% for the Baker 15 up to the beginning of 1987. After the increase in provisions announced by the major banks in May 1987 the discounts increased by an amount which produced implied losses for the banks approximately equal to the increase in bad debt provisions.

As the reverse transfer continues, and the banks are able to continue to strengthen their balance sheets, the discounts have continued to rise and this is precisely because the LDC's have continued to meet their interest and principal payments without the increased lending which was prospected in the banks as a percent of exports for the Baker 15 countries would fall to less than 100% while interest as a percent of exports would fall to around 15%.

The difficulty is that debt could not be repurchased by the borrowers at even the secondary market price for lack of resources to fund the repurchasing. This is why the debt equity swap has been created. But this also gives almost all of the difference between the face and the market value of the debt to the banks, rather than to the borrower.

5. Is There a "Market" Solution?

The basic reason why the loss to the banks implied by the secondary market discount cannot benefit the borrower can be best understood by recognising that the current crisis is unique in that a majority of the lending has taken place through the private banking system, rather than through international development organisations. For this reason it has been much more difficult to accept a difference between individual and aggregate responsibility for the debt crisis.

A private individual who contracts to borrow from an international bank in dollars has entrepreneurial responsibility to repay the dollar value of the interest and principle on the loan from his expected earnings in domestic currency. This is his individual responsibility and it is undertaken on an expectation of future price, interest and exchange rate movements which are implicitly confirmed as being reas-

onable by the lending bank in its approval of the loan. If entrepreneurial activities produce this sum in domestic currency, but actions external to the activities of the entrepreneur cause the exchange rate and/or the interest rate on the dollar loan to change, this is an external event which he could not have foreseen and is thus independent of the ability of any particular entrepreneur (and his banker!). If entrepreneurs had borrowed up to the point where expected annual returns equalled the debt service, then even if there was no question of insolvency in 1982, by 1984 after a 50% appreciation of the dollar and double digit US interest rates, there could hardly have been a project in existence that had a positive net worth.

The increased amounts of domestic currency that had to be paid to meet the higher dollar costs due to dollar appreciation and higher interest should be considered as an external responsibility and as such not subject to judgment according to the law of the market. Ever since Keynes it has been recognised that the inability to pay the increased costs due to the external change in the exchange rate or interest rate has nothing to do with individual entrepreneurial ability, but with actions over which the individual entrepreneur has no control or account. Application of the law of the market in these cases would lead to violation of the presumption of full employment of labour and resources since the effects apply generally, irrespective of individual characteristics. The correct response in these cases is to provide further individual lending supported by the community as a whole in order to avoid large scale community income loss through a depression.

But, on the same reasoning, neither is the inability to repay the responsibility of the lending bank, whose existence will also be threatened by the failure to repay and who will therefore be most interested in applying strictly the law of the market. The bank will be interested primarily in its own survival, which means the net wealth of its shareholders. Since the change in exchange rates has no impact on the bank's balance sheet, this means that it must seek full repayment of the loan, i.e. take all reasonable measures to insure that the individual meets both the individual and external responsibility for repayment. At the same time prudent banking policy suggests that such borrowers now represent an unacceptable risk and should be denied the additional funding that may be required in order to allow them to survive and meet their own individual responsibility.

In current conditions most LDC governments have accepted aggregate responsibility for their own borrowing, and for that of their

private citizens (and to the governments themselves). The majority of the loan restructuring negotiations thus are between the private banks and the national governments. This creates further difficulties because it spreads both the individual and external responsibilities across the entire population of the borrowing countries, most of whom have never consciously accepted individual responsibility. We thus have the paradox of the starving poor who are sharing the debts of the much better off entrepreneurs and government officials.

This rational response on the part of the banks also produces a paradox, as they refuse to grant any reduction in indebtedness and try to convince the debtors to accept full responsibility, while they increase their provisions against expected non-repayment which suggests they do not expect it to be repaid, while the secondary markets for the debt reflect this belief.

Thus the governments accept full responsibility, but recognise that new lending is required just to meet current payments, while the banks keep the loans on their books at full value, yet denying the lending which would allow the current payments and increasing instead bad loan provisions against non-payment. Eventually, provisions will cover the entire debt, and secondary discounts will rise to very high levels. Yet, the banks will continue to insist on full interest and principle repayment for any payments will now accrue to offset the previously reduced profits which created the provisions. The provisions and the secondary market discounts simply provide ironclad arguments for the banks not to provide additional funding, while they do not in any way change their interest in insisting on full payment of interest and principal. Their responsibility is to their shareholders, not to the citizens of the indebted countries or for the security of the world economy as a whole.

6. Has There Been a Case of "Market Failure"?

It is not difficult to see the resolution of this paradox. To meet current payments in the absence of new lending or debt reduction the debtors will be forced to reduce imports and sacrifice future growth and employment to the point that future payments become impossible or domestic conditions become intolerable. The question is whether the banks will be able to earn enough profits in the meantime to provide bad loan provisions of sufficient size to write off the full value of the loans before the indebted countries' economies or govern-

ments collapse. The only unknown is which will come first, taking for granted that the loans will not be repaid in full. If the banks reach full coverage first, the law of the market will require them to insist on full repayment. This result means that aggregate demand will have been doubly damaged, first by the reduced lending of the banks and more importantly by the reduced investment of the debtor countries.

The difficulty with this market solution is that it implies the continued weakness or expulsion of the debtors and ignores the impact of this collapse of the LDC economies on the rest of the world. The external responsibility cannot, by definition, be met by these countries. It must be dealt with, however, if it is to be prevented from having depressive effects on the world economy.

Clearly, the market process does not, indeed cannot, take account of the external aspect of the debt problem, and is thus operating inefficiently in that it is impeding the operation of the law of motion. The proper response is thus to find an acceptable framework in which the market should operate.

7. Helping the Market with Internal and External Solidarity

There is, of course, one radical solution: repudiation. There are many who believe that this is the only remaining solution. It is less radical that it was five years ago, for as the loss provisions of the banks indicate, this would weaken them, but not lead to instant collapse and financial chaos. But financial markets are currently sufficiently fragile and there are other factors, such as the condition of the US Savings and Loan banks, which suggest that outright repudiation may not be a sensible risk to run.

It would thus be preferable to find a market solution, if one existed. This solution can only be one which recognises that the difficulties have been created by both "external" and "internal" causes. This would also require that the market recognises and concedes the losses, as represented by the discounts in the secondary markets, to the benefit of the borrowers.

How might this be accomplished? First, it is necessary to recognise that the logic of the private banking system forbids the banks ever taking on the responsibility for the "external" causes of the problem: the change in the dollar value of the debt and the rise in interest rates which were engineered by the US Federal Reserve in order to resolve a purely domestic problem, inflation within the US. Only a public entity,

whose survival does not depend on the valuation of the market, can assume this role.

8. A Proposal for the "External" Debt Problem...

It has recently been suggested that it is precisely the Federal Reserve (and other Central Banks) which may hold the key to opening the way to a market solution. In a proposal put forward by Professor Paul Davidson of the University of Tennessee (Davidson, 1987-88, pp. 323 ff) the private banks would swap a proportion of their LDC debt, valued at par, for stock in United States Federal Reserve District Banks. The Reserve Banks would then exchange the LDC debt for United States Government debt. Since interest on the debt paid to the Reserve banks would increase their profits and since these profits accrue directly to the United States Treasury, there would be no net interest cost to the government. It would then be possible for the government to concede recapitalisation, refinancing or forgiveness of a proportion of the debt without directly threatening the survival of any private market institution. At the same time, concessions would be no different from lending to finance US exports and indeed can be looked at in the same way as export finance, for if the LDC countries are able to increase their growth rates much of the expansion will be in imports from the US. There are thus good economic reasons, given the US balance of payments position, as well as political reasons, to justify the reduction of a proportion of the debt. It is clear that the entire outstanding debt could not be dealt with in this way.

An objective measure of the total amount of debt which might be eligible for such a scheme would involve a calculation of the increase in the net debt due to dollar appreciation and dollar interest rates above an average level. This could be justified as a realistic division of internal and external responsibility for the debt problem.

It has been objected that this proposal would simply make the "US taxpayer" bail out the banks. But, in fact, all that is occurring is that the US taxpayer is accepting the risk of future non-payment banks are not willing to run. In the event of default and Federal Reserve intervention to save the US financial system, the US taxpayer will bear the financial burden in any case. The real question is under which solution the future costs are minimised.

9. ...And for the "Internal" Debt Problem

This would still leave a substantial amount of debt outstanding and represent the "internal" responsibility. We have already mentioned that the current debt policies had produced a situation in which entire populations were required to bear the repayment for debt in which they had no direct responsibility. In this sense the solution of the debt problem has brought about a regressive redistribution of income within a number of debtor countries. This fact is particularly striking with respect to the estimates of capital flight from the Latin American countries. For some countries, such as Argentina and Mexico, the ratio of foreign claims to foreign debts is greater than unity, implying that their entire international indebtedness could be repaid by outstanding international credits. For Venezuela the ratio is above 2, and only for Brasil and Peru, of the major debtors, the ratio is below .5 (I have taken the data from Felix and Sanchez, 1987).

The only problem is that the foreign claims are primarily private claims, while the foreign debts are the responsibility of the government. These foreign claims represent a source which must be utilised in any market solution to the debt problem. I have suggested in the past that since most of these foreign claims are held with the same private banks who hold the LDC debt, an easy way to bring about the required redistribution would be a unilateral default, leaving the private banks to collect from the private creditors. This is enforced solidarity.

An alternative might be found in financial engineering as practised in the United States. In current conditions it is perhaps inopportune to mention Michael Milkin and his creation of "High Yield Securities", now more commonly known as "Junk bonds". Yet, it is instructive to remember that before these instruments became involved in financing leveraged buyouts and corporate raider takeovers they were based on the simple empirical proposition that discounts on non-investment grade securities overcompensated holders for the actual ex-post risk of default. Indeed, these securities paid a higher risk adjusted rate of return than investment grade bonds. Michael Milkin saw an arbitrage opportunity which might benefit BOTH the borrower and the lender, giving the former a lower cost of borrowing and the latter a higher risk adjusted rate of return. He thus created High Yield Bond funds at Drexel Burnham Lambert which became the effective market maker, increasing liquidity, expanding the market, and thereby further reducing the effective risk.

Milkin thus profited from an imperfection in the market's ability to price non-investment grade debt; with a small injection of capital he created a system which further reduced the non-default risk associated with holding such debt by increasing liquidity and thus providing price stability.

It would appear that the divergence between the current pricing in the second-hand market and the ex-post risk associated with the loans to LDC's provides the same sort of arbitrage opportunity. Such funds, dealing in LDC "internal" debt, could offer LDC holders of foreign claims the possibility of investing them in a fund which would purchase the remaining debt identified as due to "internal" causes. Presumably the identity of these holders could be made part of the banks' obligations in order to participate in the swap of bank debt for Federal Reserve stock mentioned above.

In this way the debt problem may be divided into an "external" part, which may be said to be outside the direct responsibility of the debtor countries, and which would have a cooperative external solution. Since the private banks cannot participate, this must be done on a government to government basis. At the same time, a market solution could be found for the "internal" part of the debt, which the banks should be more willing to sell at second hand value once the external part has been swapped at par.

The indebted countries of Eastern Europe will have to be dealt with in a slightly different way, for US banks have only minimum exposure in this area. Rather this would be an area in which European Central Banks would be called upon to play a larger role. The internal part of the debt is also of different nature, as a much smaller part is of a private nature and the capital flight aspect appears to be smaller. On the other hand, the opportunities for swap arrangements appear to be greater than in Latin America. It will require action by European financial markets to set up market based solutions to allow investors to bear the risks which the banks choose to carry no longer.

It is clear that the debt problem will not be resolved instantaneously, but progress might be more rapid if the internal and external aspects were recognised and its solution were seen to be the responsibility of all, not just of the poorest citizens of the borrowing countries.

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"THE INTERNATIONAL DEBT STRATEGY ACCORDING TO THE WORLD BANK'S PERSPECTIVE"

MOEEN A. QURESHI

1. Introduction

My contribution will focus on the role of international capital in economic development and on ways to insure that capital flows to the developing nations bring lasting, productive, positive results.

I speak as an advocate of such resource transfers. I see them as instruments of interdependence that cement the solidarity of disparate nations and peoples to which His Holiness so eloquently referred last year in the Encyclical Letter, *Sollicitudo Rei Socialis* (The Social Concerns of the Church.)

In stressing the value of international capital to the economic and social health of both developing and advanced nations, I put emphasis on the need to improve the flow of those resources and their utilization. Debt, while indispensable to the growth of new nations, whose domestic needs exceed their domestic savings, has in the words of the Encyclical, "turned into a brake upon development ... and, in some cases, has even aggravated underdevelopment".

2. Capital Transfers to Developing Countries

To promote solutions to these problems, we must begin by examining their origins and their gravity. International lending is no new phenomenon. It financed commerce and discovery in the classical world, industrialization in 19th-Century North America and Russia, as well as the reconstruction of Europe and Japan after World War II.

In more recent times of international financial integration, private capital flows in the 1960s, and accelerated commercial bank lending

in the next decade, produced substantial benefits for investors and creditors on the one hand, and borrowing nations in Asia and Latin America on the other.

Those transfers — as well as the official, concessional flows to the less creditworthy, poorer nations of Africa and the Caribbean — followed the rule that capital moves to areas where it earns the highest returns and that such movement benefits global well-being as a whole. The corollary to that rule, however, is that those who acquire foreign capital must utilize it efficiently both to generate domestic returns higher than the costs of the imported financing and to increase foreign exchange earnings that at least match foreign obligations over time.

Let me emphasize those points. External capital, which has helped development in the past, remains essential for fostering future growth. Developing nations require smooth, effective means for the global transfer of private capital. Without such a mechanism, they and their partners will both suffer.

The poorer countries will have less capital for investment at home. The wealthier will lose export markets. In turn, the developing nations will be able to export less; the industrial states will have fewer resources to put into concessional flows; and growth on both sides will diminish.

If the most recent experience in highly indebted *middle-income countries* teaches us anything, it is that, without the capacity to borrow commercially, these countries cannot grow at a satisfactory rate. Indeed, they cannot realize their potential, whether or not they continue to meet their existing debt service obligations. If this is true in the short run, it will be even more so in the medium term, when the absence of outside savings will produce even greater constraints on investments and the growth of production capacity.

Private capital can also perform a useful function in *low-income countries*, where official flows are and will continue to be of paramount importance to the people's well-being and economic prospects. In the form of direct investments, participation in local ventures, and in some cases as loans, private international capital can usefully augment national savings, complement international aid in support of needed investment in the productive sectors of these countries and bring the benefits of modern technology and improved know-how and management.

3. The Debt Problem and International Capital Flows

When the problems of Third World debt are so severe, when the actual flows of private capital to most developing nations are in sharp decline, it may not seem realistic to speak with confidence of the workings of the international capital market.

Yet the fact is that private investments in this decade have continued to flow to a number of credit-worthy nations and projects. While commercial banks, in general, have become very reluctant to lend new money to debt-burdened sovereign borrowers, significant exceptions point the way toward better times.

Those exceptions hinge on a number of conditions. One is sustained economic growth in the industrial nations. The global recession of the early 1980s was clearly a factor in bringing on the debt crisis.

The second condition is international cooperation in resolving that crisis. The reality of interdependence makes precisely such collaboration essential.

And the third condition is the commitment of developing nations — no matter the weight of their external debts — to institute the kinds of policy reforms that will help make their economies stable and attractive to both domestic and foreign investment.

It is important to recall that not only were commercial banks in the 1970s over-eager to recycle the glut of petrodollars; many borrowing nations and firms were unwise and wasteful in the use they made of funding from abroad.

The debt crisis has indeed shown that reliance on external borrowing should not be excessive for any country. Many of the problems connected with the heavy borrowing by developing countries derived from unrealistic or unsustainable assumptions about future debt service capacity.

But the crisis has also shown that productive domestic utilization of borrowed funds is critically important in order to avoid debt service difficulties. Unless domestic policies and incentives are appropriate, both private and public investment financed with external borrowing will not yield expected results. Costly resources must be carefully used, but the channel of financing offered by international private capital must not be abandoned.

On the contrary, international financial integration can be very useful to developing countries, bringing to those that have a deficit the benefits of competitive access to outside capital, of a large variety of

credit instruments and of greater capacity to substitute between domestic and foreign assets. To capital surplus developing countries — and there are already several such nations in South-East Asia — international financial integration offers better returns on available funds and wider possibilities of risk diversification. These are benefits that no country should forego.

4. Debt Strategy to Restore Growth

A successful strategy for reducing debt burdens in order to restore growth must therefore aim, in part, at strengthening international financial integration. And the evolving strategy — launched in 1985 by Secretary Baker, amplified at the 1988 Toronto Summit and modified this year by the Brady Plan — does indeed count on the international capital markets and the multilateral financial institutions, such as the World Bank and International Monetary Fund, to play significant roles.

Where it initially stressed resumption of private bank financing for middle-income nations, the strategy has naturally and necessarily evolved to aim as much at reducing the stock of their old debt and the burden of debt service, as at generating new money. Similarly, in the low-income countries where official rather than commercial lending represents the bulk of outstanding obligations, the strategy evolved from increasing IDA lending and new flows of concessional resources to action that lightens the burden of non-concessional debt.

In close collaboration with the IMF Structural Adjustment Facilities, the World Bank — through the Special Program of Assistance to debt-distressed African countries — has been in the forefront of efforts to provide increased resources and co-financing as well as debt relief. Since the Toronto Summit, the Paris Club, as the agency for re-scheduling official debt, has set plans in motion with 12 African countries to lower, by various means, the heavy weight of the official debts they owe.

5. Prospects for Progress

I am encouraged by the distance that both creditors and debtors have already moved and by the degree of commitment — if not always the speed of action — within the international financial community.

The gravity of the crisis for all parties has been recognized, and the responses, while far from perfect or guaranteed solutions, do show movements in the right direction.

In the middle-income countries, experience is still limited, but the Mexican case presents hopeful indications worth noting.

Notwithstanding the considerable difficulties encountered in negotiating the first debt-reduction package under the Brady plan, its effects seem to be highly positive even in the short term. Confidence in the Mexican economy is improving. Domestic and foreign capital is showing renewed interest in finding investment opportunities in the country.

Flight capital is returning home. Interest rates declined appreciably after the package was announced. The confidence effects of the agreements, and the economic program which they support, are creating the right condition for successful recovery.

Mexico, however, is a single case. The Philippines, Costa Rica, Uruguay and Venezuela each constitute a different challenge and require differences in the practical application of the debt strategy. The needs of Costa Rica are different from those of the Philippines. Costa Rican debt, for example, is traded at 85% discount and commercial banks are unwilling to provide new money to this small country. The debt of the Philippines, on the contrary, is traded at a 50% discount and commercial banks are willing to continue to lend.

Future debt negotiations must accommodate these real differences in the economic circumstances of different indebted nations and in the markets' perception of risk.

The clear lesson of the Mexico experience is that the Brady approach provides a framework of principles that can facilitate a market oriented solution, but it should not be turned into a straitjacket of rigid procedures and inflexible rules. Thus a lasting solution to the debt problem of each individual indebted country must be based on a realistic assessment of its debt service capacity and should not slavishly follow the precedent set by the most recent debt renegotiation. This means, for example, that in a small and well performing country such as Costa Rica, there is the opportunity – if the support of friendly donor governments and multilateral institutions could be effectively mobilized – to undertake a comprehensive buyback operation and achieve a permanent solution to Costa Rica's debt problem.

By contrast, in the case of Venezuela, the debt problem is perceived to be of a medium-term duration. Its successful resolution is

therefore likely to take the form of providing debt service relief over the next few years, plus possibly new money, rather than necessarily involving a significant reduction in the stock of its debt.

In *low-income countries*, it has to be recognized that the scope for further relief of concessional debt burdens is small, since these debts represent only about a quarter of the total and servicing them takes up only one tenth of total payments. Therefore, the primary need is to expand action on non-concessional debt.

In the end, the common objective is to resume sustained growth in indebted countries both to lessen the sufferings of large sections of their populations and to restore the credit-worthiness of nations now cut off from international finance.

I believe that if all parties work together in the enlightened pursuit of their own objectives, we can make a success of the debt strategy and create the conditions for sustained growth in indebted countries. In a solidarity framework this task requires that all parties concerned assume their appropriate responsibilities.

6. Conditions for Debt Crisis Resolution

Debtor responsibilities are foremost. Structural adjustment and policy reform are not only necessary to refuel the engine of growth in most highly indebted countries, but are also what provides added credibility and strength to the request for additional support from the international community. If debt is a political and moral problem as well as an economic one, debtor countries have the political and moral duty to help themselves by creating the internal conditions that can attract outside help and insure its beneficial use.

To create these conditions, most debtor countries must pursue with determination and courage economic reform programs that go to the heart of their structural problems. For without lasting changes in the ways internal resources are mobilized and used, economic recovery will prove to be short-lived, outside help elusive, and its effectiveness limited.

The governments of debtor countries undergoing structural adjustment have an added duty: to recognize and to lessen the impact on the poor of the negative social and economic consequences of reform. When public services are cut and incomes reduced, for example, government authorities must take direct action to cushion the most vulnerable of their citizens and to sustain popular support for change.

This is a responsibility that few governments of indebted countries can shoulder alone. They need advice and tangible help to implement programs of targeted support that will meet the needs of the weakest segments of their populations: the poor, the elderly, the children. This challenge is one that governments of donor countries, national and foreign private assistance organizations and international institutions must meet in a true spirit of human solidarity.

Creditor responsibilities are also paramount. Governments of creditor countries can and must offer additional help to debtor country governments undertaking structural adjustment. Much has been done by industrial country governments vis-a-vis the low income countries of Africa. Yet much remains to be done even for this group of countries and for others in similar circumstances elsewhere. Extending Toronto terms for debt rescheduling to low-income countries in the Caribbean and Latin America is one way. Action on middle-income African countries that are indebted largely to official creditors is another.

These are countries that have much lower per capita income than their Latin American counterparts and much higher levels of indebtedness. They deserve more liberal terms in official debt rescheduling and better treatment in non-concessional debt rescheduling. Resumed flows of concessional resources may be necessary where incomes have fallen so dramatically in recent years.

Finally, creditor country governments must support debt and debt service reductions for highly indebted middle-income countries. At first glance, this does not seem fully consistent with the Brady initiative which envisages that the debt negotiations between the heavily indebted country and its creditors will be "voluntary" in character. This approach has drawn criticism because it is seen as a departure from the position in the early 1980s when the IMF had taken a more pro-active role in hammering out an agreement between the debtor and the creditors. I personally believe that the stance that the IMF and the World Bank have taken — i.e. involved but not interventionist — is the only feasible course of action given the altered circumstances and attitudes of the commercial banks.

This still leaves open, however, the question of who should fill the gap — that is, play the role of a catalyst in forging an agreement between the country and the banks. The current situation does lead to interminable and frustrating negotiations by Bank Advisory Committees with the debtors. This is an area where the major creditor governments have a role to play and in some cases are beginning to do

so. This role must take the form of support for debt and debt service reduction in those countries which are implementing comprehensive programs of reform and structural adjustment. Support can take many forms from regulatory changes affecting the behaviour of commercial banks to the provision of bridging finance and cofinancing with the multilateral institutions.

Let me say a word about tax and regulatory treatment for commercial bank lending to the developing countries because it differs significantly from country to country, and is a major reason for the current divisions amongst commercial banks and their differing response on the debt issue. In most countries, there is considerable scope for the authorities to "interpret" and even "modify" the regulatory framework affecting the banks in such a way as to either help or hurt the capacity of the commercial banks to arrive at a settlement with the debtor. It is incumbent upon the creditor governments to approach this task in a spirit of support and solidarity rather than domestic political expediency.

Creditor banks also have important responsibilities. As parties to the debt process, they have a substantial stake in the economic and financial future of their clients. They have clear duties vis-a-vis their shareholders and depositors at home, but they also have obligations vis-a-vis the international financial system within which they operate.

Finally, they have a long-term interest in a non-disruptive and non-traumatic resolution of the economic and financial problems faced by many of their developing country clients. While commercial banks cannot and should not be asked to put their assets in jeopardy or make decisions not based on reasonable assessments of country risks, they can be expected to act as partners to client countries which undertake internationally supported and monitored reform programs. In some cases it is reasonable to expect that commercial banks, together with multilateral financial institutions, provide new finance to reform programs and, or, accept debt reduction provisions that involve part of their assets.

Whenever indebted countries are ready and willing to take strong measures to improve their economic performance, multilateral financial institutions have the responsibility to help them, with advice, with funds and with support in catalyzing additional resources from abroad. The World Bank and the IMF have already shown their willingness to accept a large share of the responsibilities and burden of making the international debt strategy work.

7. Reviving Private Capital Flows

Yet, even if successful in reducing the debt burden of 20-25 countries, our cooperative strategy would not ensure sustained growth unless it succeeded as well in creating a base for renewed private capital flows. We must recognize, in this context, that international capital markets have changed and so have the perceptions of the key agents in them. A pure and simple return to the conditions of the 1970s, with resumption of bank lending on a large scale, is highly unlikely. Sovereign lending is going to be limited in scale and range in the years to come.

Commercial banks will continue lending to a limited number of countries, but in the main they will go back to traditional types of financing: trade and collateralized client loans. Moreover, there is no realistic hope for expecting that official flows of capital will substitute for private resources. The maintenance of even a modest growth in the real flow of public concessional capital to developing countries will require the active and continued support of all the "friends of development".

I would go as far as to say that prospects for developing countries in the remainder of the current century will be rather bleak unless and until we find new ways of getting private capital to flow back to them on a significant scale and sustained basis.

Developing countries need long-term capital. We should encourage the flow of venture and risk capital towards them. We should, above all, encourage institutional investors to take a stake in their long-term growth through direct and portfolio investments. We must develop new instruments to help these flows. What is needed is, in other words, a fundamental and permanent change in the patterns of capital flows to developing countries.

This, I am persuaded, will help developing countries, but will also help industrial countries and the world as a whole. Capital flows from surplus to deficit areas are a key way not only to maintain a global balance in international payments, but also to ensure that capital moves towards the highest possible return. Developing countries today, like all countries in their initial stages of development, need to be able to sustain a long-term balance of payments deficit through long-run capital inflows from the industrial world.

8. Concluding Remarks

To conclude, are there reasonable hopes that this can be achieved and that opportunities for better lives can be offered to present and future generations in today's debt-distressed countries? The answer in my view is a hesitant and hopeful yes.

I am hopeful because many of the developing countries in Latin America and Africa have already begun to take decisive steps to undertake economic reforms and they are beginning — at least in some cases — to show signs of recovery. Others are following in these steps.

I am hesitant because I still do not see on the part of the creditor governments and creditor institutions a recognition of how difficult the process of economic adjustment is, and how fragile is the political and institutional base for economic recovery.

Creditor governments continue to be swayed primarily by domestic political considerations — they can indulge in protectionism knowing full well that this is fatal to economic recovery in the developing countries. Their commitment to the new Brady initiative is still hedged by domestic political constraints. Most creditor governments are still primarily concerned with fighting the last war on the domestic economic front while most private creditor institutions and banks are preoccupied with their immediate benefits rather than their long-term interest.

In this connection, I am reminded of a story. There was a rich man who was in great economic and financial difficulty. He went to church and was praying quietly.

“Oh Almighty God, please make sure that I make a million dollars this year because the times are so hard”. Then suddenly he saw a poor man in church who was crying and wailing loudly and praying.

“Oh Almighty God, please give me ten dollars — my children are hungry and I have no money for food”.

The rich man became increasingly impatient with the lamentations of the poor man. There came a stage when he couldn't stand it any more. So he went up to the poor man, took a \$10 note from his pocket, held it out to him and said:

“Stop it, stop your praying — take the ten dollars and don't distract the Almighty. I need his undivided attention”.

I find the actions of the creditor governments and in particular their current aid and debt policies somewhat analogous to the behaviour of the rich man.

If we are to resolve the debt problem and restore growth, we need to accept and reaffirm, in a spirit of solidarity, our collective responsibility. It is a responsibility we can help to meet by recognizing, as His Holiness John Paul II did last year, that the "right of economic initiative ... is important not only for the individual but also for the common good". Private capital will flow where that right is honored and where, in the collaborative process of development, enterprise is encouraged as an instrument of community growth.

“ECONOMIC INTERDEPENDENCE FROM THE IMF'S PERSPECTIVE”

M. CAMDESSUS

1. Introduction

I am impressed, in reading the encyclical “*Sollicitudo Rei Socialis*”, by its emphasis on the linkage between development, interdependence and solidarity, and on the fact that genuine development must be achieved “within the framework of solidarity and freedom”. I could not agree more.

As a matter of fact, the world is not becoming more interdependent. It already *is* interdependent. For better or for worse, the world is a single unit. Whether the nation-state continues to exist for a long time, whether the international organizations continue to have difficulties in establishing themselves, this fact remains. All of the major issues of our time — debt, growth, revolution of the money markets, environment, drugs, perestroika — are world issues. And it is only in universal solidarity that a response to them can be found, whatever indeed may be the importance and urgency of responses at the national and regional levels.

The world cannot protect itself against its growing vulnerability and face up to today's global challenges, unless *each country* fully assumes the global dimension of its responsibility. We have too long been thinking in terms of donors and recipients of aid, of debtors and creditors, of superpowers, and the rest of the world. The reality is different: behind each of these groups there are partners jointly responsible for a common destiny, the co-responsible builders of the universal common good.

I would like to confine myself to just two aspects of this co-responsibility which are less often emphasized than the central trilogy of development-interdependence-solidarity, but are essential for the trilogy to be effective:

- a) The policies of all countries – the biggest as well as the smallest – have more and more universal repercussions creating for all the moral obligation of behaving as co-responsible partners.
- b) The policies required for the national good (I will call these the “good policies”) converge at a fundamental level with the policies that are called for by a sense of global co-responsibility. This means that what truly serves the universal interest, best serves the country itself; and what truly serves the specific interests of the country, best serves the rest of the world.

Of course, an instinctive reaction as human beings is to oppose these two approaches and to consider that what serves universal purposes is a minus for our parochial purposes. This view does not persist if one observes what the real mechanisms of progress of our economies are, and if one takes a longer-term perspective than the one which is suggested, for instance, by immediate electoral interests. Exercising universal co-responsibility and national promotion of the common good are two sides of the same coin. This entails an important consequence that is very relevant to the implementation of the orientation of the encyclical – that good national policies are the first dimension of a country's co-responsibility for the universal common good. I must hasten to add that these “good policies” are not in general the most popular ones, nor those that politicians are inclined to implement. They are determined by a careful consideration of the long-term needs of the countries. I have also to add that they can flourish only in a context of dialogue and coordination with other countries and that the international organizations must help define and implement them.

I propose that we verify this by glancing through an atlas of co-responsibility, stopping at four groups of countries with whom we in the IMF are in a permanent dialogue, with the view precisely to help this convergence to be translated into better policies. I will say a word in passing about the role of the churches in helping to clarify the choices of the people who bear the brunt of these tasks of co-responsibility.

2. Industrial Countries

The quality of economic policy and performance of the industrial countries is decisive for the prosperity of the rest of the world. If they were all to go into a recession together, this would mean a formidable increase in poverty for the rest of the world. The first dimension of

their duty of co-responsibility and solidarity is not to give more to poorer countries, but rather to manage their own economies properly, while ensuring, of course, that their progress supports the efforts of other countries rather than hampering them. It is only when this responsibility has been assumed that international aid for development will really make sense. This in no way implies that I disregard development aid. I see it as an essential dimension of the universal co-responsibility, and we should primarily press for its substantial increase. But good management of national economies is even more important as illustrated by the following few examples of the effects of the policies of the industrial countries on the situation of the developing countries:

1. It is estimated that a one percentage point increase in the rate of growth of real GNP in the industrial countries would raise export growth in the developing countries by about $1\frac{1}{2}$ percent a year over the medium term and could raise GDP by up to one half percentage point per annum. The debt-ratio of the net debtor countries would fall by about $2\frac{1}{2}$ percentage points.

2. A one percentage point reduction in the world benchmark interest rate (LIBOR) would lower the debt-service ratio of the net debtor countries by $1\frac{1}{2}$ percentage points and that of the 15 heavily indebted countries by roughly $2\frac{3}{4}$ percentage points.

3. The negative effect of all forms of protectionism of industrial countries on developing countries is particularly striking. It has been recently calculated that it reduces developing country national income by almost twice the amount of official development assistance that is provided. As it is also well established that protectionism is a bad policy in purely national terms, we have here a clear illustration of the importance of promoting sound national policies to best discharge universal co-responsibility.

Let us take two specific examples. The systemic effect of greater efforts by the USA to reduce their budget deficit¹ — simply by implementing fully the targets defined by the Gramm-Rudman legislation — would be significant. This would lead to a substantial reduction of inflation and interest rates in the United States and also in other industrial countries. It would also result in a lasting reduction in the external

¹ I will not elaborate further on why a reduction of the public sector deficit is a good domestic policy for an industrial country that already has high indebtedness — this would reduce an already impressive burden on future generations and allow for a much needed increased flexibility of fiscal policies.

imbalances of the United States, Germany and Japan, thus contributing to the stability of international markets. Furthermore, lower international interest rates would significantly reduce the debt service ratio of the indebted developing countries; it goes without saying that if the excessive absorption of world saving by deficit industrial countries were reduced, access to financing by the developing countries at a lower cost would improve, if their policies were correct.

Similarly, structural reform in any one country can also exert positive effects on its trading partners. Simulations with the Fund's multi-country model, undertaken for the 1989 consultation with Germany, indicate that strumental adjustments that produce a sustained one percentage point increase in Germany's potential growth rate would raise German output by 2 percent within a three-year period and output in Germany's EMS partners by $\frac{1}{2}$ percent over the same period, compared with a situation where structural rigidities were not tackled.

The industrial countries, globally speaking, have enjoyed in recent years a long period of moderate economic expansion. This has benefitted their own populations directly and the rest of the world indirectly. There has also been an improvement in policy formulation in most countries, both in terms of macroeconomic and structural policies, which holds out hope for a continuation of the recent growth. But their performance has been far from perfect; unemployment has remained high in several countries; inflationary pressures have reappeared in some and have been met by a strong exercise of monetary restraint; the external imbalances of some major industrial countries have remained dangerously large; and the adjustment process to reduce both excessive surpluses and deficits on the balance of payments has been unduly slow. This has contributed to an unstable situation on financial and exchange markets, which is one of the significant vulnerabilities of our system. They must seek to achieve continued growth, both for their own sake and for that of the developing countries that export to them. For that they have to act decisively and cooperatively to reduce their deficits and structural maladjustments in order to subdue inflation; to make rapid progress toward a renewed liberation of trade through the Uruguay Round; to assist the developing countries through the individual initiatives of their citizens and their NGOs, the far sighted and resolute contribution of their commercial banks to the debt strategy, and the increased effort of official development assistance, in particular in all the countries which lag behind the United Nations target of 0.7 percent of GNP devoted to this purpose.

The cooperation established within the so-called G-7 tries to help the seven most important industrial countries to make as effective as possible this convergence between industrial countries' national economic policies and their co-responsibility for a sounder working of the global world economy. It is the task of the IMF to provide this group of countries with a precise and candid assessment of the effects of their policies, speaking to them from the point of view of the rest of the world. This is a first step, no doubt, but only a modest step toward a more orderly and cooperative international monetary system.

3. Middle-Income Developing Countries

The middle-income developing countries show a wide variety of experience and situations. They include a number of countries that have achieved a remarkably strong economic performance, sustained over a long number of years. This group includes the newly industrializing economies in Asia, as well as others in each of the main areas of the world. These successful countries have, in general, followed sound and cautious financial policies — including a wise, and not excessive, use of foreign capital — and development policies aimed at sustainable long-term growth. Some of these countries have succeeded, over time, in so transforming their economic structures that they have emerged from being low-income, underdeveloped countries to middle-income countries, and some of them already contribute to international support for the poorest countries, in spite of the magnitude of the problem they have still to resolve. (This group includes Singapore, Korea, Thailand, and Malaysia.) It is our view, in the IMF, that in pursuing policies of dismantling external protection, adopting flexible exchange rate policies, stimulating domestic demand, and addressing in particular the needs of the poorest segments of the population, they would continue to face properly their twin national and international responsibilities.

The contrast with the success of these countries makes even more dramatic the plight of the group of middle-income countries that have fallen into severe difficulties as a result of their debt. I do agree, personally, with the analysis of the problem, provided by the encyclical and the previous document of the Pontifical Commission "Justice and Peace". So, I would like here only to draw from this crisis a few lessons of what constitutes good and bad economic policies, and what the term "solidarity" should mean here in practice.

We should recall why the debt crisis occurred. It had its roots in the attempt by some countries to achieve exceptionally rapid growth in the 1970s, on the basis of cheap and easy money from abroad, and lax policies at home — policies that usually included negative real interest rates, over-protected domestic markets, large fiscal deficits, unrealistic exchange rates, a lack of attention to the quality and productivity of the investment projects on which the borrowed funds were spent, and an insufficient regard for competitiveness or for the generation of future export earnings. The latter half of the 1970s, in particular, saw a dangerous combination of too much financing and weak economic policies. In a nutshell, bad policies. Those who lent, of course, share the responsibility for the eventually disastrous outcome and, of course, now for the reconstruction of these economies.

When this unsound and unsuitable situation came to a halt, in 1982, the world was faced with an unprecedented debt crisis.

What we were threatened with, at that moment, was the possibility of a collapse of the international financial system, with dire consequence for all countries, and not only for the creditors and debtors. Faced with this threat, the system responded quickly with collective actions, inspired, if not always, by a genuine spirit of international solidarity, at least by a wise recognition of the fact that there is no solution to such a collective problem if each of the partners — debtors and creditors — go separately, and if commercial banks and international financial institutions don't contribute their fair share to the solution, accepting at least implicitly the principle of co-responsibility. The debt strategy that was launched then aimed at helping the debt countries grow out of their problems. The shared responsibility implied that countries had to implement long overdue structural reforms and implement corrective economic policies, creditor governments and commercial banks had to cooperate in easing the financing problem, and the international organizations, in particular the Fund, the World Bank, and the IDB, had to play their essential role.

Since 1982, a lot has been achieved. Significant economic progress — even if very uneven and at a very high social cost — has been achieved. A major systemic financial crisis has been avoided and the financial system is now much stronger, which makes more obvious, in my view, the responsibilities of the banking community to contribute now decisively to the solution of the problem.

We are now entering a new phase based on the same principle of co-responsibility and solidarity implemented in what I hope will be a more favorable external context and in a more decisive fashion. The

"strengthened strategy" rests on the recognition of two basic facts; because the "debt overhang" of many countries is a structural obstacle to them growing out of their debt, it is part of the responsibility of the international community to help to reduce it to a tolerable level; and this additional effort can only take place, jointly with the indispensable provision of new money in appropriate amounts, if the debtor country is perceived as taking all necessary steps to address comprehensively its own problems.

I am convinced that this strategy has the potential to make the debt no longer a crisis but a manageable problem — a problem whose solution will indeed require a great deal of effort by all.

In the long run, the problem of debt can only be solved by sustained growth. This requires, above all, sound policies in the debtor countries themselves, and here I am pleased to note that an increasing number of the most severely affected countries are now implementing important and far reaching economic reforms. It also requires a continued and strong commitment of support by each of the other groups of participants in the collective strategy — donor governments, commercial banks and international institutions — resisting any temptation to try to escape from the collective burden sharing.

One shouldn't be mistaken about the magnitude of the effort required from all. Creditor governments and international financial institutions will have to contribute with additional and new forms of support and risks. For the debtors and banks in these debt reduction negotiations a great sense of compromise and of long-term common interest will have to prevail, preventing the ones from sticking rigidly to the principle "*pacta servanda sunt*" and the others from resorting to non-payment blackmail. In this case also, what is required by their own responsibility for the common good of the world, is also what is required by the long-term interest of their institutions or of their people.

4. Low-Income Developing Countries

This includes countries — especially the countries in sub-Saharan Africa — that have declining per capita incomes — almost a continuous decline over 20 years! — and a severe deterioration in their external financial position, despite substantial assistance from the donor countries. This is a trend which must be reversed. An exceptional effort of international solidarity from all potential donors is, of course,

required to ensure that these countries are again placed on the path of sustainable economic growth. But there is no easy solution. If international support is here an unquestionable must, the countries themselves have the main responsibility for their own destinies and they should not expect a dispensation from the need for individual effort in implementing sound economic policies, including a strong budget, a cautious monetary policy so that development is not derailed by inflation, and structural policies, to ensure that scarce resources are allocated efficiently and that investment is productive. We see in a growing number of countries that the need for policy change is now better accepted. For its part, the Fund is assisting some thirty African countries with advice, technical assistance, and substantial amounts of concessional financial assistance. In these countries, there is now the prospect of a return to a more healthy pattern of increases in per capita income, even if only gradual ones. This is, indeed, a most welcome change of trend. But, I insist, these countries can only succeed if their efforts are matched by generous support from the industrial countries. A number of industrial countries have taken steps to ease the burden of debt on the poorest countries; and they have reiterated, most recently at the Paris summit, their willingness to do more. It is clear that some of the poorest countries will need more debt relief, and that their plight and effort would obviously justify a greater provision of ODA (Overseas Development Assistance) by the donor countries. This is, in terms of priority, the field where an increase of ODA and preferably in the form grants supporting well chosen program or projects should apply.

But while insisting on this responsibility of the donors community, I would like also to mention *the systemic importance even of the smallest of these countries*. First, of course, because whatever the size of the country, when productive resources are properly utilized and, more than that, when "authentic human development" takes place, there is a plus for the world at large. The encyclical makes this point strongly: "... it should be obvious that development either becomes shared in common by every part of the world or it undergoes a process of regression even in zones marked by constant progress. This tells us a great deal about the nature of authentic development: either all the nations of the world *participate* or it will not be true development". So, in striving for their own development "not expecting everything from the more favored countries" these countries discharge also their share of a universal co-responsibility.

In the limited framework of our work in the IMF, which is not

development aid but preparation of the ground for it, in reestablishing the basic macroeconomic equilibrium, we see very well the positive or negative effects of the behaviour of these countries and of their leaders for development at large. Remember how the wasting of resources in unproductive spending by some countries has undermined the prospects for ODA in the world as a whole. Remember the negative impact on the global pace of adjustment of the provocative attitude of some countries who have challenged what is seen by the international community at large as reasonable policies. What delays development in a single country delays it everywhere. There is, no doubt, a universal cost of national demagoguery! And, by contrast, look to the encouraging effects on the others of the success of a few countries — whatever their size — that implement sound policies steadily!

5. Centrally Planned Economies

The fourth group that I wish to mention is those countries that are in the process of reforming their centrally planned economies. These countries have recently taken the historically momentous decision to adopt some of the important characteristics of the economic systems of the industrial countries of the West; in particular, a reduced role for government, a greater scope for individual initiative and decentralized decision-making, and more reliance on market mechanisms. With this will come a much closer integration of their economies into the world's global trading and monetary system for the common benefit of all.

It is clear that the task of transforming these economies, of modernizing them and making their productive structures more competitive, will require a major long-term commitment by the governments and populations of these countries. It will also need a great deal of understanding and support by all those in the rest of the world who wish the reforms to succeed. This presents, in my view, one of the toughest and most promising challenges to us all for the coming decade. What is at stake is the improvement of the economic and social conditions in these countries. But more than that! The encyclical has very striking comments on the fact that "the present division of the world — East-West — is a direct obstacle to the real transformation of the conditions of underdevelopment in the developing countries..." These developments have the potential to reduce significantly this formidable obsta-

cle. So, in many respects, the efforts of these countries have a major universal dimension.

The international community has to support these countries in this delicate and painful transition, and this support will have to be maintained not only for the current period of enthusiasm but for several years. For its part, the IMF is trying to make its full and proper contribution. Four of the countries that are undertaking major reforms — China, Yugoslavia, Hungary, and Poland — are members of the Fund and we are actively engaged in assisting them.

The first step of this cooperation — in which we are presently engaged with three European countries — is to assist them in designing the program of adjustment which would best facilitate their difficult transition. Many problems have to be tackled simultaneously — inflation, structural rigidities, the introduction of market mechanisms and institutions, external debt, etc. The determination of their leaders gives me hope for their eventual success if their public opinion perceives properly that a long and steady effort will be necessary and if the multifaceted contribution by the industrial countries is put in place quickly and maintained as long as it is needed.

6. Concluding Remarks

It is very natural for me to call the reader's attention to these universal responsibilities of all countries and to this convergence between the national and international requirements of good policies. It is our task, in the IMF, to make that clear to governments — time and time again — and to support, to the best of our ability, policies that are well in line with these converging objectives. Knowing well the limits of our influence, we cannot but attach the highest importance to the role of the churches in particular in fighting all the “negative factors” that work against a true awareness of the universal common good. To be sure, we do not expect the Church to give any kind of particular blessing to the policies we recommend. But we see the decisive importance for the history of humanity of making all human beings more aware of their universal dimension and more able to discern the specific requirement of the common good at a given moment in time. This is a particular responsibility of all those whose task it is to inform or to educate. The contribution of the Church — through its social doctrine — to promote this sense of the common good has been important. When looking at the challenges of the next millenium, I see a growing need for such a contribution.

It is better to recognize that we do not know a lot about these challenges, except for one thing of major importance indeed. Instead of 5.1 billion human beings, we will be 6.2 billion in the year 2000, and out of the 1.1 billion additional children, 1 billion will be born in developing countries. One sees, then, how important it is that these economies grow steadily, implement reasonable policies, manage for the best their scarce economic resources — with proper international support — and share with the rest of the world their own values.

We also know a little bit about some of the other challenges of this next decade, as the following ones are already with us:

- a) the successful implementation by the centrally planned economies of their reform programs;
 - b) the achievement of sustainable growth in the indebted developing countries;
 - c) the fight against drugs;
 - d) protection of the environment,
- and certainly we will have to face new ones that we have not clearly identified at this stage.

But let us take these four key challenges. They have in common a feature we are now familiar with: they cannot be tackled by any country alone: they are genuinely universal in nature and they have to be addressed as such. It will be a great task to equip the world with appropriate universal instruments to deal, in particular, with the drug and environmental issues. But the most important task is certainly one in which churches have to play a role of primary importance: to help developing in such human being, one of his so-far atrophied dimensions, the universal dimension, and help transform all of them — all of us — into universal makers of solidarity.

— *Part 2* —

GLOBAL INTERDEPENDENCE

THE NEW TERMS OF WESTERN ECONOMIC ACTIVITY TOWARD THE EAST AND THE SOUTH

ENZO R. GRILLI

The old terms of the North-South relationship in trade, aid, and finance are too well known to be recalled here in detail. The skeptic may think that there is nothing new either in the structure or in the evolution of the ties between the economies of the developed countries and those of the developing countries. The terms of the East-West relationship, on the other hand, are so new that a skeptic may think that nothing can yet be said about them. Some important novelties recently have emerged, however, in Western economic postures toward both the South and the East. Significant changes have taken place and are still taking place.

These changes have to do with the intellectual and political climate of the 1980s, with the policies of industrial countries on the debt, adjustment, and growth crises of the developing countries, and the reactions of the West to the recent political upheavals in Eastern Europe. They also have to do with the autonomous response of developing and Eastern European countries to the many challenges that they had to face in the 1980s: restoration of economic growth, return to creditworthiness, and political and economic reforms. There is a clear interaction between these various types of impulses, and as a result a substantive change in the structure of relations between North and South and between North and East will probably ensue.

1. Introduction

The 1980s witnessed the interplay, and sometimes the convergence, of many causes of change. Early in the decade the debt crisis showed clearly, if suddenly and painfully, that the growth-through-debt strategy followed by many developing countries during the 1970s

could not be sustained. It also showed that without constant efforts to maintain and improve the productivity of investment resources, growth was bound to suffer. Quantity, in other words, cannot go on substituting for quality and efficiency in the use of resources. External debt cannot be accumulated endlessly and serviced by new borrowings. Finally, the debt crisis made clear to many policymakers in developing countries that trade interdependence could not be lessened by increasing financial interdependence. Despite the hopes and rhetoric of delinking, the South remained deeply tied to the North. The two planes of interdependence are related to one another, as shown by the effects of policy choices made by the North in the early 1980s. These choices generated economic recession and caused real and financial terms-of-trade losses for the developing countries.

The intellectual climate also changed drastically in many industrial countries of the North. This influenced economic policies and postures at home and abroad. Conservatives questioned the role of government in the generation and the distribution of income. 'Rational' expectations of economic agents restricted governments' ability to conduct economic policies. The capacity of government to steer the economy became drastically discounted. Industrial countries emphasized control of inflation over the maintenance of employment. Many basic tenets of neoclassical economics were revalued. Market flexibility, relative price changes, and private initiative were given much more importance than at any time in the postwar period.

In developing countries new political and economic attitudes also emerged. Governments recognized not only their responsibility for fostering adjustment to the external shocks that their economies had to absorb in the areas of commodity prices and interest rates, but also the need to change the very structures of their national economies to recreate the conditions for more lasting growth. The reforms needed in the economic domain, they also realized, necessitated deep internal changes, both political and social. These new convictions served to justify, intellectually and politically, policies that would have been almost unthinkable a decade earlier.

What was particularly striking in the 1980s was the scale and the spread of changes in the direction of policies that occurred in developing countries. These did not remain confined to countries at a certain stage of development, or to a particular region, but occurred in the low-income countries of Africa and Central America as well as in the middle-income countries of North Africa, Latin America, and part of Asia. Quite remarkably similar were the perceptions of what needed

to be done and in what sequence. Regaining control over their economies was seen by many policymakers in developing countries as a top priority. In the short term, this meant more orthodox fiscal and monetary stabilization measures and in the longer term efficiency-enhancing, economic-restructuring measures.

Change was undoubtedly affected by industrial countries - directly through their policy dialogue with individual developing countries and indirectly through international organizations. Assistance policies, both bilateral and multilateral, became more conditional and directed toward the support of specific structural reforms in developing countries. Bilateral and multilateral financial support to developing countries was increasingly linked to their policies and performance. Yet such a widespread change in the direction of policies could not have been induced without the concurrence of developing countries' policymakers, and without the social and political consensus that is necessary to carry out radical economic moves.

In a group of countries of Eastern Europe, once referred to as the centrally planned economies (CPEs), change was catalyzed, as in developing countries, by the external economic environment and by a growing realization of the shortcomings of the "command economy", where production was administratively planned, factors of production centrally allocated, and consumption decisions stringently bound. Many of these countries were highly indebted toward the West and were therefore affected by the changes in the 1980s in the availability and price of foreign loans. In addition, many Eastern European countries had begun to trade with the West in the 1970s; they, too, were dependent on the policy and performance of the Western economies, particularly in those of Western Europe.

In Eastern Europe the realization that the command economy was not performing adequately went back at least to the mid-1950s, as witnessed by the economic reforms attempted by Poland in those years. Yugoslavia had begun experimenting with an important variation of the socialist economic model in the late 1940s, but in rather special political circumstances. The reform movement in Eastern Europe also had deep roots in Hungary, which cautiously attempted to combine decentralized decision-making by firms with state ownership of industry in the mid-1960s. Poland, on the other hand, after its early experiments returned to orthodoxy and did not begin again economic reforms until the early 1980s. In various ways however, if at different times, all of these economies had undergone significant changes from the strict command economy model.

Yet in Eastern Europe, more than elsewhere, the impulse for economic reform came from external political changes. Political developments in the Soviet Union in the second part of the 1980s were of paramount importance in creating the internal political conditions necessary for attempting more radical and general economic reforms.

However, if countries such as Yugoslavia, Hungary, and Poland had already become modified planned economies (MPEs) in their increased market orientation (Wolf 1978), the typology and sequence of economic problems that they faced in the 1980s were still closer to those confronted by developing countries than by industrial countries: recurrent imbalances in external payments, crippling external indebtedness, spiraling domestic inflation, and persistent slowdowns in output growth (Balassa 1986). Still, what differentiated these economies from those of developing as well as industrial countries was the peculiar interaction between stabilization and reform requirements that was generated by the inferior operation of market constraints at the microeconomic level.

2. Economic Adjustment: The Model

In the 1980s economic adjustment became a clear priority of developing and modified planned economies with serious macroeconomic imbalances and faltering domestic economic activity. The model from which many of the policy prescriptions followed by these countries, in attempting to reduce their imbalances and resume growth, can be reconduced to the small, open economy framework, with tradables and nontradable goods, competitive markets, and (almost) flexible prices (Corden 1977).

In situations where external (current account) and internal (inflation) imbalances coexist, the stylized diagnosis that comes from the model is as follows:

1. Ex-ante excess demand for both tradable and nontradable goods generates a current account (CA) deficit, it increases the price of nontradable goods (P_{nt}) in absolute terms and relative to the prices of tradable goods (P_t).
2. The real exchange rate (P_{nt}/P_t) then appreciates and domestic expenditure switches from nontradables to tradables, while production switches in the opposite direction from tradables

to nontradables. This tends to correct the excess demand for nontradables, but at the expense of a larger CA deficit.

3. If the external imbalance cannot be financed (with domestic reserves, external borrowing, or external aid), the nominal exchange rate (r) will depreciate, offsetting the increase in the price of nontradables and thus preventing real depreciation. As long as excess demand persists, successive rounds of inflation and depreciation can be expected.

If this is the correct diagnosis, the stylized policy prescriptions that logically follow are:

1. Domestic aggregate demand must be brought in line with domestic supply possibilities through both expenditure-cutting and supply-enhancing measures. This will reduce the external and the internal imbalance.
2. Relative price changes (P_{nt}/P_t) must play a key role in bringing about realignment of domestic demand and supply. Real devaluation does just that.
3. Growth can be ensured only by productivity gains (related to technology transfers or other types of learning) and by renewed capital accumulation (that is, by outward movements of the production possibility frontier).

3. Adapting the Model to Developing Countries

To adapt this model to developing countries one must recognize that factor markets, particularly capital markets, may not function as well as in developed countries. One must also recognize that market structures may differ substantially in degrees of competitiveness across different types of goods. Nontradable goods, in particular, may be produced in near monopolistic conditions, while conditions in tradable good markets may be competitive. In these circumstances less than full employment of resources may prevail. In other words, in many developing economies equilibrium production may well attain systematically at a point located inside their production possibility frontiers. Underemployment of labor and capital resources can co-exist with internal and external imbalances for long periods of time.

Growth can therefore be achieved in many developing countries through efficiency-enhancing measures that can induce a better use of resources. The exploitation of this growth potential thus becomes an important objective of these countries' economic policies (Khan 1987).

Another adaptation of the reference model to developing countries consists in the explicit consideration of external indebtedness and its growth-limiting consequences. This is generally done in an ad hoc manner, by treating external debt as a drain on domestic savings and thus as an impediment to investment, capacity creation, and faster output growth. Debt, therefore, is seen as holding back the outward expansion of the production possibility frontier coming from growth in the capital stock. When the debt accumulation has binding effects on capital accumulation, the simple policy conclusion that is drawn from the model is that debt or debt service reduction become necessary (Sachs 1986).

Yet another adaptation of the model needs to be made whenever all important prices are not flexible. If a developing country, for example, is part of a currency area that maintains a fixed rate of exchange among the currencies of the members and between them and a reference currency, nominal devaluation is no longer a policy option. This applies, for example, to the countries belonging to the West African currency (or CFA) area, whose currency is pegged to the French franc at a rate that can be changed only by collective agreement (Bathia 1985).

Whenever national authorities, in the presence of an external deficit, no longer can change nominal exchange parities to alter the relative prices of tradables (that is, to engineer a real devaluation), they must operate on factor prices, usually on wages in the nontradable goods sector. In fact, only if the rate of growth of domestic prices of nontradables becomes less than that of tradables, real devaluation can take place and resources shift in the direction needed to sustain output and reduce external imbalances (that is, a shift toward the production of tradable goods).

Another way of looking at the same problem is to consider the ways in which external competitiveness can be maintained if nominal devaluation is ruled out, and the rate of growth of domestic prices is higher than that of competitors' prices. Real devaluation can be attained only by bringing domestic inflation below competitors' levels. This may require restrictive monetary and fiscal policies, restrictive wage policies, and/or income policies. If they can be implemented, income policies are preferable to a generally restrictive monetary and

fiscal stance, as they mitigate some of the negative effects on employment of expenditure dampening.

In many developing countries in the 1980s four types of actions characterized adjustment programs: aggregate expenditure dampening, output and expenditure switching, resumption of output growth, and debt management-debt reduction. The first type of action was directed at containing excess demand through the use of restrictive fiscal and monetary policies. The second was aimed at resource switching through changes in relative prices (mostly through real devaluations). The third became embodied in the structural policies aimed at using more efficiently the existing capital stock and at increasing its size over time. The fourth, an important complement of the third, developed only gradually because industrial countries were slow to accept the notion of debt reduction.

Policy actions also are influenced by the country situation. Typically, economic structures in middle-income countries are more varied than in low-income countries, and production is more diversified. Markets are more developed and the institutional frameworks upon which the effective use of certain policy instruments is dependent are more robust than in low-income countries. In addition, low-income countries are usually more dependent on agricultural output and export than are middle-income countries, where the tradable sector produces a variety of agricultural and industrial goods. The composition of output of an economy is important so far as it influences the supply response to changes in relative prices and the degree of dependency on world demand. Industrial production in the short-term often reacts more to price changes than does agricultural output, and export demand for manufactures is more income and price elastic than that for primary goods. The values of the elasticities determine the differences in the degree of effectiveness shown by real devaluations in correcting external imbalances and in sustaining domestic output. Generally, both middle-income and low-income countries are heavily indebted abroad - the former to commercial banks and the latter to the governments of industrial countries.

4. Adapting the Model to Modified Planned Economies

To adapt the standard model to the modified planned economies of Eastern Europe is even more complicated than in the case of developing countries. Most attention was focused in the 1980s on modified

planned economies of Yugoslavia, Poland, and Hungary. All three shared some of the structural features of the middle-income developing countries: a mixed industrial and agricultural output, many highly protected industries, and a pervasive influence of government in their economies. They also shared some of the same external and internal imbalances of the middle-income developing countries: persistent external deficits in their hard currency trade (Yugoslavia, Poland, and more recently Hungary), rapidly rising domestic inflation (Yugoslavia and Poland), and declining output growth (all three countries). In addition, like most of the middle-income developing countries of Latin America and North-Africa, these MPEs were highly indebted to international commercial banks (as well as to the Soviet Union).

Despite the economic reforms already implemented in Yugoslavia and Hungary and being implemented in Poland, the modified planned economies of these countries differed from the economies of the middle-income developing countries in several ways: the absence in MPEs of a hard budget constraint for enterprises (state-owned, worker-owned, or mixed); the existence of a passive and accommodating banking system ready to validate all the bargains struck by enterprises with government authorities over taxes, subsidies, and credit; and the separation of domestic and foreign prices, largely dependent on the reform of the exchange rate system in each case.

Redressing internal and external imbalances in these circumstances is quite difficult (Wolf 1985). To be effective, credit rationing through the banking system would necessitate drastic changes in the traditional relationship between enterprises and banks, as well as enforcement by government authorities of a rigid budgetary posture toward public enterprises. In the final analysis, those incapable of operating within the established parameters should be let go bankrupt. However, this presupposes that enterprises are free to make decisions concerning production, employment, and the price of output, which means an increased market orientation of the economy. It also presupposes that governments are ready to accept temporary unemployment.

Similarly, contraction of government deficits through lower subsidies and higher taxes requires an unaccommodating monetary policy, and thus the enforcement of many of the same conditions that are necessary for an effective credit policy. For this to happen, government bargaining with enterprises over taxes, subsidies, preferential rates of interest, and controlled prices must cease.

Finally, nominal devaluation can help elicit the type of demand and supply response that goes in the direction of reduced external imbalance (that is, a deficit vis-a-vis hard currency countries) only if domestic prices are allowed to adapt to foreign prices (that is, if artificial price equalization mechanisms operating inside these economies are eliminated or scaled down) and if those enterprises that react swiftly to price changes by increasing production of tradables are not taxed of all the "surplus" profits that they make. This implies the acceptance of differentiated wages (or earnings, to be more precise) within industries, which is very difficult in an equalitarian, socialist-oriented political system.

Clearly, the standard model becomes more applicable to Eastern European economies as they become more market oriented. As I noted earlier, the process of reform vastly differs from country to country. Yugoslavia never became a command economy since it established early on a unique system of worker self-management. Central control of Yugoslavia's economy has always been limited and the provinces have exercised local control through a system of foreign exchange, credit, and investment allocation - a system that now is crippling the whole economy (Dubey, 1975; Tyson, 1982).

In Hungary in 1968, economic policies radically changed: direct ministerial control over industry was abolished, enterprises were given much greater autonomy and administrative price controls were reduced (Balassa, 1983). Poland, however, was a near textbook example of a command economy until the early 1980s, with central setting of production, investment, and trade targets; allocation of supplies by branch ministries; and prices used simply as accounting devices. Since 1981 the government has attempted various reforms affecting the functioning of enterprises, the role of prices, and the organization of credit supply (Wolf, 1989).

There are, moreover, adaptation problems created by different economic structures. In the three MPEs of Eastern Europe considered here, industrial sectors constitute 50 percent to 60 percent of gross domestic product (GDP), with the rest being accounted for mostly by services. Agriculture is much more important in Poland (20 percent of GDP) than in the other two economies, and it is largely in private hands. Yet, even in Poland and Yugoslavia, small private farmers produce the bulk of agricultural output. Therefore, all these three countries have a relatively large and well-developed private sector that is capable of responding to price incentives. Despite their large share of GDP, the service sectors are relatively undeveloped even in Eastern

European MPEs. Output is largely in the form of services that are not for sale. Trade openness also varies a good deal. Of the three economies considered here, Hungary and Yugoslavia are the most open to foreign trade - 40 percent and 25 percent of GDP respectively. Export of goods and nonfactor services account in Poland for only 18 percent of GDP. Yet little more than half of Hungarian and Polish exports are to hard currency countries, while Yugoslavia's export receipts are in hard currency for over 80 percent of the total.

5. Economic Adjustment: The Responses of the West

The West responded at different times and in different ways to the crises faced by the developing countries and Eastern European countries in the 1980s. The response depended on the specific needs of the various country groups and on the countries' relative importance to the West. The plight of the highly indebted, middle-income countries was the first to be addressed (after the debt moratorium suddenly proclaimed by Mexico in August 1982). Africa and the special problems of the low-income, sub-Saharan countries came next, after the devastating losses in terms of trade suffered by them in 1982-83 and the series of natural and man-made disasters that followed. The problems of the reforming Eastern European economies are only now beginning to be faced in a comprehensive fashion. History, therefore, had a lot to do with the evolution of the policy responses of the West to the adjustment, growth, and debt problems of all these areas.

National interest also influenced the timing and typology of the Western response. The debt crisis directly threatened the banking system of the West and the international financial system at large because the middle-income countries were overwhelmingly indebted to Western commercial banks. The concentration of highly indebted countries facing payment difficulties in Latin America was another factor affecting the Western response, which became strongly dependent on US initiative and leadership.

Europe, rather than the United States, took the lead in formulating and implementing policies affecting the Sub-Saharan countries. This reflected the greater historical and political importance of Africa to Europe than to the United States. Europe is also taking the lead in shaping Western strategy toward Eastern Europe, but with strong participation from the United States, whose strategic and security in-

terests are at stake and whose bilateral relationship with the Soviet Union is of paramount importance to continued political and economic liberalization in Eastern Europe.

Japan, the country doing the best economically and accumulating the largest payment surpluses, looked at times quite aloof. To gain Japan's needed participation in assisting developing countries, the other Western countries had to make additional compromises over burden-sharing and over the content of specific initiatives. The political economy of the Western response to the adjustment and growth crises of the developing and Eastern European countries was, therefore, complex because of the multiplicity of interests involved and the variety of objectives being pursued. To accommodate them, numerous trade-offs had to be made among the various components of the response. Moreover, decisions on policies affecting developing countries became often intertwined with others affecting mostly industrial countries. The debt crisis and the dollar problem, for example, became closely interconnected in the first part of the 1980s and international decision making in these areas became highly interdependent. Much of the slowness of the Western response to the debt problem of middle-income developing countries can be traced to these complexities.

In retrospect, the response of the West to the plights of the South and the East can be summarized and ordered as follows: 1) strong indirect support for adjustment in indebted countries (with a related, if weak, debt strategy); 2) special direct and indirect assistance to low-income countries (particularly in Africa) in the form of exceptional finance and specific debt initiatives; and 3) the beginning of a coordinated approach to Eastern Europe, involving trade and aid concessions as well as special financial support for adjustment and economic reform.

6. Middle-Income Highly Indebted Countries

Central to the assistance strategy followed by the industrial West were the financial support to the economic adjustment of middle-income countries and the debt strategy. These two aspects of the Western response were highly interrelated. They were, in addition, crucial to the path of adjustment of middle-income, highly indebted countries throughout the 1980s.

Adjustment in these countries had a short-term dimension having to do with macroeconomic imbalances (inflation, current account deficits, and budget deficits) and a long-term dimension having to do with resumption of growth and its sustainability over time. Dealing with the first dimension of the adjustment problem necessitated reductions in real domestic absorption, while progress along the second involved such measures as public expenditure rationalization, reform of tax systems, subsidies and producer prices, changes in existing trade regimes, financial sector and public enterprise reforms, and policies to encourage domestic savings. The short-term dimension of adjustment fell naturally within the domain of the International Monetary Fund (IMF), while the long-term laid within that of the multilateral development banks – the World Bank and regional banks. These institutions, in addition to technical expertise, had considerable resources at their disposal from financial markets (those of the multilateral development banks) and from member-country contributions (those of the IMF and of the International Development Association, the soft-loan window of the World Bank Group).

The direct and massive involvement of multilateral institutions, largely controlled by the North, but cooperative in nature and tradition, in support of adjustment programs was probably inevitable. Given the strong relationship between stabilization and growth (and between both of them and debt management) in highly indebted countries, the IMF and the World Bank naturally became active participants in the evolving debt strategy for the middle-income countries of Latin America, Eastern Europe and Asia.

Throughout the 1980s the IMF and the World Bank strongly supported with technical and financial assistance the adjustment efforts in middle-income countries. In the process there occurred considerable convergence in the instruments used by the two institutions. Lending for structural adjustment became a major new activity for the World Bank Group, absorbing more than a quarter of its total lending and more than half of total lending to middle-income, highly indebted countries (World Bank, 1988). In support of macrostabilization and adjustment programs the IMF committed vast resources drawn by members under tranche policies (upper credit tranches and extended fund facilities) as well as under special facilities such as compensatory financing (IMF, 1988).

The IMF focused on macroeconomic stabilization: reduction of inflation, control of budget deficits, and reduction of current account imbalances. The World Bank supported structural adjustment pro-

grams to increase efficiency in the use of resources and improve conditions for capital accumulation. Adjustment lending, being quick disbursing, also facilitated aggregate demand management by allowing for smaller cuts in expenditure than otherwise necessary and by sustaining public investments beyond what would have been permissible in its absence.

Nonetheless, the primary focus of structural adjustment lending (sometimes called policy-based lending) was on supporting the structural changes initiated by the governments of indebted countries in order to restore growth and, eventually, creditworthiness. Reforms supported under World Bank adjustment lending were mostly related to trade regimes, public enterprises, budget-public expenditure, and agricultural policies. Fiscal and exchange rate policies came next in importance (World Bank and UNDP, 1989). Lending assistance was necessary to deal with either external payments' problems or with the foreign exchange component of compensating policies.

Serious questions have been raised about the purposes of structural adjustment, its shape (Streeten, 1987) and macroeconomic effects (Harrigan and Mosley, 1989). But the concentration of international assistance on structural adjustment has been most criticized for its social costs. The poor often see their access to vital government services (health, education) reduced at a time when their incomes are also being reduced (Helleiner, 1985; Cornia, Jolly, and Stewart, 1987). Yet, despite the costs, neither the commitment of government authorities nor the domestic consensus necessary to put it in place and sustain adjustment seems to have diminished over time. Moreover, evaluations of adjustment lending in the past ten years, albeit by the same international organizations that supported it, have been positive. Average performance in adjustment lending countries has been better than in nonadjustment lending ones in terms both of growth and of resource balances (World Bank, 1988 and 1990; Thomas and Chhibber, 1989), and neither short nor long-term indicators of living conditions in the early intensive adjustment lending countries seem to have deteriorated. In these countries, moreover, per capita consumption growth was higher than in countries adjusting less slowly (World Bank, 1990).

Policymakers in industrial countries had more difficulty arriving at an effective debt strategy for middle-income, highly indebted countries than they had supporting adjustment lending by multilateral organizations and adding their own resources to it through cofinancing. There was, in the first instance, no available reference model that

could be relied upon. Consensus about the problems and their effects was thus harder to reach. In addition, burden sharing in the debt area was harder to reach for industrial countries, given strong differences in individual country balances between the private and public costs to be shouldered. Evolving external perceptions and internal political economy considerations largely determined the pace of the changes that took place.

The immediate impulse after 1982 was to try to muddle through, save the banking system from possible collapse, and minimize the international financial implications of the crisis. Preventing default of major debtors was the main initial goal of the debt strategy (Fischer, 1988). Debtor countries were provided finance within the context of IMF stabilization programs. Financing came from both the IMF and commercial banks, strongly encouraged by government officials (the so-called "concerted lending").

Improvement in payment positions during 1983-84 and maintenance of debt service were the result of import compression and investment reduction in debtor countries. The plan by James Baker, then Secretary of the Treasury, recognized in 1985 that highly indebted countries needed to return to growth and that a resumption of growth depended on both internal reform and external finance. Adjustment had to be macroeconomic as well as structural, with finance provided by commercial banks, the IMF, and the World Bank. This represented an important turning point in the debt strategy, even though the plan did not succeed in increasing commercial capital flows to highly indebted countries. Banks preferred to lend to a few countries with considerable importance for them and to reduce their exposure to the rest (Fischer, 1988; Cline, 1989).

The formal recognition that adjustment, to yield sustained growth, had to be complemented by debt reduction came in 1989. The crippling burden of the debt overhang was officially acknowledged in the plan by Baker's successor at Treasury, Nicholas Brady. His plan constituted another turning point in Western attitudes and policies toward the indebted countries. It accepted that when reduction of debt was essential to achieve growth, it could then be sought by indebted countries in the context of appropriate adjustment programs and be supported by finance coming from both the IMF and the World Bank. This, however, was to happen only on case by case basis, and debt reduction had to be both market-based and voluntary. While it is too early to see the impact of this change in strategy, the first experience with Mexico seems to have generated considerable

optimism about the indirect and direct benefits of publicly supported debt workouts.

7. Low-Income Countries

The crisis of Sub-Saharan African countries in the 1980s became progressively more evident in both human and economic terms. Export earnings, terms of trade, and ability to import declined precipitously. Debt accumulation, poor weather, civil strife, and other internal difficulties compounded the problems. Led by Europe, the West recognized not only that extraordinary public action was needed, but also that economic policies in these countries had to change drastically if the economic decline of the continent was to be reversed. Instead of supporting a relief effort, the West decided to use the occasion to support in some cases, and to induce in others, a fundamental change in the general policy approach to the development of Sub-Saharan Africa.

Some of the intellectual preconditions for a radical change in policy had already been established before the debt crisis with the Berg Report (World Bank, 1981), which questioned the government-based strategies of growth followed in the 1960s and 1970s in most African countries. However, the world economic recession of 1981-82 and the concomitant debt crisis created fresh urgency for a new course in Western policies toward Africa. This came gradually, but surely, with the financial support extended by Europe to the World Bank Special Funds for Africa, the massive Paris Club rescheduling of official debt, the establishment of the IMF structural adjustment facility in 1986 (extended two years later), the eight replenishments of IDA resources in 1987 and the earmarking of 50 percent of them to Sub-Saharan Africa, the enhancement of the IMF structural adjustment facility, the endorsement of the World Bank Special Program of Assistance in 1987, and finally the decision taken in Toronto in 1988 to reduce the burden of official debt to low-income African countries.

The strategy of the West toward low-income Africa can roughly be described as moving on two parallel tracks. On the first there were the special initiatives in the field of financial assistance and debt management taken directly by Western governments (increases in bilateral development assistance, Paris Club rescheduling, and Toronto terms) or being intermediated by multilateral organizations but supported by national resources (IDA replenishments and special assistance, debt

reduction funds set up at the initiative of the World Bank, and the establishment of special facilities at the IMF for the provision of medium-term concessional assistance to low-income countries). On the second track there was support of greater efficiency, market-oriented reforms, and institution building in Sub-Saharan countries. This track involved public investment programs, budgeting practices, taxation systems, price and trade regimes, and financial intermediaries. Agriculture, together with institutional reforms, constituted by far the most important sides of the policy thrust pursued by the West. The World Bank played a key role, through IDA and the Special Finance Facility for Africa, in fostering basic reforms in Sub-Saharan Africa.

The debt dimension of this strategy was particularly noteworthy because it included relief on official concessional debt (as bilateral donors converted concessional debt to Sub-Saharan Africa into grants), as well as debt and debt service reductions on official nonconcessional debt (the so-called Toronto terms). These were concessions made only to the low-income countries. Industrial countries differentiated quite clearly between low-income and middle-income developing countries in terms of the approach they followed toward their debt problems.

Economic adjustment and reform programs, involving more than half of the African countries between 1983 and 1988, have helped several of them to improve their performance and ameliorate living standards (World Bank and UNDP, 1989). Agriculture sectors appear to have been the most reactive to improved price incentives and liberalization of internal markets. There is also evidence of growing commitment by African policymakers to the new course.

The final results are not in yet, and there is room for legitimate doubt about the sustainability and costs of the economic reforms so far implemented in a continent where differences abound, structures are weak, and problems daunting (ECA, 1989). Yet it is undeniable that economic policies in Africa, in part autonomously and in part under prodding from the West, have taken a noticeable turn toward orthodoxy. Reliance on market signals and responses has increased. The weight of public sectors and reliance on government economic initiatives have declined. Authorities are paying more attention to budget constraints and to efficiency in the use of resources. These are corrections that probably would have come by themselves after such a long period of scarce attention to financial constraints and of rather uncritical reliance on direct government action in the economy. But

the fact that they occurred when they did constitutes a positive development.

The effects of the change in direction of economic policy should not be overestimated, given the fragility of many economic structures in Africa and the enormous resource problems faced by much of the region. Neither should the importance of these effects be underestimated. Without a correction in the degree of public control over the economy, efficiency would have been very hard to improve, given the scarcity of human and technical resources in the public sectors of most countries. Without greater respect of budget constraints and more efforts to raise domestic savings levels, growth could hardly be sustained in a situation of diminishing access to external capital. These are lessons that also could have been derived from the experience of the command economies of Eastern Europe and Asia. Yet fundamental changes in private and public consumption are notoriously difficult to achieve and take a long time. From available evidence it seems that sustained recoveries in savings rates and in private investments have not yet occurred in most low-income African countries (World Bank, 1990).

8. Eastern European Countries

Western strategy toward the MPEs of Eastern Europe is just beginning to take shape. Much of the response so far has been piecemeal and has focused on the stabilization problems of Yugoslavia and Poland. Wider and more coherent action was limited in the past by lack of demand. Eastern European governments were wary of being seen as too dependent on the West for economic ideas and financial incentives. The situation is now changing rapidly, and Eastern European countries are openly soliciting Western advice and assistance.

Most Eastern European economies are in the throes of serious economic difficulties. They all experienced slow growth in the 1980s. Stabilization attempts have failed in some of them, and conditions for renewed growth have not been restored in any of them (Balassa, 1986). Inflation has risen dramatically (to three-digit levels in Yugoslavia and Poland). The MPEs of Eastern Europe are highly indebted. In per capita terms external debts are as high as in the highly indebted middle-income countries. Total debt-to-GDP ratios in Hungary and Poland are also as high as in most middle-income countries. In

addition, these two economies have large current account deficits with hard currency countries.

The Eastern European economies exhibit systemic failures in their inability to supply consumer goods in the quantity and quality demanded by their populations. Shortages of food and other essential goods are widespread in some of them. Housing is also in short supply. Systemic failures are evident as well in mismatches between resource endowments and resource intensity of productions, in the widespread obsolescence of capital equipment, and in the very low productivity of investments. What is more, these countries have some of the worst pollution problems in the world (Dhanji, 1989).

These economies are in urgent need of macroeconomic stabilization and economic restructuring. The need in Poland and Yugoslavia is much more pressing than in Hungary. External imbalances, however, are widening also in Hungary. All Eastern European countries, from Yugoslavia to Romania, exhibit internal politics in a stage of acute transition and a considerable measure of social unrest.

Some Eastern European MPEs have already attempted structural reforms. Private activities have been legitimized, and various forms of company organization have been introduced. Hungary and Poland have considerably modified their financial sectors and differentiated between central and commercial bank functions. In Yugoslavia financial sector reform is lagging. All three countries recognize the need to give market forces a much greater play in determining production and consumption decisions. All three need massive financial assistance from the West to be able to do so without paying too high costs in the transition period.

The response of the West to the current needs of the MPEs of Eastern Europe comprises a mix of traditional and new features. The traditional forms of response are most evident in the firm desire of most major industrial countries that the IMF take the lead in helping country authorities to control inflation and reduce external and internal deficits. The existence of IMF programs of economic stabilization has been made into a key precondition for World Bank financial support of national programs of structural adjustment. These programs are focusing on enterprise and the financial sector reforms and on the related institutional and legal aspects. Elements of traditional response can also be seen in the supply of food aid to Poland by Europe and the United States.

The novelty in the response of the West lies in the unilateral trade concessions being made to Eastern European countries. The EC

Commission, for example, has recently proposed the accelerated abolition of most quantitative restrictions on imports from Hungary and Poland. It has promised unilateral tariff concessions as well. In addition, these two countries should benefit from an extension of the EC Generalized System of Trade Preference beginning in 1990. Steps being taken by the EC in related fields are also in line with a model of preferential relations with Eastern Europe. To facilitate investments, Hungary and Poland are going to be made eligible for loans from the European Investment Bank (EIB) guaranteed by the EC Cooperation in the field of the environment is being offered (European Community News, No 32, 1989).

Direct financial assistance is also being organized on an accelerated basis. The EC Commission has proposed an autonomous budgetary contribution of ECU 200 million in 1990, to be supplemented by ECU 100 million from member states and by ECU 300 million from other industrial countries. The United States has approved a special aid package for Poland and Hungary beginning in 1990. Meanwhile, the Paris Club and private banks are being influenced by European governments in favor of Eastern European debtors.

In addition, a new regional bank for Eastern Europe - the European Bank for Reconstruction and Development - is being established, with the EC countries in the forefront of this effort. This Bank will be endowed with capital that will allow it to borrow in private capital markets and re-lend to the nations of Eastern Europe, and probably to the Soviet Union, for development purposes. The Bank will likely support both private and public sector investment projects.

The assistance needs of Eastern European countries are large and urgent if the pace of economic reform is to be quickened in time to support the political changes that are taking place in the region. The starting strategy followed by the West appears to be sound. The evolution of this strategy will remain a matter of considerable priority in the months to come. A key issue is whether the West will be willing to commit enough resources, on a continuing basis, to sustain in time the radical restructuring needed by many of the Eastern European economies.

9. North-South-East: What Remains to Be Done

The immediate priority is the debt strategy. Without success in this area, return to growth will be late to come in much of the develop-

ing world, with negative consequences extending to industrial countries as well. A successful debt strategy is particularly important to the middle-income, highly indebted countries. Low-income countries in Africa and outside Africa share much of the same needs. Assistance to low-income countries not covered by the World Bank SPA and by the Toronto initiative on debt relief is urgent.

Some low-income developing countries, especially in Asia, have avoided the debt problem, but their national economies remain fragile, and their economic reforms are not yet well entrenched. The needs of these countries have to be taken into account not only to avoid punishing the "prudent and parsimonious", but also because a good deal of the recent economic successes in these countries must be consolidated. Low-income Asian countries are those where economic success or failure affects the largest share of poor people in the world.

Finally, the Western countries will continue to influence decisively the economic destinies of most developing countries through trade and finance. Policies conducive to freedom and stability of trade and capital flows constitute the necessary framework to economic assistance to developing countries. Without access to Western goods and financial markets, developing countries and Eastern European countries would see their efforts at policy reform and growth thwarted. Success in the Uruguay Round of trade negotiations and in restoring private capital flows to developing countries on a scale commensurate to their needs and capacity to use them effectively are essential to both the South and the East. Lack of success in these areas would also be harmful to the North. These are the basic requirements of economic interdependence, the importance of which cannot be overlooked by anybody.

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“INTERNATIONAL ECONOMIC COOPERATION: A LATIN AMERICAN PERSPECTIVE”

ENRIQUE V. IGLESIAS

1. Introduction

At the close of the eighties, Latin America is moving from an extraordinarily difficult period of economic stagnation and social reversal to a stage of hope, opportunity and great challenge. Our countries will have to make a formidable effort aimed at restoring the viability of their economic development, and at meeting urgent domestic and political social needs and bringing about the modernization demanded by the growing interdependence of a world economy that is undergoing profound and rapid change.

In the domestic context of the Latin America economies, that means furthering and intensifying the structural reform programs begun in recent years and laying the groundwork for renewed growth sustainable over the long-term and less vulnerable to external economic fluctuations. For a successful outcome, both the costs and the benefits associated with this great task must be shared fairly: adequate motivation must be provided for all social sectors to commit themselves in a framework of joint effort and democratic teamwork. We are confident that the region will succeed in meeting the challenge. It possesses vast natural resources, a history rich in tradition and accomplishment, and a young, willing population determined to progress.

With respect to the international economic environment, whose influence on Latin America has been and will no doubt continue to be ever more decisive, the urgent need to mobilize a renewed and effective flows of multilateral cooperation must be recognized. This means a cooperation effort based on a new concept of international solidarity, in tune with current realities which make reciprocal interest and benefit the driving force in the relations among an ever greater number of countries, including the relations of industrial countries among

themselves, those of industrial countries with developing countries and those concerning the developing countries themselves.

Meanwhile, for international cooperation to be effective, a healthy amount of coordination must underlie national policies, on the basis of the political will of the governments. The crucial areas of policy coordination and formulation of general standards nowadays include monetary, financial and trade issues, and the spheres of technological cooperation and environmental protection are commanding more attention. These are all areas in which the international community has responsibilities, objectives and benefits to share. Against this general background the external cooperation requirements of Latin America stand out as indispensable for the success of adjustment efforts and the correction of domestic and external imbalances, as well as the launching of long-term development.

The external debt crisis continues to represent one of the most urgent problems on the international economic scene. Its persistence has turned it into a constant stumbling block to the resumption of economic growth, a hurdle to trade and a source of risk and instability in relations between debtor and creditor countries. In this connection the Latin American experience has been particularly revealing. For many countries, as the constraints on their capacity to make external payments tightened in recent years, the option between economic growth and debt service became a very troublesome political dilemma. The measures taken generally meant a serious deterioration of living conditions and drastic cuts in investment, testing social tolerance and the consolidation of the democratic resurgence while limiting the scope of the future process of transformation and modernization of the region's productive structures.

That same persistence and intensification of the crisis seems to have brought about, at the beginning of this year, a changed approach to the international debt strategy. For the first time in this historical experience, debt gained acceptance as a prerequisite to alleviating the negative net transfer of resources from the debtor nations, helping to reestablish financial confidence in them and freeing savings and foreign currency for capital formation. However, to meet the Latin American countries' real external financing needs, debt reduction must be backed by new flows of foreign capital in the form of direct investment, trade credit and long-term loans for investments in economic and social development. External cooperation must be aimed at the encouragement of structural reform of those economies, including the expansion and diversification of exports based on true

comparative advantages, which necessarily entails free and competitive access to the markets of the industrial countries.

To sum up, overcoming the Latin American external debt crisis entails effective mobilization of international economic cooperation in such a way as to support the internal efforts of the countries of the region by means of an adequate flow of external financing and the establishment of conditions for free trade at the level of the global economy.

However, over and above national and international relations of an economic nature, the solution of the external debt problem has social and human dimensions which in our Western Christian culture impose fundamental ethical requirements: no economic policy may demand of a people sacrifices incompatible with human dignity, as His Holiness John Paul II has repeatedly reminded us. That is why we advocate solutions based on the dynamic of an economic development process sustained over the long-term, with the active and responsible participation of all social sectors, and accompanied by a fair distribution of its costs and benefits.

2. The Latin American Economic Situation and its Prospects for the Nineties

For Latin America the eighties were a decade of semistagnation in economic terms, combined with symptoms of retrogression in general living conditions and a considerable impairment of its development potential. The region's average real per capita product declined by around 9 percent from 1980 to this year, and it is now lower than it was in 1980 in 20 of the 25 countries for which comparable statistics are available. Even worse, in seven of those countries the reversal was greater over 20 years.

The outlook for the next five years seems generally favorable, with some recovery of business activity, though clouded persistently by a shortage of external financing and balance of payments deficits. While production is expected to grow at an average rate of 3.5 percent per year, the improvement in per capita product will probably be slight, not reaching its 1980 level again before 1995. Those prospects certainly represent a rebound from current trends, but they appear meagre in comparison with the region's development needs.

A critical factor behind the insufficiency of historical and potential economic growth is the slowdown of capital formation. For the region

as a whole, investment spending shrank in the last seven years to between 16 and 17 percent of gross domestic product, as compared with some 24 percent in 1980. That drop halted numerous economic initiatives and caused ongoing projects to be postponed or even abandoned, with negative consequences for productive activity, employment and the incorporation of technological advances.

One of the most consequential factors in the drop of investment spending was the contraction of total demand caused by the domestic economic adjustment policies applied in many countries from 1982 on. Reconsideration of that approach and the adoption of new economic adjustment policies allowing for expansion are of crucial importance to overcoming the current stagnation. It is estimated that the economic revitalization of Latin America projected for the next five years calls for a significant increase in the investment rate amounting to at least two percentage points of the gross product, which is tantamount to raising investment spending from \$ 170 billion in 1989 to approximately \$ 225 billion in 1990.

In contrast with the investment picture, Latin American export development played an important role in boosting output and efforts designed to balance payments. Of the components of total demand, the volume of exports of non-factor goods and services was the one growing fastest in the eighties. Its average annual growth rate reached 3.1 percent, as against 1.3 percent for gross product, 0.8 percent for consumption and minus 2.1 percent for investment. Not only did the volume of exports rise but several countries in the region made substantial progress in diversifying exports and conquering new markets.

Despite the foregoing, expanded export volumes did not translate into larger earnings of foreign exchange. Only in 1988 did current export receipts surpass, with \$ 102.6 billion, the 1981 figure of \$ 100.7 billion. Throughout the period, raw materials prices on international markets decreased steadily, by extraordinary amounts. The unit value of exports of goods and services from Latin America registered a drop of 26 percent from 1980 to 1988. This decline may have been one of the international economic trends most instrumental in keeping payments out of balance and pushing down Latin American real income, while also playing a key role in the drastic reduction of imports forced by a lack of compensatory external financing.

Under those conditions, the external adjustment of the Latin American economies, forced by the debt crisis and the drying up of international private credit, came to rely mainly on the reduction of imports as the most effective means of generating the necessary trade

surpluses to service the external debt. The value of imports of goods into Latin America diminished from \$ 103 billion in 1981 to a little over \$ 61 billion in the years from 1983 through 1986: a drop of around 40 percent. Nevertheless, the slight recovery in business activity and domestic demand in 1986 brought a partial resumption of the growth of imports beginning in 1987.

In general, as a result of export incentives and policies discouraging imports, the balance of trade in non-factor goods and services changed to an extraordinary extent, from a deficit equivalent to 2.5 percent of gross product in 1980 to a surplus of 6.8 percent of the product in 1985. In other words, there was an upswing equalling more than nine percentage points of the regional gross product. In that way, the increase in the trade surplus helped covering the growing cost of interest on the external debt and of the remittance of profits on foreign investment, and the current deficit on the balance of payments of \$ 40 billion in 1981 and 1982 shrank to a position of virtual equilibrium in 1984. The current deficit rose again in the following years, but remained at moderate levels of about \$ 9 billion in 1987 and 1988.

In the face of such turbulence and its domestic economic and social impact, little doubt remains of the governments' political will to undertake economic reforms. However, despite the severity of the adjustment measures taken by these countries, it must be admitted that their efforts have still not been sufficient to fill the external gap in the Latin American economy. Furthermore, chiefly as a reflection of the economic recovery and the increase in investment spending anticipated for the years ahead, imports can be expected to grow faster than exports and bring down the trade surplus from 5.6 percent of the regional product in 1990 to 3.4 percent in 1994. These figures underscore the need for the region to continue and intensify its efforts to expand its export capacity through greater efficiency and competitiveness. However, for reasons of simple symmetry in trade relations, they also demonstrate the need to restore growth to world trade, eliminate protectionist barriers in the markets of the industrial countries and realize the often proclaimed principles of free trade.

3. The Crisis of the External Debt and Negative Resource Transfer

The external debt crisis unleashed in 1982 became one of the most serious economic difficulties facing the majority of Latin

American countries in the course of this decade. At the end of a long period in which external credit helped to supplement domestic saving, expand capital formation and accelerate economic growth in the region — according to conventional economic postulates validated by the experience of the industrial countries as well — that mechanism reversed the flow of resources in the direction of creditor nations and other sources, to the detriment of Latin American economic well-being and economic growth.

Latin America unexpectedly became a net capital-exporting region, together with Japan, Germany and other industrial countries with monetary surpluses. In 1982 the amounts paid out in interest and profits on external capital began to exceed the inflow of new funds. For the region there thus arose a net negative transfer of financial resources which increased from \$ 21 billion in 1982 to a peak of \$ 42.5 billion in 1985, whence it diminished to about \$ 30 billion annually. In the course of seven years, the region transferred to the rest of the world financial resources totaling some \$ 225 billion. This figure represents slightly more than half of the total external debt at the end of 1988, or more than twice the current value of the region's merchandise exports in 1988.

The initial fear of an eventual international financial collapse as a result of the debt now seems to have passed, thanks largely to the continuing growth which the industrialized economies have managed to sustain for seven consecutive years, and the strengthened capital and reserves of the creditor banks. It now remains to find more effective approaches to alleviate the external debt burden of the Latin American countries. In that connection, the Brady Proposal was a very positive step, especially as regard its attempt to reconcile the debtor nations' need for resources — for growth and for pursuing the economic structural reforms — with the restoration of their financial confidence and access to voluntary credit in the international capital markets.

The financial arrangement achieved by Mexico after seven months of arduous negotiations constituted the first case of relief from external obligations among the principal debtor nations. The agreed "menu" offers different options designed to bring financial relief amounting to a 35 percent reduction of the stock of debt, or the provision of additional financing either by means of new credits or the capitalization of interest. The international financial community hopes that these agreements will be finalized by the contracting parties at the earliest possible date, thus helping to resolve Mexico's urgent financial

needs. This experience would serve to guide other Latin American debtor countries in similar negotiations.

Ultimately, the real dilemma faced by the various parties wrestling with the external debt problem — the debtor countries, the international private banks, the multilateral financial organizations and the creditor countries — is whether to choose swift consolidation of the agreements reached in conjunction with the Brady Proposal and move into a new stable stage of economic growth or to opt for the alternative, an increasing clash between debt and development which in the Latin American case threatens to destabilize the democratic advances made in the great majority of countries.

The task is without any doubt a huge one. Its successful conclusion, under current conditions of global economic interdependence, depends on dialogue and on the coordinated efforts of all the interested parties. The Latin American countries, meanwhile, share the major responsibility of enhancing the effectiveness of the structural reforms of their economies, with the aim of speeding the growth of output and employment based on greater long-term efficiency and stability, with the emphasis on improvements in the social sphere. No less important, however, is the contribution to be made by the various economic and external financial sectors of the Latin America nations. That contribution is crucial if the prospects concerning exports and external financing accessible to each country are to be in line with its requirements for resources to import and service the external debt. In this context, official external financing for purposes of stabilization and development, especially that part of it for which multilateral financial organizations are relied upon, must increase substantially in order to reestablish a positive net transfer of resources in support of regional development.

4. Conclusions

The Latin American countries face a major historical challenge: how to reconcile the exigencies of democratic progress with a grim economic and social reality. In fact, in the eighties the region has experienced the paradox of seeing its greatest political awakening in the midst of its worst economic and financial crisis of the century. Average per capital product stands at the level of 10 years ago, together with stagnant output, high unemployment and inflation and a persistent excessive load of external debt. And this is happening de-

spite the adjustment and stabilization efforts made by many countries.

This experience, as well as the retrospective analysis of the region's economic and social development during the sixties and early seventies, has left us very valuable lessons. We have learned that there are no simple valid paradigms or development models. Each country has its own specific problems and timeframe. This insight has brought about a real consensus regarding the desirability of adopting stable realistic and political targets for development based on efforts of a fundamentally domestic character whose destiny depends in decisive measure, however, on the international economic reform aimed at overcoming long-standing structural rigidities and responding to the challenge of opening up trade and integrating with the more dynamic and efficient global economy. However, these attempts have encountered adverse external conditions which it is urgently necessary to correct.

External over-indebtedness, compounded by the persistence of abnormally high and unstable real interest rates and by sharp fluctuations in the exchange rates among the leading currencies, imposes a formidable restriction. For seven years in a row it has produced a significant transfer of savings from the region to the industrial countries and a general climate of financial uncertainty which has driven down further the already low propensity to invest, especially in the years just passed.

Another severe restriction operates in the area of world trade. The proliferation of obstacles and discriminatory barriers in past years, as part of a rising protectionist trend, has curtailed the access of Latin American exports to the markets of the industrial countries. That and the weakening demand for these products have caused a considerable loss of resources through deteriorating terms of trade. For many Latin American countries, interested in expanding and diversifying their exports, foreign exchange earnings from exports of primary commodities continue to have critical importance, especially when the prospects of obtaining international private credit appear so reduced and uncertain.

Just by considering the questions relating to the economic recovery of the Latin American nations, the solution of the external debt crisis and the reverse resource flow, as well as the struggle against protectionism in trade, one comes upon an agenda of economic policy problems that demands extraordinary efforts with respect to marshalling resources, both at the level of individual Latin American countries and in terms of close international cooperation.

In view of the contraction of voluntary private credit, it is for the multilateral organizations to resume a leading role, through their technical and financial contribution to the realization of fundamental economic reforms, in support of long-term economic and social development, as well as through the catalytic effect of their actions on other international financial sources, both official and private.

This is the traditional calling of the Inter-American Development Bank, which is currently embarked on the effort to expand and improve its participation in the promotion of the region's economic and social progress.

“INTERNATIONAL COOPERATION FROM THE SOVIET POINT OF VIEW”

OLEG T. BOGOMOLOV

1. Introduction

The understanding of the fact that not only individual countries and regions, but the world as a whole are facing changes of a fundamental importance is becoming more distinct from year to year. Following revolutionary changes in technology and engineering, there is an urgent necessity in reorganization of the economy of international relations. The processes of improvement and ripening transformation are reflected in the public consciousness as a new political thinking. Unfortunately, the political thinking and actual policies respond to new realities with a noticeable delay. This time lag aggravates the difficulties of the transition period and makes many contradictions of the domestic and international affairs more acute.

Michael Blumenthal — former US Secretary of the Treasury — wrote: “In the 1970s and 1980s, extraordinarily rapid technological changes have thrust upon us new and as yet unresolved problems of governance in the national and international spheres”.

To find appropriate solutions it is necessary to properly evaluate the essence of the changes. Though the world economy depends on the situation in individual countries in the context of the security problems, a global analysis seems to be of priority importance.

What is being changed in the world economy? What new features that require reflection in world politics are inherent in the world economy? The growing interdependence of the development of individual countries, a qualitatively different degree of internationalization of the societal life should be put in the first place. Secondly, the interrelationship and interaction of the global economic and political processes which are now more intimate than ever before become more clearly

pronounced. To this should be added a growing polycentrism of the world community, emergence of still new political and economic forces on the world arena accompanied by a visible non-uniformity of their development, aggravation of competition. Let us discuss these changes in more detail.

The countries and peoples of the world are becoming more fully aware of the common character of their destinies and interdependence of their development from one year to another. Many problems that different nations are faced with are of a global character, their solution necessitates concerted efforts of states, coordination of policies, a broad exchange of information. The degree of internationalization of economic affairs in the modern world is such that the future of each country depends on the normal development of international economic relations. It depends on possible weakening and overcoming of the conflicts and contradictions undermining the world economy. This relates equally to Western countries, to socialist and developing states. The growing interdependence does not know the difference between social systems. The world and its economy are becoming more consolidated and integrated than before. The Soviet Union, likewise many countries of the West, has acknowledged this phenomenon not at once and not without certain hesitations. But, having realized its fundamental significance, it has made the conclusion as to the necessity of a new political thinking in the present-day international relations.

2. The Effects of Technological Progress

The decisive role in the alteration of the world economy situation was played by the scientific and technological progress of our times. A new turn of the scientific and technological revolution has brought about profound, but not unequivocal, shifts in the world economy. Electronics, new materials, nuclear power engineering, robots and manipulators, hypersensitive and precise control and measurement instruments, space and aircraft technology, new kinds of telecommunications, biotechnology — these and other kinds of science-intensive technology do revolutionize the manufacture, transportation, communications, military applications, ensuring a higher level of labour productivity, opening substantial opportunities for growth of the people's well-being, strengthening the defense. The technological revolution has added up new factors, to the traditional ones, of international division of labour which are characterized by a high

concentration of capital, technical intensity of the modern production, its growing demand for the R&D results. The highest relative advantage in international exchanges are connected today with the ability of using efficiently the new information technology. The role of traditional advantages — cheap raw materials and manpower — is substantially reduced, though they should not be underestimated.

The assortment range of industrial products, their technical sophistication, especially in machine-building, electronics, chemistry are so significant and the necessity of reducing costs on the basis of concentration and expanding the scale of production is so acute that the international cooperation of production becomes indispensable. It is still more difficult to determine the national origination of the commodity, since an ever-growing number of components, parts and technical knowledge are obtained from other countries. Foreign investments have never played such a great role as now, likewise the export and import of capital, the activity of transnational corporations.

The mastering of new technologies in different countries of the world at the present time occurs much faster than ever before. At the beginning of this century the process of penetration of a new technology from one country into another took many years. The reason for such acceleration should be sought in the growth of investments abroad, in an evergrowing scope of activities of multinational corporations throughout the world, a broad humanitarian exchange and liberalization of its rules. It is not rarely that the country that has made an invention does not become a producer of new products on a mass scale.

In this respect, it should be noted that economic exchanges between countries are growing faster than the production of material wealth. The rates of growth of international trade during the last 40 years were 1.5 times higher than the growth rates of the gross domestic product of all countries of the world. Estimates by certain economists enable an assumption that within 15-20 years about one third of the entire world industrial output will be involved in international exchanges (now this proportion is about 8 percent).

The turning of the problem of provision of foodstuffs, energy and raw materials from a national into a global one is one of the most illustrative evidences of the new role acquired by the world economy. As a result of non-uniform distribution of the resources of fuel (specially oil) and mineral raw materials among different countries, the world economy encounters an extremely complicated problem of satisfying growing needs of the states that are unable of self-sufficiency.

Thus, industrially developed countries of the West possess more than 40 percent of explored deposits of mineral raw materials concentrating within themselves up to 70 percent of its consumption; Japan, for example, covers 90 percent of its demands by purchases abroad. About 40-50 percent of the entire consumption of power by the EC countries is covered by import (first of all of petroleum) from the third countries. The USA satisfy their needs in oil by about 35-40 percent at the account of import.

The CMEA member countries, as regards oil, gas, electric power, coal, iron ore and some other important raw materials satisfy the demands in them by about 95 percent on the basis of their own production and mutual cooperation. This advantage of them over the European Economic Community was demonstrated during the years of energy crisis. At the same time, inside the CMEA, natural resources are not uniformly distributed. The predominating portion of the deposits of oil, gas, iron ore, ores of rare and non-ferrous metals is concentrated in the Soviet Union which covers the import demands of its CMEA partners by nearly 80 percent in oil and petroleum products, and to a greater extent, in gas and iron ore. Besides, the USSR exports oil, gas and some kinds of mineral raw materials to the world market. The CMEA partners of the Soviet Union satisfy their demands in energy by 70-75 percent at the account of their own production.

The industry of Western Europe depends heavily on the Middle East and African crude oil, deliveries of chromium, manganese, platinum, cobalt, copper and vanadium from Africa. Out of 95 kinds of raw materials consumed by the industry, in the mid-70s the USA depended on imports of 68 kinds, including full dependence on 15 of them (diamonds, bismuth, cobalt, tin, mica, etc.).

Any shortage of oil, gas, coal could have, in the opinion of some Western experts, dramatic consequences for industrial powers of the West. The same should be said, according to them, in respect of platinum, cobalt, tin, chromium, aluminium, copper, silver, nickel, tungsten. As it is well known, one of a limited range of exporters of platinum and other platinum-group metals gold and manganese to the world market is the Soviet Union.

The reason for dependency on the USA, Western Europe and Japan on import of mineral raw materials and fuels during the post-war period is not only absence or exhaustion of geological reserves, but also a rapid growth of consumption and higher costs of domestic extraction. Rationalization of consumption, technological innovations aiming at substitution of especially scarce metals and minerals, a more

comprehensive utilization of domestic resources counteract this dependence, but do not eliminate it. If this is added by uncertainty of a guaranteed long-term supply of raw materials, panic forecasts of the coming exhaustion of certain kinds of natural resources, it becomes clear that the provision with raw materials and fuels turns into one of the most sensitive points in the structure of the world economy.

The threat of the raw-material and power crisis is potentially still present. The struggle for the access to the markets of mineral raw materials is intensified. The exhaustion of domestic natural resources and the desire to maintain the customary way of life, in the opinion of some well-known Western specialists, require a "non-stop" inflow of these resources from developing countries.

The problems of environmental protection, access of all nations to the benefits of technological progress, control of dangerous diseases, rational utilization of the World Ocean resources facing the mankind are not less acute. A closer interaction of countries is required in these areas as well.

Of course, the interdependence of the development of countries of the world does not rest on the economic base alone. In the nuclear age the fate of all nations depends on the possibility of prevention of the missile-nuclear conflict. The interest of survival of mankind becomes to a growing extent a common basis for various international normalization, makes follow the path of political and economic interaction. But there is also another side of the relationship of politics and economics.

The arms race, militarization of many countries have reached such a scale that they not only threaten the life on earth, but undermine the world economy, the mechanisms of its normal functioning. According to the data published by the UN Economic and Social Council, the annual military expenditures of all countries surpass \$1,000 billion which amounts to about 7 percent of the total world's GNP. This means pulling out considerable manpower, material and financial resources from their productive use, thus seriously affecting the economic life, destabilizing the global economy. For this reason, the economic security of countries is put on the same level with the military security imperatively requiring finding new political solutions based on the balance of interests of different countries.

In the past the international policies and the development of trade and economic relations were not so strongly interwoven and non-frequently failed to coincide in their tendencies. During recent times, as especially demonstrated by the experience of East-West relations,

the normalization of political controversies comes out as the main factor of activation of the business cooperation. On the other hand, its expansion, in turn, can enhance interests in the political detente, in stabilization of the entire system of international relations, in achieving progress in the arms control.

The world economy whose participants now number 160 independent states is becoming ever more polycentric. A growing number of states acquire a sufficient political, economic and export potential to play a more or less noticeable role in the world economy. The fact of simultaneous interaction of so many states and economic forces is a new trait of the world economy. Not only the diversity of participants, but also a considerable difference between them is inherent in it.

3. Differences Between World Areas

3a) East and West

The availability of countries with different social systems, industrially developed and developing ones, makes the global economy a very contradictory system. Here different interests interlace, various economic and political forces interact. But, at the same time, the integrity and interrelationship of the world economy is retained and enhanced.

Owing to a whole number of reasons among which a certain incompatibility of internal economic mechanisms and long years of political and military confrontation should be mentioned, the socialist countries turned to become a relatively isolated part of the world economy. Hence, a low share of East-West exchanges in the world trade (3-4 percent). Unfortunately, the gap between countries of East and West in conditions of the production and technological progress during recent years is not reduced, but becoming greater. This sets a problem in the way of strengthening both political and economic stability of the world.

3b) North and South

An even more serious problem is the division of industrially developed and developing countries into so-called industrialized "North" and backward agrarian "South", the presence of the "world town" and the "world village". The industrially developed bourgeois states where only 25 percent of the population of the non-socialist

world live accounted in the early 80s for 78 percent of the total GNP and 87 percent of the industrial output of this part of the world. In the developing countries 75 percent of the population lives, but produced are only 22 percent of the total GNP and 15 percent of the output of the manufacturing industry of the non-socialist countries.

It is insufficient to mention the presence of these two economically distinctly outlined and politically arranged (in the form of respective organizations and alliances) groups of states. It is worthy to note that the gap between the levels of economic development is not being bridged, but, on the contrary, is widening as a result of a non-uniform contradictory development.

The average per capita value of the GNP in the group of the developed countries during many years exceeded by 10-13 times that in the group of developing countries. And the gap between the former and the group of 36 least developed countries has already reached a 25-30 times level. This is a very dangerous situation for mankind's future, characteristic of the world economy.

The developing countries take part in the world economy as suppliers of industrial and agricultural raw materials for industrially developed countries. This nature of trade exchange conditioned by the shaped division of labor does not open wide opportunities for young national states and it is not incidental that their share in world trade is increasing, even if slowly and mainly on account of growing oil prices. In 1960 this share was 21 percent, in 1970-18, 1981-29, in 1988-25 percent. The international division of labor is characterized by a high intensity in the group of industrially developed states of the West which aggravated non-uniformity of the division of labor in the whole world.

The technological progress, non-uniformity of the socio-political development during recent decades accelerate the shifts in the balance of forces on the world scene. On the one hand, a growing gap between industrially developed and developing countries and, on the other, changes in the level of economic power of individual industrialized bourgeois states reshape the already formed system of the international division of labour and proportions of commodity exchanges.

4. The New Image of the World Economy

Over the post-war period in the world production and especially in export the role of such states as Japan and Federal Republic of

Germany, as well as of the entire grouping of the member countries of the European Community, has noticeably increased. These new centers of economic and political forces have pressed the United States. The international contradictions, accordingly, have aggravated, the proportions of commodity flows in the world trade changed, new lines of the international specialization and cooperation in production were formed. In the long run the non-uniformity of development might again substantially change the pattern of the international division of labour. There are already signs of the fact that Japan is rushing ahead even faster and Western Europe intends to strengthen its position by the creation of a single internal market by 1992. The role of China is rapidly growing.

It should be noted that with the emergence of the "newly industrialized states" the competition on the world markets has become more acute. In the export of Brazil, Argentina, Mexico, South Korea, Taiwan, Singapore, Hong Kong, the share of final goods (leather, clothes, radio, and photoelectronics, communication means, tourism and sport goods, toys, bijouterie, etc.) reaches 40-60 percent. A major part of these products are manufactured in affiliates of transnational corporations and the production strongly depends on imports of components and materials.

The principal economic prerequisite of a rapid growth of export from the "new industrialized states" is cheap manpower. However, the new turn of the scientific and technological revolution associated with implementation of automation robotics, power-saving technologies can substantially weaken the role of this factor and cause new shifts in the structure of the world industry and exports. Western states, while being in the stage of restructuring of their economies, modernizing of a number of old industries and developing new ones, face the necessity creating of new jobs for the labour force released as a result of automation.

All this reflects in the structure of international trade. The share of fuels and raw materials, foodstuffs in it is declined. The role of new technologies in exchanges is being increased. Exports of services are rapidly growing both at the account of conventional ones (transport, banking operations, insurance, communications, tourism) and as a result of the appearance of new kinds of services (leasing of equipment, computer services and data processing, construction and engineering, various sorts of consulting services, licensing). The value of exports of services from the United States amounts to 40 percent of their commodity exports.

International flows of capital can now substantially instantly be switched over from one country of the West to another, thus subjecting the national economy to a strong effect of external market forces. The trade in financial activities is considerably superior, in its volume, to the trade in goods and services by, according to some estimates, at least 20 times. Accordingly, fluctuations of exchange rates of the main currencies become an important factor regulating the world economy.

As the role of infrastructure of the world economy (transport, communications, information processing, banks, stock markets, store-houses) is increasing, a conflictual character of this development manifests itself. The structural shifts in this area result in a more intensive concentration of the infrastructure in the hands of the West. While monopolizing these intermediary functions to a far greater extent than export-import commodities, transnational corporations acquire an enormous power both over the production and consumption to the detriment of interests of many countries. According to estimates by some authors, today these corporations have under their control 1/3 of the world trade while passing through their hands up to 2/3 of raw materials commodities and a considerable share of manufactures exported by developing countries.

So, the enhanced global interdependence is one of the realities of our times which makes revision numerous former concepts of foreign policy and external economic relations necessary. Many politicians do not interrelate the intensification of economic rapprochement with the necessity of recognition of equality of all states of the world, with a further democratization of international relations. On the contrary, the reliance is made on the use of force, conservation of the dependence of developing states in the economic sphere. During hard times the policy of "ruin thy neighbor" to preserve one's own profits is pursued more persistently. In short, efforts are being taken to substitute the objectively growing economic interdependence with an absolute system of a unilateral dependence on the powers that constitute, by an old-fashioned system of privileges, political and economic domination. This results, in particular, in a practical rejection of the concept of new world economic order by the influential circles of the West.

5. What Can Bring Disorder into the World Economy?

The changes in the international division of labour, exchanges in the image of the world economy itself have made all the countries of the world very sensitive to its condition and, at the same time, have made the problem of maintaining the world economic order very complicated. Unfortunately, the global economic changes occur not so conflictlessly and painlessly. Many of them acquire a dangerous character. What brings the anxiety?

"The world economy during the 80s" — as it is stated in the Final Act of UNCTAD VII (August, 1987) is characterized by deceleration of rates of growth of demand and production as compared to the previous two decades, lower general rates of inflation, difficulties with which many countries adapted themselves to the structural changes, a growing debt, high real interest rates, inadequate net flows of financial resources, fluctuations of exchange rates, a high and still growing level of protectionism, drop in prices for raw-material commodities down to the lowest level during the past 50 years, a steady deterioration of terms of trade for the countries exporting raw-material commodities and by a generally unreliable economic situation where primary conditions for a decent life are not provided for millions of people".

This very concise general characteristic of the world economy does not reveal, however, important country-to-country differences without which it is impossible to find out the reasons for the difficulties and to forecast probable progress of the events in the future.

6. The Decline of the U.S. Leadership

The global situation is being shaped to a great extent under the influence of the problems of the U.S. economy. The enormous deficit of the state budget caused primarily by the arms races, the passive balance of payments on current transactions render the main destabilizing effect. The budget deficit which during recent years amounted to \$200 billion and over annually and which was reduced only insignificantly laid a heavy burden on the American economy. It is covered at the account of inflow of foreign capitals and savings of the population. This restrains the opportunities for financing investments so necessary for economic growth. At the same time, the debt of the private sector of the economy has also increased everywhere. The total amount of the state and private debt in 1988 was more than 185 percent of GDP

volume as compared to 163 percent in 1975. This heavy debt load has caused a strong "credit inflation", the potential danger of which is very strong and which pushes the interest rates upwards. By the end of 1988 the basis bank rate increased from 8.2 to 9.3 percent, the average level of inflation by the end of the year reached 4.2 percent.

All this does not encourage industrial investments, many people prefer to invest money into securities.

The high interest rates and the overvalued exchange rate of the dollar retained for many years contributed to attract foreign capitals and, hence, to an enormous deficit of the balance of payments (to the value of \$133 billion in 1988). Even after a recent decline of the American dollar exchange rate by 40 percent relative to other leading currencies and after the interest rates dropped by 2 times and more as compared to their record values, the deficits still resist resolution. Most forecasts relative to the time limits of the recovery turn to be erroneous.

The richest country in the world has turned into the greatest world's debtor. According to the available data, by the end of 1988 the debt reached \$580 billion, thus showing the increase of nearly \$200 billion over one year. If this trend is not changed, the U.S. debt will soon be equal to the total debt of all other countries of the world altogether.

In the Economic Report of the President for 1987 it was noted that about 50 percent of net investments in the economy were of a foreign origin. Domestic savings are clearly in short supply for investments. At such scale of the debt its servicing might become a strong brake for economic development, while absorbing still scarce domestic savings (the lowest rate of savings among developed countries). According to M. Blumental, the United States are also experiencing the period of "unprecedented securities market uncertainties"...

In view of the foregoing, a long-time rise of the American economy during the 80s cannot be regarded as sound. The country faces a serious restructuring. In the opinion of F. Bergstein, Director of the Institute of International Economic Studies (Washington), during the forthcoming period it is necessary to allocate 1 percent of the GDP for repayment of debts caused by a spendthrift life in the past. The time will show whether it would bring about decline, growth of interest rates or devaluation of the dollar. So far, not so many reasons are available for optimistic conclusions. However, it should be borne in mind that all this tells upon the situation in the world economy where the United States and their currency play the leading role. The instability

and uncertainty of their further development is one of the repercussions of the problems the USA are faced with.

The adaptation and restructuring of the American economy will result in substantial changes in the economy of the Western world. Anyhow, the delay in taking decisive measures by the USA or their half-way character will exert an even more painful effect on the rest of the world. The US wealth cannot rest for a long time on pumping resources out of other countries, thus hindering their own investment activity and decelerating their development. Accordingly, their demand for import goods is also restrained.

If the USA manage to eliminate the deficit of the balance of payment on current account, this means that Japan, FRG, Taiwan, South Korea have to cut short their surplus accordingly. This will require respective changes in their economic strategy.

Despite the boom of the domestic demand in Japan and acceleration of its economic growth, the adaptation of the Japanese economy is still ahead. The policy based on combination of the internal demand and stimulation of export has become senseless. A high exchange rate of the yen has weakened the competitive positions of the country, resulted in loss of many jobs. Up to now the efforts to reduce the surplus of the trade and payment balances turn to be unsuccessful.

West Germany and the EC on the whole are not ready to take the role of a locomotive of the world economy, i.e. to substantially promote their economic growth and demand for American goods using credit-and-money leverages. The fear of an enhanced inflation is too strong. In some European countries unemployment has reached the highest level over the entire post-war period. The investment activity remains sluggish. The EC faces a growing crisis of surplus of the agricultural product which undermines the fundamental pillars of the society.

It is difficult to forecast whether the US efforts to encourage Japan to continue the present rapid growth of the domestic demand and to inspire FRG (and, hence, the EC) to start such rise, to reduce interest rates and to increase military expenditures would give the desired results. Such measures could facilitate solution of the American problems, but they do not always coincide with the interests of both Europe and Japan.

Western Europe prefers to follow its own way by implementing the plan of creation of a common internal market in the EC by 1992. This promises great opportunities, but it is still not clear what effect the formation of the unified market would provide on the USA, Japan,

and the entire world economy. It is possible that the EC will accelerate its economic growth and will attract foreign investments on a large scale, first of all from Japan and the USA. But it is not impossible that the protectionist barriers fencing the EC off the rest of the world would be made stronger.

Being the most powerful and influential forces in the world economy, the USA, Japan, Western Europe are still unable to recover the situation shaping here. In particular, the prospects for settling the indebtedness of developing countries are not seen as one of the most hazardous problems of the world economy. According to the data of the World Bank, this debt will exceed \$1,300 billion by the end of 1989. It is increasing from year to year by more than \$100 billion.

7. The Debt Problem in Southern Countries

The inflow of resources to developing countries in the form of credits, investments, official assistance of Western countries is reducing, while the outflow of assets in the form of debt-servicing payments and dividends on foreign investments is steadily growing. It frequently surpasses the revenues. The most severe situation is characteristic for African Sub-Saharan and Latin American countries. The economies of these countries are stagnating under the burden of indebtedness, the living standards of the population are falling, inflation and unemployment take enormous proportions.

An increase of export revenues necessary for reducing the debt of the developing countries encounters hardly surmountable barriers. To this end, they have to stop the economic decline, increase rates of economic growth, expand the output of their export goods, manufactures in the first place. This simultaneously necessitates greater imports of machinery and equipment, spare parts, materials for the maintenance and development of their own industry. However, the burden of debt-service payments makes them cut imports. It becomes impossible to promote exports due to the drop of demand and worsened terms of trade: prices for export goods of these countries have dropped to their lowest limits.

The solution to the problem of indebtedness of developing states and of a number of other countries, including socialist ones, is complicated by protectionism which has acquired global scale and most refined forms. According to some estimates, industrialized countries of the West spend 3 to 5 percent of their gross national income for

subsidizing their producers and exporters. The agrarian sector was the first one to be subsidized, while nowadays many industries get such subsidies.

The USA and other industrially developed states try to defend from foreign competition, through protectionist measures, the industries that have found themselves in a hard situation due to a rapid technological progress or a short-sighted economic and technical policy. These are, for example, some old industries such as metallurgy, car manufacture, ship-building, rubber and textile industries. But these are also some new industries such as home electronics.

The protectionism and various discrimination measures used by Western countries in their trade with developing and socialist countries are contradicting the goals of healing the world economy. Especially intolerable is the use of trade embargoes, credit and technological blockades for inflicting political pressure on other states.

Closing some or other channels of economics exchanges with developing countries and socialist states, industrial and financial powers of the West narrow the opportunities for their own exports, lose important sales markets. To resolve their problems, the USA, Western Europe and Japan need activation of their foreign trade. Without developing countries and socialist states this is difficult to achieve.

One cannot say that socialist countries are also responsible for deterioration of the global economic situation. Their share in the world production is considerable, but it is quite insignificant in trade and financial relations. Nevertheless, these countries constitute a major potential market and their economic development makes influence on the world economic situation and can become an important factor of its stabilization.

8. The Crisis of Stalinism

The socialist world is experiencing dramatic changes periodically accompanied by outbursts and shocks. The ongoing process of renewal derives from the crisis of the Stalinist and neo-Stalinist social system which has been aggravating over decades before its full hopelessness and the necessity of radical reforms become obvious. A widening gap between the Soviet Union and the West in technological progress, productivity of labour, living standards of the population, inflation and ecological disasters, coupled with permanent shortages of

many essential goods, a steady growth of crime, non-competitiveness of the majority of manufactures, falling economic growth rates, a more cumbersome and bureaucratic character of the party-and-state machine, the aggravation of ethnic conflict, and a humiliated and dependent role of an individual in the society are the most characteristic symptoms of the crisis which has emerged.

A growing number of facts shows that the socialism of the Stalinist and neo-Stalinist type has been seriously discredited and faith in its "advantages" has disappeared. This is evidenced, in particular, by the events in Hungary and Poland. However, socialist ideas of a more perfect and just social organization than that provided by capitalism are still alive and continue to reign over the minds of millions. There is a strong desire to purify socialism from deformations and elements of utopianism, return to the concept of socialism set out in Lenin's later works, restore the rights of general democratic and humanist values, and accept all the best achievements of human civilization. Such desire is a moving force of *perestroika* in the USSR.

The attempts at renovation and *perestroika* periodically taken in the past (1956, 1968, 1980) in Eastern Europe affected only individual countries; they were accompanied by negative side effects, were forcibly interrupted and did not result in radical changes. Nevertheless, they were precursors of the coming transformations, though only a few people could see in them the outlines of the future. *Perestroika* in the USSR has opened a new stage in the development of this process of reformation. Although owing its inception, above all, to the specific conditions of the Soviet Union, and with no pretensions to being an example for others, it has, nevertheless, substantially improved the general climate for finding new ways of socialist development. Eastern Europe had encountered difficulties very similar to ours, since it developed predominantly according to the Soviet model which was either imposed on it or irresponsibly copied during the post-war period. That is why the changes in the Soviet Union have aroused a keen response in Eastern Europe and have supported the reforming forces there.

It would be impossible not to be conscious of the unsynchronized and inconsistent character of the process of renewal in the Soviet Union and other socialist countries. Just as in the past, one cannot overlook the fact that progress today is interspersed with temporary steps back. The tragic events in China are the most recent evidence of this. But the very depth and pressing nature of the problems and contradictions these countries are faced with offers no choice other than

a radical change of the existing social system. Objectively the system is ripe for change, whether or not this fact is recognized today by society and by the leadership.

9. Miscalculations and Threats

The results of *perestroika* in the USSR have been noticeably disappointing to the general public who are experiencing a growing feeling of lost illusions and deceived hopes. This is explained by the further deterioration of the economic situation during the years of *perestroika*, by the aggravation of ethnic and social conflicts, and by the growth of crime. Of course, the transition from totalitarianism to democracy and from a command economy to a market-type one cannot be effected painlessly. The burden of problems accumulated over decades is still very heavy. But many difficulties could have been avoided, if miscalculations had not been made in the concept of *perestroika* and its practical realization, along with inconsistency and indecision.

We began to introduce market principles and the self-financing of industrial enterprise without the prior formation of the necessary environment: a genuine wholesale-trade market, full-value money, a sound price system, and appropriate tax and credit regulations. As a result, they did not get off to an effective start but created additional inflationary pressures.

It would have been wiser to have started from the other end — agriculture — with the emancipation of the agriculture producer from bureaucratic control and with giving him freedom of economic activity on the land. This would have called for the leasing of the land or its transfer to the possession of family and cooperative farmers, together with a gradual reduction in the obligatory deliveries of agricultural products to the state and their replacement with a system of free trade.

At the same time, market relations based on free business activity should be introduced in all industries producing goods for the population and for export, as well as in the service sector. This would have created an antidote to the risks of inflation, since a free market stimulates increases in output and competition between producers and makes them maintain or improve the quality of goods, reducing prices. Unfortunately, up to now only the co-operatives, and not the state enterprise in these sectors, have obtained relative freedom of economic activity.

Instead of taking resolute measures to control the money supply and to balance supply and demand in the economy by means of transition to a severe deflation policy we continue inflationary policies, amassing expenditures for social needs and subsidizing loss-making enterprising, without cutting spending on other items of the budget. The absence of a true monetary system which provides genuine purchasing power freely convertible into the required goods and, later on, into foreign currencies calls into question the entire economic reform in the country.

There are also latent threats to *perestroika* in the extent to which the process of democratization of economic and social life is lagging behind the developing political consciousness of the nation and its desire to take the responsibility for its destiny and its material wealth in its own hands.

If the plan-and-market model of the Soviet economy is to function effectively, a broad democratization of the entire system of state management and of the internal life of the political institutions of our society is necessary. This envisages a sharp reduction in the role of the bureaucracy and *apparatus* in management, the delegation of a substantial share of responsibilities to lower echelons of the state and economic management, and a widespread use of elements of self-management. The political system should provide opportunities for creativity and initiative in all its forms and manifestations, allow a plurality of forms of economic, social and political activities, and provide conditions whereby differing state policy options can be compared and compete, so that eventually, after an appropriate co-ordination, the best could be chosen and gain the broadest support. Such a favourable climate can only be maintained if the political system adequately reflects the interests of all strata and groups of population (including persons employed in the individual and co-operative sectors) and can, if necessary, protect them. The elections of the Congress of People's Deputies and of the new Supreme Soviet of the USSR have made the first, but still insufficient, step in this direction.

The progress of the main productive force of the Soviet society — the human being — is today ever more associated with his freedom, and his material independence, both indispensable for the all-round development of the individual, his talents and his abilities. The guaranteed exercise of all the democratic rights of a human being is equally an economic, a moral and a political necessity; it is an indispensable precondition of scientific, technological and moral progress.

Unfortunately, however, this idea is penetrating everyday political life with great difficulty.

10. Overcoming Isolation from the World Economy

Analysis of the ongoing changes in the social life of the Soviet Union, Hungary, Poland and other countries, the growing role of the market and of different forms of ownership (including private ownership), developments towards political pluralism and multi-party system, and increasing openness, all lead to the conclusion that as these countries become more open and adapted to international co-operation and exchanges, a greater structural compatibility of East and West is being shaped.

The Soviet process of overcoming Stalinist deformations of social life and its return to common values of civilization is frequently interpreted as convergence, i.e. progressive elimination of the divisions between social systems. Such convergence is likely to occur. On the one hand, the Soviet Union is taking steps towards demolition of the human civilization in respect of technology, the organization of economic life, democratic development and the establishment and assurance of human rights. On the other hand, some characteristics of embryonic forms of socialist thinking and relations are growing within modern Western society (e.g. concepts of collective property, centralized planning, and social guarantees). We still apply to this society the notion of capitalism, though the content of this notion has changed considerably compared to the beginning of the century, and it inadequately describes numerous present-day realities. It appears that humanity is moving towards a post-capitalist, post-industrial information society which should embody the ideals of universal freedom, social justice, economic prosperity and well-being, a true humanism. It will be for the historians of the future to find a proper descriptive label for this new society. In doing so it may prove necessary to go beyond the scope of today's and past ideological stereotypes.

11. Western Support?

The principal means and resources for the improvement of the economic situation of the USSR which should be unleashed by *perestroika* are, of course, domestic ones and they lie mainly in the sphere

of politics, rather than in the economic one. The democratization of society, the emancipation of the people's consciousness, the awakening of talents and a moral upgrading of the society are capable of giving a strong impetus to further development.

Hopes for an acceleration of social and economic progress are also associated with efforts to impart a more open character to our society and economy in respect of the rest of the world.

The expansion of imports of machinery and equipment from the West on credit cannot be regarded as a promising way to promote East-West cooperation. Today the cost of these credits is very high. Taking into consideration inefficiencies in starting up such imported equipment and in ensuring its profitable operation (which, unfortunately, are characteristic for us), the growth of foreign indebtedness will lay a heavy burden on the Soviet economy. It is likely, therefore, that preference will be given to other forms of collaboration: industrial co-operation, joint ventures, and free zones for joint enterprises organized on Soviet territory.

In assessing the prospects for a greater involvement of the Soviet Union in the world economy, one other significant circumstance should be taken into consideration. An important role in the integration process occurring in the world economy is played by transnational corporations. Despite all the controversies over their activities from the perspective of the national interests of the countries in which they have their affiliates, these corporations contribute to the proliferation of technological progress and enhance the interdependence of different countries. They have an ever-growing influence on dynamism and geographic flows of world trade. The Soviet Union has no large transnational companies with affiliates around the world, nor has it divisions of Western transnationals on its territory. Joint ventures will clearly contribute to transnationalization of production in the Soviet Union as well. But at what time and in what forms this development will take place is difficult to foresee now.

The radical changes currently being undertaken by the Soviet Union in its internal development and in its external economic relations make it necessary to think through their implications for the future. The changes in politics and in the mechanism of social organization, although so far at an initial stage and not yet widespread, do nevertheless indicate development for the better. This process will apparently take 10 to 15 years and will be accompanied by an acute struggle of opinions and by conflicts between the old and

the new modes of action. As regards relations between different social systems, a weakening of many of the existing contradictions can be expected, as well as an increasing compatibility of economic interests and approaches. The interaction between East and West is unlikely to prove an exception to the general process of increasing interdependence and interweaving of economic development between the countries of the world.

12. What is Required to Strengthen International Economic Security?

The mechanism of the world economy does not match its new state and needs a reform. But still there are very few hopes that prescriptions for healing serious diseases from which the world economy is suffering will be found in the short run. This necessitates appropriate changes in the structure of socio-economic relations both inside the countries and between them. However, conservatism in policies still prevails and, hence, the conditions causing instability and threatening the international economic security are retained.

The movement for a new international economic order opens the prospects for democratization of relations in the world economy and weakening of some conflicts inherent in it. But its requirements encounter a strong counteraction. On the one hand, this is lack of mutual understanding, selfishness, excessive claims, and on the other this is enormous technological, economic, military and political power of those whom the status quo suits best.

An impetus for the revival of the world economy and expansion of world trade, including in the East-West direction, could stem, in my opinion, from a practical realization of the proposals on the arms control and their reduction. There are serious political (strengthening of security) and economic (reduction of giant non-productive expenditures) reasons for searching and finding compromise accords here.

With all seeming impossibility of resolving the problem of an enormous debt of developing states the way out of this situation must be found. All the proposal put forward hitherto were either too radical and, hence, unrealistic, or were aimed at a partial weakening of the burden of debt servicing.

The first step towards an actual improvement of the situation of the developing states resides in lowering credit rates to a normal level which, in turn, necessitates liquidation of a huge deficit of the US balance of payments and budget deficit which whip up these rates. The

second step could reside in the creation of international mechanisms maintaining fair prices for food and raw-material commodities from developing states and assuring the access of these commodities to the markets of Western countries. Furthermore, it is important to create a situation where debt-servicing payments of developing countries would be invested within these countries in the construction of industrial and other enterprises fully or partly belonging to foreign investors.

While discussing prospects for the recovery of the world economy, one cannot but agree with numerous conclusions made by M. Blumenthal in his paper published in "Foreign Affairs": "No real progress is likely or possible without the leadership of the United States. We are no longer the dominating world economic power, but we are still the largest and most powerful nation... What happens in the United States affects world economic events profoundly. We were the principal architect of the existing framework created in the wake of the Second World War, and none of these international economic institutions can evolve without active initiative and support. We are expected to lead, and it is in our interest that we make efforts to do so... One of the great problems of the recent past is that we have not done so, and that our domestic economic policies, quite apart from their impact on us, have shown insufficient evidence of an appreciation of their impact on the rest of the world... An indispensable prerequisite for leadership must be what our domestic economic affairs are first put back into tolerable shape... We cannot be the world's largest debtor and the world's economic leader at the same time... We need to define a bold and comprehensive new philosophical underpinning for the management of domestic and international economic affairs a kind of new economic Weltanschauung that explicitly recognizes the new problems but also the enormous opportunities for mankind which technology has opened up.

What I have in mind is a general framework for the gradual restructuring of domestic and international economic relations that corresponds more closely to the technological realities of our day". A new political thinking is indeed indispensable to normalize the situation in the world economy and ensure an advancing development of all countries. But its elaboration is not the task for the USA only. Their hegemony in the world economy ceased, a greater role is being played now by Japan, the EEC, socialist countries, developing states. To become an effective lever for strengthening international economic security, the new political thinking should be born in the course of the

global co-operation based on the principles of true equality and mutual benefits and elimination of any discrimination of some countries by others. *Perestroika* of the world economy can be successful only on conditions of equality of all participants of international economic relations, due account of needs and interests of newly-free countries within the framework of the process of their economic decolonization and progress; observation of economic interests of major, medium and small industrially developed capitalist states and socialist countries.

13. Concluding Remarks

Today one cannot rely on "by force" decisions any more. Only voluntary, equal and mutually beneficial cooperation of all groups of states, elaboration of a coordinated economic strategy can show the way out of the growing difficulties.

The hopes for a further progress of humanity are associated with finding ways for resolving global problems on the basis of solidarity of peoples and nations, recognition, by them, of the priority of common human values, overcoming national egoism and showing readiness for a mutually advantageous co-operation. Moral and spiritual factors and arguments begin to play a greater role in addition to economic and political leverage. In international affairs the argument of military force, economic, theological and scientific supremacy will undoubtedly give way to a greater extent to moral ideals of humanism, social justice, common human solidarity in front of the growing menaces to the existence of the mankind itself. The moral motives start to exert a growing influence on international relations. The magnitude of this influence is directly proportional to the growth of public self-consciousness of peoples, to the progress of culture and education, democracy and realization of human rights.

ASSISTANCE TO THE SOVIET UNION: WHAT NEEDS TO BE DONE *

ANTONIO MARIA COSTA

1. Introduction

Without much bloodshed President Gorbachev is leading the Soviet Union out of bolshevism. Change has been erratic and chaotic — at times dramatic. As of late, change has been in the wrong direction, with a U-turn in regard to some of the early accomplishments (for example, making the KGB and the Army more accountable to society). Yet, something of an historic dimension is under way in the USSR: either political and economic democracy prevails, or the country will collapse. There is neither a third way Soviet authorities can pursue, nor a way back there where the process started. So this paper assumes that politics will eventually help economics and — despite cyclical ups and downs — the reform process will eventually prevail.

But what reform process can now prevail, if the radical plans of Shatalin and Petrakov have been discarded and even the truly moderate proposals of Abalkin e Rishkov have been put aside?

To rationalize the process faced by Gorbachev mark-II (a President by far less transparent than the Secretary General of the Party mark-I who launched perestroika), a double consensus is needed on (i) the Soviet policies towards the market system and (ii) the role of the West to support the transition.

Here I have sketched, with a rough brush, the main aspects of such a possible consensus.

PART ONE focusses on a double Soviet responsibility. In the short-term there is the urgent need to stabilize macro-economic ag-

* Some comments have been included in this essay after the Study Week.

gregates. At the same time, but especially in the longer-term, there is the need to bring forward the economic reform process, with a proper sequencing of priorities within it and by means of an appropriate set of policy instruments.

PART TWO elaborates on the role, the nature and the possible content of Western support. This is done in concrete, operational terms, inclusive of a possible institutional setting. Three areas of interventions are singled out. First, there are activities concerning key production sectors. Second, there are suggestions concerning targeted aid to a variety of agencies of economic (and political) importance. Finally, and third, more systemic (and longer term) forms of help — whose time may not be ripe yet — are considered.

2. Gorbachev's Policy Dilemmas

The main tasks faced by the Soviet leader are stylized in Table 1, which separates political issues (domestic and international) from the socio-economic ones (detailed in Table 2). This introduction to the economic discussion (in parts II and III) is useful to recall the basics.

I. Foreign Policy. Perestroika has delivered the most promising results in this domain. There would be no point of restating this in an economic text, were it not for the fact that progress towards disarmament, disputes settlement (Afghanistan), the end to interference in Central America, even the reluctantly passive role at the time of the Gulf war, and the reunification of Europe are the main reasons for Western willingness to consider economic help.

So, Gorbachev's policy agenda ought to be considered in its totality when the merit of financial help to the USSR is considered.

II. Domestic Policy. There has been much progress as well. Human rights are (largely) respected; there is now freedom to say and write anything. The KGB is less unaccountable; the Army is divided and less ready with progressive separation from the state. Some in the West wish to remunerate Gorbachev for these changes as well.

Yet, the USSR has enormous progress to make in order to satisfy our criteria of freedom, democratic pluralism and decentralization. Western support could induce further progress towards these goals. However, to what extent political conditionality can be forced upon the USSR is unclear: probably less than some people think (or wish). Rather, our economic support may have to follow (ex post) concrete

progress towards political democracy in the USSR, and not be made available (ex ante), conditional to future political reform.

III. *Economic Reform*. Practically no progress. The (little) change introduced so far has been chaotic and undertaken so as to minimize (political) resistance. No remuneration by the West is due yet on this ground. Conditionality should be applied in the future, keeping in mind the difference between short and longer term issues.

IV. *Social Reform*. Here is the link between (domestic) political events and economic adjustment. Round Table negotiations would represent an embryo of democratic pluralism. Above all they would enhance authorities' legitimacy to carry out economic reforms. The West may like to promote these developments, for example, by helping financing a social safety net (with a Counterpart fund?).

Table I

GORBACHEV'S POLICY AGENDA

Good and continuing progress:

Foreign Policy

Disarmament
End of cold war
Reunification of Europe
New geopolitical role of USSR

Domestic Policy

Freedom and human rights
Democratic pluralism
Separation Party and state
Decentralization and constitutional change

Slow and inadequate progress:

Economic Policy

Macro-economic stabilization
Factor markets adjustment
Micro-economic reform
International econ. relations

Social Policy

Social cohesion
Safety net
Round Table negotiations

Table 2

ECONOMIC REFORM in the USSR and POSSIBLE WESTERN SUPPORT

Short Term

For the USSR to do:

Macroeconomic stabilization
budgetary discipline
monetary tightening
income policy
drainage of liquidity
partial convertibility

For the West to do:

Immediate economic support
emergency food aid
export credits
loans for macro-stabilization
limited, all-purpose credits
debt rescheduling

Longer term

For the USSR to do:

Factor markets reform
labour markets
capital markets

For the West to do:

Technical assistance
counterpart fund (safety net)
training in banking

Micro-economic reform

price liberalization
trade policy
ownership legislation
competition policy
full convertibility

Systemic support

structural adjustment loans (SAL)
Peace Bonds by EBRD/IMF/WB
FDI to support privatization
resources for defence conversion
training and technical assistance

Foreign economic relations

conversion of CMEA into P.
Union
IMF/IBRD membership

Financial and institutional support

forex reserves and BoP funds
resources from IMF/WB/IFIs

3. Economic Policy in the Short/Medium Term

What follows is an outline of priorities and policy making in the USSR, and of possible Western support in the medium term.

In the short term attention ought to be focussed on macroeconomic stabilization: exactly the point stressed not only in the 500-day plan but unanimously by all Western observers. This has to be pursued first in the transition to a market system. It must be front loaded (with the bulk of the measures taken early in the process), and quick-moving (based on expeditious decisions by the presidential power, not on lengthy legislation by Parliament).

a) Soviet Responsibilities

Stabilization policies (in the USSR, much as else where in the world) have to cover several domains, with much simultaneity.

1. *Budgetary Discipline.* The reform has a double component. First, the public sector deficit (now 10% GNP) has to be reduced forcefully, to stabilize the debt/GDP ratio. Second, public expenditure priorities have to be reorganized. Subsidies (especially to production and consumption) have to be cut, so as to curb further increases in liquidity (20% GNP) and in the budget deficit. The resulting increases in prices need to be offset (see below).

2. *Monetary Reform and Credit Policy.* In the USSR there is no separation between central and commercial banking; no meaningful interest rates; no currency convertibility. In the short term, authorities have to make credit scarce, forcing enterprises and Ministries alike to face a true budget constraint. Central Bank's automatic underwriting of the budget deficit has to end, with interest rates made (progressively) positive.

The immediate unification of the country's several exchange rates ought to be preceeded by another large devaluation, and be followed by progress towards convertibility of current transactions (see below).

3. *Income Policy.* A cap on wage claims, supported by a social pact, will help stabilization. Since price pressure will remain high for a while because of scarcities (as production and above all distribution remain seriously disrupted) and because of policy (as subsidies are to be cut), it is essential to maintain a social consensus on the distribution of purchasing power losses in society.

Round Table negotiations proved useful in the transition to politi-

cal democracy in Eastern Europe. They could enhance the credibility of economic reform in the USSR, where consumers' (and voters') expectations have been unsettled so much.

4. *Drainage of liquidity, via structural and currency reform.* Strong budgetary and monetary discipline is needed to fight the impact of excess liquidity (R 200 bil.) on inflation. However, certain structural measures, while necessary to improve the country's performance, can also be used to reinforce disinflation.

In the short term, some *privatization*, some *price reform* and some *imports* of consumer goods can indeed reduce monetary pressure — but only up to a point. Measures in these areas cannot be pursued with the sole (even main) purpose of draining liquidity and containing macro-imbalances. Above all, they must be part of the institutional change required for the transition to the market system (see the longer term question below).

Furthermore, given public opinion's spoiled mood, important synergies between economic and social behaviours can be exploited. For example, privatization of dwellings (at a low purchase price, given today's low rental costs) could be used to induce public opinion into a less hostile attitude towards price reform.

5. A *currency reform* could also help. But to succeed it requires public support, which in turn depends on authorities' political credibility. There is not much of such credibility at the moment in the USSR. If the Soviet leadership promoted some democratic accountability by means of Round Table negotiations, a monetary reform (even more punitive than the one introduced in mid-February 1991) would face milder opposition.

b) Western Support

In the West, a combination of technical and financial support continues to be needed to support (induce?) short-term macroeconomic stabilization. Here there are possible channels, some already explored in the late 1990 and in the early 1991.

First, the USSR has faced arrears in import payments and debt servicing: in the future the problem will be recurrent. Deliveries by Western exporters (of consumer goods especially) have been delayed — even suspended. The 1990 harvest was good (about 230 million tons of cereals), but this could not alleviate shortages. Indeed consumers' expectations have been so unsettled (about deliveries and prices) that the market continues to absorb quickly whatever additional domestic output is supplied.

The opening of a limited amount of credit lines (about \$ 12 billion) did not calm the hunger fear, nor it mopped up liquidity, nor it stabilized free prices in the (kalkhozian) market, nor it tranquillized coal mining centres (which struck strike again, as in 1989), nor it inspired better attitude about perestroika, its goals and accomplishments.

The above notwithstanding this kind of support is still needed but in limited amounts, as it will result in a major increase of the USSR external debt (now close to \$ 50 billion), without any increase in the country's capital base. The country's ability to service its external debt will remain impaired (as these credits would be utilized to finance consumption).

The type of support mentioned above was, and it should continue to be, made available without conditions. Not so far the rest of aid.

Second, loans in support of macroeconomic stabilization have so far been considered and approved — but then not granted as events in the Baltic (and then in the Gulf) unfolded. These resources need to be considered under significant IMF conditionality, to make sure that short-term budgetary consolidation and monetary tightening are immediately put in place — as a proper sequencing of reforms requires.

4. Structural Policies in the Longer Term

The kind of massive systemic changes needed in the Soviet Union, in order to establish a market system, can be assessed by separating the (A) reform of factor markets, from the (B) institutional reform to induce the systemic switch. Let us look at these, separately.

The (A) REFORM OF FACTOR MARKETS has to start during the phase of economic stabilization and be pursued aggressively in the long term.

a) Soviet Responsibilities

1. *Labour and industrial Relations.* These are to be established with the twin goals of guaranteeing efficient use of this unique resource, while containing the impact of structural adjustment on employment.

These two objectives may collide, as they have done in the West. To avoid (or minimize) that, collective bargaining has to begin. An adequate social security net is also needed.

2. *Capital Markets and Financial Intermediation.* They have to be created, with separation of different types of banking. Security markets need to be developed for government bonds (as monetization of deficits ends); for enterprises (being privatized) and for channelling foreign investment and joint ventures.

b) Western Support

Here assistance ought to consist of expertises and resources for training, management and social protection of the labour force disposed of in the drive towards efficiency.

Regarding capital markets, the Soviets have no know-how, not even understanding of what is involved in banking and financial intermediation: massive training, in the USSR and in our own financial institutions, is needed.

The development of market-based industrial relations at a time of major structural adjustment (hence unemployment) will require a strong safety net. The *Counterpart Fund* which the West may build in the USSR following emergency aid, may contribute to it.

Finally, the (B) INSTITUTIONAL REFORM to put the market regime into place has to extend private ownership and allow goods and services markets to behave competitively.

a) Soviet Responsibilities

1. *Price Liberalization.* Gradual, and accompanied by robust mechanisms to protect the weak, it ought to cover consumers items at first, then intermediate and investment goods. This sequence is exactly the opposite of the one under realization in the USSR.

As seen above, partial freeing of price is appropriate during the macroeconomic stabilization phase. However, the bulk of the reform is to be carried out only after:

- aggregate imbalances are under control; and
- competition legislation is in place.

This sequence is to prevent that price liberation,

- taking place at a time of excess liquidity, results in prices incompatible with long-term income/output equilibria;
- taking place at a time of privileged market positions, results in windfall benefit of the monopolists.

2. *Trade Policy.* Some import liberalization is necessary during macroeconomic stabilization to facilitate the transmission of price signals into the domestic economy. The greatest part of the liberali-

zation, however, must be integral part of the institutional reform, so as to foster domestic competition and exploit comparative advantages. Protection of infant industries and gradualism in the dismantling of barriers are necessary in the tradition.

3. *Ownership Legislation and Privatization.* The partial transfer of state assets (housing) to households may contribute to macroeconomic stabilization (by draining liquidity and reducing the national debt). It may also lessen public opinion hostility to reforms that entail purchasing power losses.

Large scale privatization can only be done after:

- the legislation on competition is secured (to avoid private monopolies);
- monetary stabilization is well underway (to facilitate value assessment of, and by the enterprise being privatized);
- financial markets begin their mediating role (to make privatization efficient and transparent).

Property and commercial rights (for nationals and foreigners) have to be recognized by the law.

4. Finally, *Enterprises Tutelage* has to come to an end as *Competition Policy* is enforced. This calls for legislation to abolish the redistributive functions of state budget through the productive sector.

b) Western Support

When *economic support* is considered, it is better to err on the side of generosity; when *economic conditionality* is considered for an economy so rotten, it is better to err on the conservative side, rewarding the Soviet leadership only for truly radical reforms towards democracy, the market, (further) disarmament and riconversion of industry to peaceful uses. Since Gorbachev mark-II is by far less enthusiastic about democratization and liberalization than his mark-I predecessor, it has been an error to limit economic support. To the contrary the West should enhance the economic conditionality.

The *private sector* can provide important resources — and quite soon. But the private/public mix will shift in favour of the former only once politics is stabilized (not the case yet), the economy is made efficient and open to foreigners (not the case yet), and Western agencies provide MIGA-type investment insurance guarantees (again not the case yet). But some of the above (for example the guarantees) could change quite rapidly once the USSR enters the IMF and the World Bank. The potential returns from investments in the rather unsettled

Soviet economy today are so huge (25-30%), that it ought not to be a surprise to discover that they came with uncertainty, risk and dislocations.

What then to entice the private sector? Let us turn to this, and to the synoptical table which preceeds it.

MENU of OPTIONS of SUPPORT for the USSR

	DEBT CREATING	NONDEBT CREATING
PRIVATE MONEY	loans for: energy agriculture industrial conv.	joint ventures for: energy agriculture nuclear safety research labs. industrial conv.
GOV.T MONEY	X-credits BoP loans forex facility	technical assistance: energy agriculture nuclear safety industrial convers urban centres
EBRD	loans (as per statute)	privatiz.+joint vt.: energy agriculture nuclear safety industrial convers research labs. urban centres
PARIS/LONDONCLUB IFIs (soon memeber)	rescheduling* SAL* stand-by*	swaps*

* not discussed here

5. ANNEX: Assistance to the USSR - Operational Aspects

What follows is an assessment of possible operational measures (also spelled out in a synoptical table). They all seem ripe in economic and political terms – as volatile as the latter seems to be. However they vary in scope, nature and money intensity. Hence their different gestation lags.

- 2 sectors of production:
 - I. energy (oil and gas)
 - II. agriculture
- 4 forms of targetted aid to:
 - III. nuclear safety
 - IV. research laboratories
 - V. militar-civilian industrial conversion
 - VI. urban centres
- 1 type of systemic support for:
 - VII. a foreign exchange reserve facility.

In this paper the EBRD, the IMF and the World Bank are seeing to play a key role in providing assistance to the USSR. So the paper adds an hypothetical assessment of the funding mix (private/public); the required technical assistance and each project's *modus operandi*.

These areas command wide political support, in the West as well as in the USSR.

For the *West*, they

- I make democratization and disarmament irreversible
- II. mobilize private money and skill
- III facilitate technical assistance

For *the USSR*, they

- I. build on the country's comparative advantage
- II. add to capital formation but not to external debt.

I. An Energy (Oil and Gas) Facility

a) *General Comment*. Everywhere, and more than anything else, energy production and trade affect economic activity – even the Gulf war started because of an attempt to influence world oil supply.

To the East of the EC, they are likely to affect regional equilibria

as well, as they could promote growth in the USSR (if its serious supply disruptions can be brought under control) and wreck it in Eastern Europe. Hence a special EBRD facility (with contribution from other IFI's?) could improve the situation and give operational content to the Lubbers proposal.

b) *Modus operandi*. A facility could provide:

I. *an energy fund*. To begin with, working capital is needed to help the USSR reorganize this sector (extension of the facility to other EC countries could reduce the \$ 10 billion terms of trade losses expected from 1991 on);

II. *technical assistance*. The Fund could coordinate the help of Western technicians (as a grant) to exploit oil/gas wells more efficiently (only 70% of their potential is used at the moment), lengthening their life expectancy;

III. *EBRD support for (partial) privatization/ internationalization*. Joint ventures could be set up for the development of new energy poles. The facility could provide seed money, finance feasibility studies and organize business deals;

IV. additional *private resources* could be mobilized to build infrastructures (transport and refining). Leasing operations are another promising option. Oil and gas reserves (and shares of privatized entities) could be used as collateral.

c) *Assessment*. The initiative is politically acceptable. For *the West* it will:

I. keep oil prices down (current slack only 1 mb/day);

II. be carried out mostly by the private sector;

III. provide good collateral to new lending;

IV. induce, perhaps, the USSR to commit itself to uninterrupted deliveries to Eastern Europe, whose energy future is bleak.

Soviet authorities are aware that without Western support, oil export (and revenue) will soon decline.

II. Support to Agriculture

a) *General Comment*. This is another "make it, or break it" sector, with enormous foreign exchange earning (or, better, saving) potentials.

b) *Modus operandi*.

I. A *Soviet Agency* has been suggested, combining public/private, national/foreign capital. Western capital could be represented in the Board of Directors.

II. *Cooperativization/internationalization* is to be promoted through ventures with Western agro-industrial complexes.

III. The EBRD could also tap private resources for the building of *infrastructures*: harvesting, storage, transport, refrigeration and processing facilities. Again, leasing offers a possibility.

IV. *Technical assistance* from the West (as grant) could promote efficient exploitation of the country's land and livestock. Biotechnologies and high-yield seeding are to be massively introduced.

c) *Assessment*. There is Western and Soviet agreement on the significance of this type of intervention. This is a:

I. major import substitution activity, where the USSR enjoys a (potential) comparative advantage;

II. SMEs (small/medium enterprises) could be mobilized both in the USSR (as recipients, once kholkozy are broken up) and in the West (as business partners);

III. Gorbachev considers this a priority area: his own (political) support in the country-side is at stake.

Indeed,

IV. Western intervention could be extended to cover investment for the improvement of quality of life in rural areas.

III. A Nuclear Safety Facility

a) *General Comment*. Economics, politics, safety and the environment ought to mix better in the USSR. Gorbachev himself confirmed this view — and the fact that Western help is needed to realize it.

b) *Modus Operandi*. Here collaboration is needed from energy agencies and the EC.

I. A *Nuclear Energy Fund* could be partly financed by major international agencies. EC's own role could also be prominent. The Fund would promote technical assistance, investment for greater safety and retooling of existing facilities.

II. *Technical Assistance*. Redoing (some of) nuclear facilities in the USSR is only a part of the problem. The Chernobyl disaster was management-made, reinforcement to those charged with nuclear power management is the key to a success of this programme.

III. *Joint Ventures* could be envisaged (through EBRD intermediation) for the development of new facilities, in a country where environmental militancy is still in infancy. Western nuclear technology exporters, eager for production order could also provide (part of) the required capital.

IV. Partial *privatization* could be promoted by EBRD, to finance some of the above, as to develop facilities for nuclear waste disposal.

c) *Assessment*. Again Eastern and Western interests meet:

I. for the *West*, capacities (and human talent) long under-employed could be put to work. Furthermore, given the links between peaceful and military use of nuclear technology, Western penetration of Soviet nuclear arcana would further contribute to the irreversibility of nuclear disarmament.

II. *Gorbachev* has uncovered the Chernobyl cover-up, with public disclosure of its causes and consequences. In order to deliver the remedy, he has acknowledged the need for Western support.

IV. Internationalization of Soviet Research Laboratories

a) *General Comment*. The USSR has not enjoyed a decent (economic) return from its substantial investment in education. Soviet Research Labs are notoriously delinked from production, despite ample evidence of major discoveries and intentions (new materials, genetics, pharmaceuticals) which could be socially and commercially valuable to everybody – in the East and in the West.

b) *Modus Operandi*. Private inventors are likely to mobilize the bulk of the required resources, assisted by the public sector.

I. A *Research Fund* (coordinated by EBRD) could provide seed money to establish the necessary links between Western investors and Soviet Labs for the exploitation at the industrial scale of successfully tested, *past* discoveries. Furthermore,

II. astute financial engineering could mobilize Western *risk capital* to finance *future* research results.

III. The EBRD could also mediate, even finance the *privatization/internationalization* of some of the Soviet Labs.

c) *Assessment*. This is another politically acceptable and economically viable proposition;

I. for the *West* penetration into some of the Soviet laboratories which have contributed so much to space and military developments would increase the chances of lasting disarmament and peace;

II. for the *USSR*, exploitation of its comparative advantage in gray matter is a reason of pride and a guarantee of great-power status. Furthermore,

III. mobilization of Soviet High Tech Labs and decent remuneration of their staff will stop the brain drain which has followed more liberal emigration policy.

V. Military-civilian Industrial Conversion (harvesting the peace dividend)

a) *General Comment*. Democratization of East Europe and USSR may allow a reduction of defence expenditure in all industrial countries by 1/4 (about \$ 180 billion yearly). If proceeds are equally shared between consumption and saving, the increase of capital available for investment could amount to \$ 30 billion a year in the US; half that amount for both EC and USSR; \$ 3 billion for East Europe.

Authorities may like to channel some of these resources towards LDCs. Capital markets could handle the rest, on normal business merit. But the peace dividend cannot be left to the private sector alone, both in the West and in the East.

b) *Modus Operandi*. While this is a much more complex proposal than the previous ones, the expected economic returns are equally great.

- I. A *Peace Dividend Fund* could be established by EBRD to finance (at the enterprise level) feasibility studies concerning:
 - the *economic* question: conversion into what?

— the *technological* question: conversion on the basis of which technology?

— the *financial* question: how is the financing to be arranged?

II. *Technical Assistance* could be provided by a variety of institutions for that part of the restructuring which the Soviets may wish to carry out alone.

III. EBRD could also provide resources and promote mediation to launch *joint ventures and production* and (partial) *privatization*.

IV. *Private capital* would follow, together with the (privately sponsored) technology transfer.

c) *Assessment*. For the *West*, this proposal is acceptable on a double account:

I. *financially*, it is mostly self-paying (with strong private sector involvement);

II. *politically*, it will really end the Soviet threat.

For the *USSR* it will:

I. release resources to reduce the fiscal deficit and

II. help finance perestroika, in general

III. earn foreign resources via exports.

VI. Targeted Assistance to Urban Centres

a) *General Comment*. An embryo of pluralistic democracy has been established in the USSR thanks to Gorbachev's political glasnost and Yeltsin's resignation from the PCUS. Several urban centres have elected mayors who radically oppose the PCUS, notably Moscow (G. Popov) and Leningrad (A. Sobchak).

As the West considers economic support to perestroika, it may also consider an "infant democracy" argument favouring support to cities on their way towards democratic life (note that the same argument cannot be extended to dissident republics, as political decentralization differs from constitutional disintegration).

b) *Modus Operandi*. At the moment it is not clear how this targeted help could be organized — and whether it should be coordinated by a single institution.

I. An *Urban Fund* could be set up, perhaps with Western public grants to finance "quality of life" projects (metropolitan transport, telecommunication, betterment of the environment) and "basic needs" (hospitals, food storage, water purification).

II. The Soviets have not yet figured out who owns what — and how privatization should proceed. However, both Moscow and Leningrad's mayors have proposed privatization of some of the economic activity taking place in their cities. Hence EBRD could sponsor some *privatization and joint venturing*.

III. *Technical assistance* is also needed for the training of managers of public affairs (budget experts and tax collectors, accountants, social workers). Western grants are conceivable.

c) *Assessment*. To the West, this kind of "infant democracy protection" is of enormous value: it is the beginning of the real political transformation of the USSR.

It is less clear whether (federal) Soviet authorities will appreciate an initiative of this sort — bound to strengthen militant opponents of PCUS. But this may be preferable to a further deterioration of the country's socio-political fibre.

VII. A Foreign Exchange Reserve Facility

a) *General Comment*. The credibility of the USSR in financial markets has been shattered by recent debt-service delays. At the root of the matter are measures favouring liberalization of trade activities and a rapidly growing current deficit.

There has been a similar serious deterioration in the external accounts in all Eastern European countries, for related reasons.

Ironically, the above is happening at a time when serious consideration is being given to monetary reform and currency convertibility: hence, the region's need for some form of currency safety net, accompanied by mechanisms to restructure the region's intra-trade and its payments. Western Europe's experience with EPU comes to one's mind.

b) *Modus operandi*. A sort of *Payment Union* linking the European members of CMEA and the USSR would require:

I. a *Payment Fund* to finance bilateral deficit through a clear-

ing mechanism. In the 1950s, the BIS played that role; a similar facility could be envisaged;

II. a set of bilateral *fixed exchange rates* between East European (convertible) currencies and the Rouble;

III. a *trade and payments agreement* with non-member countries to facilitate transaction outside the area and avoid the typical Payment Union pitfall: efforts by participating countries to channel resources from within the Union to the outside.

c) *Assessment*. For a number of years, trade and payments in the USSR and Eastern Europe will be disrupted by efforts to stabilize macroeconomic aggregates and shift the economy onto the market.

I. A *foreign exchange reserve facility* could provide a safety net for their currencies, now that convertibility has been established everywhere except for Bulgaria and Romania (and USSR, of course). This would strengthen these countries' trade performance with the USSR — and therefore the West's ability to keep exporting to them without increasing their debt;

II. the reorientation of Eastern Europe away from the USSR and towards the West could cause unemployment. It could even give origin to *political friction* with the USSR: a PU with the USSR part of it could reduce such tensions.

— *Part 3* —

SECTORS, FACTORS AND
SOLIDARITY

“THE ROLE OF GATT AND THE NECESSITY OF COOPERATION IN INTERNATIONAL TRADE”

JAGDISH BHAGWATI

1. Introduction

The world trading system is at crossroads. There are good signs and bad signs. The good signs are that the nations of the world are negotiating new rules and disciplines at the Uruguay Round, trying hard to bring the GATT into line with the needs of the modern age. The bad signs are that there are several tendencies at work which tend to undermine the world trading system at the same time as nations are working to strengthen it. In my remarks, I will focus on the adverse trends, simply with a view to identifying them, in the hope that awareness of their presence and insidious effect will itself serve to focus attention on containing them.

Most of these adverse trends come from the intensified feeling that “unfair trade” is breaking out and this, in turn, leads to demands for managed trade, for aggressive use of economic power to extract unilaterally-imposed changes in other nations' trade and economic policies (contrary to the GATT system which depends on mutuality of trade concessions and shields therefore the weak against the strong nations), and for regionalism (which stands against GATT-wide freeing of trade by confining trade liberalization to smaller groups of nations). I therefore consider the rise of unfair trade in Section 2, managed trade in Section 3 and aggressive unilateralism in Section 4, eschewing the analysis of regionalism for lack of space ¹.

¹ Regionalism issues have however been discussed by me separately in my *Multilateralism at Risk*, 1990, *ibid.* where I analyse how GATT Article XXIV should be reworked so as to make regional trading arrangements into building, rather than stumbling, blocs to GATT-wide, multilateral freeing of trade.

2. Rise of Unfair Trade

At the outset, I should note that there is a strong case for free trade to be complemented by fair trade. One can argue that a free trade *regime* (such as the GATT), overseeing trade among trading nations, must embody the principle of largely symmetric free trade by each; otherwise, the efficient allocation of activity among trading nations that the regime must reflect will be compromised by the license taken by those who stray.

There is also the prudential argument that, even if one were not interested in cosmopolitanism and were actuated only by considerations of narrow national interest, one's own ability to sustain free trade would be imperilled in practice if one's rivals were considered to be trading unfairly. Pluralist politics will generally rule out accommodation to free trade unless trade is also seen to be fair.

Hence, the liberalization of trade has always been accompanied by the institution or activation of the two now-conventional measures against unfair trade: the countervailing duty (CVD) against foreign subsidization of exports and the anti-dumping (AD) duty to counteract the presumably predatory effects of dumping.

The problem is that "unfair trade" is a two-faced creature: one face is friendly to free trade; the other frowns on it. Measures against unfair trade can be misused to allege unfair trade unfairly and thus to undermine free trade. And new definitions of widening scope, of what constitutes unfair, "unreasonable" and unacceptable trade can be invented in unending improvisations. It is this other, ugly face that we currently see and must fear. Why?

1) Perhaps the most compelling reason for the increase in allegations of unfair trade is simply the outbreak of protectionist pressures in the early 1980s, combined with the fact that protection is easier to procure if the successful foreign rival is alleged to be unfairly trading than if one pleads for it merely by citing the difficulty of one's situation.

2) Again, the implausibility with which such allegations can be made by protectionists is diminished by the increased focus on non-tariff barriers (NTBs) relative to now-negligible tariffs. The latter are transparent and, indeed, uncomplicated. Gertrude Stein could have said, "A tariff is a tariff is a tariff". But NTBs are hard to handle. Suspicions often linger of their invisible hand strangulating trade.

3) In addition, there are changes in the world economy that

reinforce the rise of unfair-trade concerns to center stage. Three merit attention.

Perhaps the most important factor, responsible in particular for the American conversion to neurosis on this front, has been the relative decline of the United States in the world economy, leading to what I called some years ago the Diminished Giant Syndrome ².

The Diminished Giant Syndrome of the United States now parallels Britain's at the end of the 19th century when the United States and Germany arrived on the world scene.

4) But the change in the world economy that propels more forcefully the unfair-trade crusade is the increased criss-crossing of foreign investments that is turning the globalized world into a veritable spider's web. This has increasingly meant that everyone now tends to be in everyone else's backyard, making import competition in one's own market, and export competition in the other's market and in third markets, ever more fierce. In this atmosphere, suspicions of unfair advantage accruing to one's rivals have combined to make the American scene a potentially fertile ground for such analytical demonstrations to flourish in a symbiotically interacting relationship between the theorists and the interest groups, correspondingly intensifying the obsession with unfair trade.

These converging forces have resulted in:

a) a capture, and protectionist misuse, of the traditional unfair-trade mechanisms in regard to import competition, CVD and AD, in both the European Community and the United States, as documented splendidly by Michael Finger, Brian Hindley and Patrick Messerlin in recent years;

b) an extension of the unfair-trade concerns to markets for exports, in others' home markets and in third markets;

c) an expansion of such concerns to wholly new areas (such as differences in retail distribution systems, savings rates and workers' rights) in regard to fair competition in both imports and exports. The last two developments are more novel and merit further comment.

The notion of unfair trade in one's export markets has led not merely to conventional concerns about subsidies to one's rivals there but to two new twists.

² Cf. Bhagwati and Douglas Irwin, "The Return of the Reciprocitarians: U.S. Trade Policy Today" *The World Economy*, June 1987, pp. 109-30; and Bhagwati, *Protectionism*, MIT Press: Cambridge (USA), 1988.

First, the question of *intra-sectoral reciprocity* of trade barriers has become fairly widespread by now, whereas earlier only some "average" equality (across all imports) of mutual openness of the two countries would have sufficed to meet the criterion.

Second, the question of fairness is now considered important enough to justify actions which can only be described as reopening the terms of earlier trade negotiations in view of *ex post* realities. This is certainly one of the many arguments for seeking unrequited trade concessions from Japan: that the difficulty of penetrating her markets was underestimated and hence the trade concessions given to her were more than those received and the situation must be corrected by new concessions by Japan.

These notions are dangerous enough and have driven some of the recent GATT-illegal aggressive unilateralism that I will discuss shortly. But they are benign compared with the extension of unfair trade notions to wholly new areas, as in the 1988 Omnibus Trade and Competitiveness Act in the United States and in the Structural Impediments Initiative (SII) with Japan. In both instances, the notion of unreasonable unfair-trade practices has been extended to areas that range over matters as diverse as domestic anti-monopoly policies, retail distribution systems, infra-structure spending, savings rates, workers' rights and so on. The American shopping list in the SII talks was reputed to have included 240 items.

The problem with trying to include such things, and indeed most policies and institutions, as the natural target for objections that they affect trade and must therefore be scrutinized and changed to suit one's advantage if free trade is to be allowed, is simply that one is opening up a Pandora's Box.

3. Issue of Managed Trade

Indeed, the question of managed trade has arisen as a threat to the GATT regime, not just because of the outbreak of unfair-trade-mindedness. It has also derived from three other notions: (i) most trade is not managed trade anyway; (ii) Japan, a major player today, is exotic and different; she will not, and cannot, play by rules; and (iii) high-tech industries are so important that they cannot be, or will not be, left to the market place. Each contention is erroneous.

3a) Managed Trade Anyway?

That trade occurs frequently by either bypassing or flouting GATT discipline, as with VERs on goods, or outside of its framework, as in agriculture and services, is indeed true. But it is a *non-sequitur* to conclude that rules do not work and more managed trade must therefore be the way to go. Yes, the glass is half empty and half full. But there is little doubt that it would have been emptier still if the GATT had not provided the overall framework and ethos that kept the glass upright instead of falling on its side. Moreover, the issue surely is whether we want to empty the glass further or to fill it up. The Uruguay Round negotiations are properly about filling it further.

3b) The "Japan-is-different" Argument

The "Japan question" raises different issues, but, for recent critics, it leads to a similar conclusion: that managed trade with Japan is either inevitable or desirable.

In particular, culturalists have had a field day with their assertion of Japan's cultural uniqueness that makes fix-rule trade with her impossible to contemplate. Thus James Fallows, of *The Atlantic Monthly*, an influential Japan-worrier today, has argued that Japan is unable to play by rules and prefers "quantities", making managed trade (with specified quantities traded) the only way to trade with her. Japanese trade negotiators presumably ask the United States: "How much do you want us to import?" Fallows attributes this query to "Japanese discomfort with the very prospect of abiding by abstract principles". This is strange. Is it not more likely that, faced with Americans' repeated complaints, the Japanese ask: "How much do you want us to import," wisely muting the rest of the sentence, "to get you off our backs?" Indeed, since the 1930s, Japan has faced quantitative limits on her exports. The "Japan (trade) problem" has long been with us and has reflected her rapid growth, her import dependence for raw materials and her consequent rapid growth of exports that has been hard to accommodate in the more sluggish world economy. The giant among Lilliputians has in consequence been repeatedly tied down by quantity restraints on her trade. If the Japanese negotiate on quantities, can it not be that they have learned from their trade history that this is the only way left open to them by their trading partners?

3c) High-tech Support?

The Japan question, however, feeds an altogether different, more universal, argument for managed trade in the United States. This relates to the fear (discussed earlier) that unless trade restrictions and targets are imposed in high-tech industries, these industries will be lost to countries such as Japan which somehow managed to spawn and support them against the firms in countries that abstain from such support. Now, while economists have great difficulty in finding externalities in specific industries and are generally inclined to discount claims of their existence in a sufficiently disproportionate degree so as to justify selective support, the opposite is true of politicians. Today, thanks to the scientific revolution that started in informatics and biogenetics, there is virtually no politician in any major developed country who does not feel that high-tech industries must be attracted and supported for their manifest externalities and, in non-economic terms, for their identification with modernization in view of their state-of-the-arts and at-the-frontier status. Given these perceptions, which then become realities that the economists must work with, it is evident that a rules-oriented free trade - system in high-tech industries will not be workable unless:

- *either* there is a multilateral mechanism for bringing up front the various differing ways in which different governments are alleged to be biasing the outcomes in their favour, so that the "net balance" of such artificial advantages among the different rivals is sorted out and then eliminated,
- *or* one goes yet further and manages essentially to get an acceptable degree of harmonization (that then irons out the differences) by adherence to a code of do's and don'ts.

The latter may not be possible if governments do have definite and differing preferences for certain policies. The former surely is possible and would enable the Japanese to point to the artificial advantages stemming in the United States from higher defense expenditures, support for science through the National Science Foundation and so on when the Americans complain about the Japanese Government's guidance and support to pooled research, etc. The multilateral format would ensure that the finger-pointing would be fair and balanced, where appropriate, without the advantage of the thicker finger in bilateral one-on-one confrontations.

4. Aggressive Unilateralism

The concerns over unfair trade have created yet another hazard for the fix-rule GATT system in the recent use of aggressive unilateralism by the United States to impose on others its unilaterally-defined views of unfair trade practices.

I refer here, of course, to the use of the Section 301 and Super 301 provisions of American trade legislation, as currently updated in the 1988 Act, to demand negotiations from specified countries on "priority" practices that the United States find unacceptable, regardless of whether they are proscribed by the GATT or another treaty, and to seek their abolition on a tight time schedule set by the United States, using tariff retaliation by the United States if necessary. What is the problem with this policy?

At the outset, it must be understood that the GATT does have the force of a treaty for the United States.

Why does GATT-illegality matter? *Prima facie*, honouring a treaty commitment is to reaffirm one's respect for orderly procedures and the rule of law in dealing with other nation states.

But does *vigilantism* have a place when the sheriff is asleep in the saloon? Or, to rise to a higher principle, is there not a case for "justified disobedience", as Professor Robert Hudec has recently put it, when the law is not working as it should ³? In either case, a doctrine of "creative illegality" is being invoked: a breach of law to improve the law is being claimed.

The problem with this line of defense by the United States of GATT-illegality (to improve an ineffective GATT) is that almost no one else in the trading system quite accepts this justification. Indeed, as Professor Hudec has noted, the United States' own record of acting within the rules to respect others' GATT-defined rights has not been exemplary.

There is also the problem that means may affect ends. Is it not likely that a declared willingness to break GATT commitments, and even actual breach thereof, may spread cynicism towards such commitments by others rather than adherence to them in the future?

Let me now turn to other dangers inherent in this form of

³ Cf. Robert Hudec, "Section 301: Beyond Good and Evil", in Bhagwati and Patrick (eds), *Aggressive Unilateralism*, University of Michigan Press: Ann Arbor, USA, 1990.

unilateral extraction of trade concessions from others. In particular, since it reflects clout and concentrated pressure, there is a strong likelihood that the targets of Section 301 actions will satisfy American demands by diverting trade from other countries (with small political clout) to the United States, satisfying the strong at the expense of the weak.

Admittedly, the US Ambassador Carla Hills repeatedly stresses that she will ensure that markets are opened under Section 301 in a non-discriminatory fashion. But *ex ante* intentions can diverge from *ex post* outcomes. The countries targeted for action know that the American pressures are more likely to ease if the United States gets a good share than if it does not.

There is also the possibility that the use of muscle to impose one's own views and to extract one-way trade concessions will poison the ethos of fairness in trade relations without which open markets are hard to sustain.

5. Concluding Remarks

Even if one makes the implausible assumption that Section 301 is used only for "altruistic" reasons (such as using muscle to make progress in the Uruguay Round negotiations), the notion that the United States should serve as a benign dictator, laying down its own definition of a desirable trading regime instead of making (admittedly slower) progress by persuasion and mutual concession, is hard to accept. Institutions cannot be built on notions of benign dictatorship: this is a lesson that the functioning democracy in the United States itself, with all the slowness and "inefficiencies" that practitioners of *realpolitik* complain about, amply teaches us all.

We must also confront the fact that trade policy is rarely made in pluralistic democracies by dictators with monolithic objective functions. Instead, it reflects the resolution of sectional interests in the political domain. There is no necessary correspondence, therefore, between the triumphant sectoral interests and the national interest and, most important, the international or cosmopolitan interest that must define the world trading regime.

The instrument of aggressive unilateralism therefore has important drawbacks and somehow the Uruguay Round negotiations will have to find a way of cutting it down to size through an agreement proscribing the use of such instruments.

"THE INDUSTRIAL SYSTEM AND SOLIDARITY"

R. PRODI

1. Introduction

I will tell you the story of three temptations we have incurred in our efforts of solidarity with less developed countries.

The *first temptation* is to consider growth and solidarity as two fully separate issues: the first one belonging to economy and pragmatism, the second mostly to the field of moral utopia.

The temptation stems from the fact that it is somehow easier to feel morally satisfied by a good action, such as a gift, without having to worry if this same gift has any meaning, in terms of long-term improvement of a general situation, which only a self-sustaining growth can guarantee. In fact solidarity as a value "per se" has never been doubted; it looks like it can win by itself and be socially aggregating.

The needs for efficiency may appear to conflict with the reasons for solidarity, especially if industrial systems and technological innovations are involved. Resources are scarce by definition, and choices have to be made. Unfortunatley "omnis electis est negatio", which might create some problem in the desire of solidarity.

Solidarity boils down to emotions and feelings, and it ends up affecting individual souls only, without really changing reality. Things stay the same, and solidarity does not meet its objectives.

This basic concept was very well expressed in the words of Sollicitudo Rei Socialis, "Solidarity is not a feeling of vague compassion for sorrow of people but rather a firm and persevering determination to commit oneself to the common good".

The *second temptation* is to assume that science and technology, industry and services can be "the solution" to the problems of less-developed countries.

The whole story of man has been discussed in these terms: are civilization and prosperity a result of science and technology and industry or, viceversa, are science and technology and industry a result of civilization?

Most of the analyses lead us to think that the second case is closer to the truth. Generally, in fact, the story of man is scattered with examples of knowledge which have been sitting there for decades because social and cultural conditions were not ready to allow them to develop into factors of growth. Think back to the giant steps from the wind mills in the middles ages, to the microscope in the seventeenth century, to the telephone in the nineteenth. In all cases knowledge and technology existed much earlier than utilization.

What is very important to realize is that a good industrial system needs the cooperation of all those who work within it. Cooperation may be more or less voluntary, the result of interest rather than of solidarity, but if social conditions are such that cooperation cannot exist, growth is impossible.

The *third temptation* is that of pessimism. Given some dramatic features in the policies of solidarity by aids and technical or commercial cooperation since 1944 (big bang of international cooperation, Bretton Woods conference) we might be brought to think that there is no way out for some areas of the world.

The fact that the policy of cooperation has been working in some areas and not in others does not imply that these last ones are hopeless.

It implies only that different areas have different problems and different problems need different solutions.

In most of these "failure cases" it was taken for granted that the right aid was a contribution to investments in production facilities of import substitution industries.

The correct concept, which of course implies relevant differentiations in choices about industrial policies and technology transfers, is not that of concentrating on how to import less, but on how to help local human resources to produce what they are better suited for and to export more. We are all getting together in a world where a thick network of links, collaborations and relationships tend to unify different areas and to enhance the value of opening up trading channels rather than limiting existing ones.

The temptation of "pessimism" can be avoided if we use a rational approach to the problem by accepting three basic concepts:

a) solidarity requires more and more a shift from pure aid to new forms of cooperation, forms which sometimes may also require painful measures;

b) the concept of LDCs (Less Developed Countries), despite its almost unique ideological drive, is a highly fragmented set of situations requiring fully different approaches;

c) the socio-economical framework of LDCs is moving very quickly and therefore our efforts to show and implement solidarity must be able to change and adapt flexibly too.

In fact if we look at the trends of the last forty years of cooperative policies we will see that some things have changed, and despite the fact that it may look like from one failure to another, a few good signs of improvement are there.

2. International Solidarity

As a matter of fact the first example of solidarity, the Marshall plan, had been a great success from 1948 to 1953. It was based on the transfer of capitals mainly invested in the industrial sector. But the support of the quick process of industrialization which was very good for Europe did not work, and "a posteriori" we can say now that it could not work in other areas of the world which needed fully different approaches.

I have already mentioned the negative impact of "import substitution policies" and of "protection policies". In the sixties the whole sector of "international solidarity" had to be reviewed. Three major mistakes were identified:

- a) the importance of the human factor in industrial development had been neglected;
- b) increasing as much as possible the productivity of investments in agriculture had not been perceived as the quickest and many times as the only way to improve conditions of life in the remaining poor countries;
- c) many of the developing countries were driven towards autarky and cut out of international trade (see for example the case of the European Agricultural Policy).

The first phase of this critical revision got so far to discuss even the objective of economic growth as a value (I recall here the controversies about the neocolonialism of industrial development).

Later on the full complementary between economic growth and satisfaction of human needs was recognized and accepted. But it was also clear that, together with investments in industry and services, or even before, capabilities in administration and planning needed to be highly improved. In some cases they needed to be introduced.

This implied moving from aid to cooperation and had an impact on the allocation of the international funds.

Going from aid to cooperation means that the whole process is implemented in the framework of a development policy which the receiving country has proposed, negotiated and fully accepted. It means also that the sharing of responsibilities between the two parties is always the result of an agreement. The emphasis is put on a continuous evaluation of the efficiency of the investments (and more on micro-macro reforms) within a framework of policy dialogue. Public contributions to development have grown in the last ten years from 30% of the total flux of funds (which includes also export loans and private aids) to 54% today with a peak of 60% in 1985.

It may also be interesting to recall that while in 1962 the share of the public international contribution was 60% by the USA, 36% by the EEC, 2% by Japan, today it is 22% by the USA, 4% by the EEC, 18% by Japan, and the total amount rose from 25 billion \$ to 54 billion \$.

Moving from aid to cooperation has also meant a stranger coordination of the efforts of "donor countries" under the control of the World Bank through "consulting groups" including also representatives from the receiving countries.

Within this framework the so-called "structural adjustment lending" has grown up to one third of the total and has interested 31 countries.

The typical adjustment lending is included in a hybrid loan where part of it is still "project lending", becoming therefore conditioned to a set of reforms in economic and industrial policy.

It has been very clear that the technical quality of the interventions both in industry and in service sectors was not sufficient, and although it was clear to everybody how difficult this was, not only structural but also institutional changes were pursued in order to broaden the perspective to the long term.

But despite the difficulties in growing a country to a developed industrial stage there are cases where this has been possible.

3. The Successful Story of South Korea

South Korea had in 1950 an income per head of about 350\$ only; life expectancy was 50 years, farming employed nearly 40% of national income; the savings rate (a good pointer to future growth) was only 8% of GNP. The country was so far behind the industrial ones that it seemed almost impossible that it could attain reasonable standards of living within a couple of generations.

Well, in a time shorter than that South Korea made it. Its income per year has grown 8 times to 2900\$, life expectancy to 69 years and employment in agriculture has fallen to 25%. The reasons of this success, which has not been unique in the far east, lay in a very bright industrial policy and in a great emphasis on development of human resources, especially in technical education.

South Korea did not make the mistake of looking for import substitution; it concentrated on labour intensive sectors starting from imitation of existing technologies and managed then to move year after year towards more and more advanced original products and industrial processes. The key of success, together of course with cheap labour, has been technical and grass root schools; almost 70% of South Korean youth goes to high school up to the age of 18.

The protagonists of Korean industrialization are neither the entrepreneurs nor the corporation managers but salaried engineers. And now Korea is investing more and more in technical education and R&D. In the last ten years the number of graduate engineers has increased sevenfold; R&D, which was negligible in the seventies (all technologies were borrowed from abroad), is now 2% of GNP; it will be 2,8% in 1990 and 5% in year 2000.

But growth has not been very high in South Korea only: the whole Pacific area of Asia (including China) has been growing, lately, around 6% a year; also the Southern part of Asia has grown 3% as the best developing countries: these figures show that on the average the whole "developing world" has reduced its distance from the developed countries. In fact they make up for very difficult situations in North Africa and East Europe (where growth is zero), in Latin America (-1%), and in Subsaharian Africa (-3%). In these last areas negative growth is affected also by the high foreign debt (83% Subsahara, 43% Latin America, 39% East Europe).

As far as the contribution of industry is concerned, the weight of manufacturing activities has grown from 10% of non-oil exports to 65%; but the total amount has not been sufficient.

The problems are very different from area to area and contributions to their solution from technology, industry and services are also quite different; different, of course, is the role played by solidarity.

4. The Case of North Africa

The first case, very close to us Southern Europeans, is the case of North Africa. An area where 200 million people suffer zero growth, with a total income of only 320 billion \$ per year, facing on the other side of the Mediterranean 160 million people with sustained economic growth and an income of 2000 billion \$ per year. On top of this, while the wealthy 160 million of the Northern side of the sea are almost stable in number, the 200 million on the other side keep growing very fast and projections say they shall be 100 million more by year 2020. If you consider also that their education systems are unadequate, it is clear that modern forms of industrialization with labour saving, hightech, production systems can not be a solution to the problems of this area.

An intelligent effort of solidarity means offering cooperation in fields where human resources can be better utilized in high numbers, such as services connected to tourism or labour intensive production. This means cooperation with investments in infrastructures and in specialized schools, which may not require a specific high level of education.

Opening trade barriers is also necessary, as well as favouring the export of those goods which they are more capable of producing (agriculture, textiles).

But in this specific area of the world solidarity means also managing immigration flows North-bound at the EEC level. Managing does not mean closing borders of course, but some form of quota system which allows an ordered presence of immigrants and avoids the risks of fundamentalism on the one hand and of racism on the other.

5. Central and Latin America

The problems of Central and South America are very different. Here the levels of income are much higher than the average of the poor countries, and the development and the diversification of those economies are not irrelevant.

What is devastating in these countries is the coincidence of foreign debt and inflation at very high levels. And devastating as well is the increasing spread between social classes politically protected and those politically weak, up to the point that the aid funnelled to these countries to help the estimate is that 300 billion \$ (one half of the debt) have gone this way. The large credits have fed an uncontrolled inflation without any relevant impact on the industrial system as a whole.

In the collaborations with South American countries we have found as IRI group many cases of good technological capabilities (aeroplanes, steel) and of highly skilled manpower. This makes us believe that if a correct relation (between the measures which will have to be taken and those of internal restructuring) will be designed and achieved, chances of recovery actually exist. But it is very clear that the problems of debt and inflation are mainly political. And by political we mean that their management requires the solution of painful internal struggles; so painful that they cannot be left to non-coordinated initiatives or even to bilateral negotiations. The management of these problems must be faced, assessed and guaranteed by the international community.

Consolidation and reduction of debt should take place in parallel with measures of internal restructuring; these measures, among other things, should be able to incentivate exported capitals to come back. Otherwise, within such dramatically broken societies, no industrial system would grow, no external solidarity could be of any help.

6. The Problem of Eastern Countries

The third set of problems is the one stemming from the collapse of communist economies in Eastern Europe. Here is where solidarity has the highest chance of achieving very important results in reasonable times; but here is also where, without solidarity, the risk of a terrible leap backward is also very high.

The desire of "more freedom", "more Western life" in countries like Hungary and Poland is pushing these societies to jump, without being prepared at all, into an economic system which on the short run can create more damage than good.

What is missing is not human resources nor individual technologies: what is missing is the "very language", not to say the culture of an industrial productive system. These people after so many years of

rigidly planned economy, not only have lost the feeling of entrepreneurship, but also the basic concept of cost accounting and pricing which are the fundamentals of a free economy.

But if we can help in overcoming these problems, then the outcome goes much beyond helping a country; it implies the consolidation of the spreading of peace of which, in the last three, four years, we have only seen the dawn.

It is evident that the opening up of Poland and Hungary towards Western forms of industrial systems and services is tightly connected to the events in Moscow; but if before showing our solidarity to Poland and Hungary we want to wait and see what happens in Moscow, we may be too late and be ourselves, with our doubts and lack of enthusiasm, a cause of their failure.

We had the opportunity of discussing, at very early stages of their development, or even before the actual development really started, with some of the protagonists of these events. And as IRI group (a group where, almost uniquely in the world, state and private ownership coexist) we have been asked from the beginning three forms of help:

1. Joint ventures in banking,
2. Joint ventures in technology,
3. Assistance in education, economics and management.

These three "needs" came even before the need of "funds" to cover the debt and to finance the development.

We have already started operative discussions for all three topics and in all three we hope to achieve positive results soon. But we think that, although necessary, these activities are not sufficient. We must face the problem of funding which is not sufficient but still necessary.

The large amount of this fund which is becoming more and more acceptable to the Western countries, makes it necessary that its utilization is controlled by a supernational body, a new financial institution, where donors and receivers are represented. The institution should not only promote the raise of funds but also guarantee the correspondence of its utilization with its objectives.

Solidarity in this case means full cooperation and interconnection from the very beginning. By doing this we would really help not only Eastern European countries to get out their problems, but also the whole world to free itself from the fogs of ideologies.

7. Concluding Remarks

Africa, South America, Eastern Europe, all over although with different "regional" approaches, there is a strong expectation for the 90s of a great project of international solidarity. All forms of technical, scientific and industrial cooperation should be explored, evaluated and implemented; together with joint ventures in specific fields also more general forms of economic integration should be promoted (fragmentation is one of the main obstacles to growth. Think that in Africa 20 states out of 53 have less than 5 million people).

The Western industrial system is at the same time a model and a powerful tool for world development. But as a model we can not expect it to duplicate all over; as a matter of fact it can in few cases only. As a tool it can be used everywhere within a framework of solidarity.

But there is no doubt that in order to use the industrial system (industry, technology, services) towards worldwide development, it is necessary to leap forward in our concept of solidarity. The developed countries should really aim at new political solutions capable to focus all the potential of the industrial system toward the objective of development.

Many experiences exist, proving the capability of large industrial systems to achieve very ambitious objectives. Think, for instance, to the space programs and to the amount of human, economic, technological and organizational resources which have been streamlined in large projects towards common objectives.

But in all cases there is something missing in the developing process we are looking for: an authority in charge for proposing the objective, not having it accepted, and for managing the needed resources. Advanced industrial systems have a great capability for designing large projects, but they always need forms of authority of managed cooperation.

Although, as we have seen, regional problems will require regional solutions and projects, one issue will require, in our effort towards development, a worldwide common approach. It is an issue fully connected with the industrial system: the protection of the environment. It is not a third world problem; it is our problem.

Environment must become the frontier of our capability to tame reality and highlight our engagement toward the common good.

In order to do this, our industrial systems need some form of "ethic jump" as a prerequisite to a collective move going beyond national solidarities.

"AGRICULTURE AND THE NEED OF SOLIDARITY"

ALBERTO VALDÉS

1. Introduction

That malnutrition is a function of poverty is self-evident. Only in recent years has the problem of malnutrition been viewed not only as a consequence of underdevelopment, but also as a contributory factor to it. In their pioneering study, Reutlinger and Selowsky (1976) identify two distinctive features of the problem of malnutrition. One is that nutrition is one of the main determinants of health, and distinctly from the general objective of improving economic welfare, society regards health as a desirable end in itself; thus most societies strive for a minimum standard of health and nutrition for all its citizens, although the same society may have no minimum standard of income for all its citizens. The second is that health and nutritional interventions have an impact on human capital formation, through their impact on schooling and labour productivity, thus with implications for the future earnings of individuals and the growth in gross national product.

This last consideration is crucial. Solidarity with the conditions of the poor based on non-economic considerations supplies a clear justification for implementing policy interventions to provide for specific groups' minimum adequate consumption of food, health, education and shelter, beyond the level resulting from market demand and supply. This is a basic need policy. However, if specific investment policies in nutrition and health increase the endowment of human capital of the poor by increasing their earning capacity, as such they do not necessarily imply a trade-off between economic growth and poverty alleviation. Thus the argument for making a special sustained economic effort towards such basic needs programming is reinforced by the implications of economic growth. The question before us is then how to design or adjust current programs to make them more effective.

In assessing the relative merits of various public policies to deal with malnutrition among the poor in developing countries, I will sub-

mit that a better understanding of the household behaviour is the natural starting point. The determinants of health and nutrition are basically decisions made by individuals and households in which they live, given their income, the price structure they face, and the level of services and infrastructure in the community. It is in this context that public policies must be designed — the household makes the ultimate decision concerning the family's expenditures and nutritional intake — otherwise public policies might not be effective.

Rather than talking about the millions of malnourished people living in developing countries, which usually becomes a call for more food aid to nations and families, I believe it is far more useful at this stage to try to relate explicitly the household behaviour patterns with the public policy options. In this study the focus is on the relationship between household's income and the nutritional and health status. This paper presents what in my opinion is striking new evidence on these interactions and suggests a framework for the analysis of the interactions among income transfers, the publicly provided inputs, and the household's response, in their effect on nutrition and health. Such framework can be applied in the evaluation of public policies designed to reduce malnutrition among the poor in urban and rural areas ¹.

2. On the Relationship of Nutrition and Income: the Statistical Evidence

In these last fifteen years, a growing body of literature has examined the interaction between nutritional status in developing countries and nutritional intake and household's income, and has made recommendations on how to improve nutrition based on parameters from empirical studies of food expenditure systems at the household level. Recent surveys of such studies include Behrman and Deodaliakar (1988), Alderman (1989), and Schiff and Valdés (1990b). It is found, however, that the policy recommendations derived from the analysis depend critically on the definition of nutrition and, more broadly, on the conceptual framework used. In particular, critical elements of the pathway from changes in income to its effect on nutritional status are still questioned. Showing that nutrient intakes are unresponsive to changes in income even at very low income levels such as rural South

¹ Malnutrition is a multifactorial issue and there are general deficiencies of nutrients (calories, proteins) and specific deficiencies (iron, iodine, etc.). In this paper, emphasis is given to the former type.

India, recent studies have questioned whether developing country nutrition will improve with income (for example in Behrman and Deodalikar, 1987).

While not attempting to survey this vast field, which is already well documented in Behrman and Deodalikar (1988), it is useful to highlight some fundamental findings on which there is a fair degree of agreement. For a small number of food aggregates, estimates from food expenditure systems obtain income elasticities of nutrients (ϵ_{nY}) somewhat smaller than but not significantly different from 1.0. These are derived indirectly by estimating the income elasticities of food expenditures (also close to 1.0) and by assuming constant nutrient-to-food conversion factors.

More recently, a re-estimation of these demand systems, such as for example for rural South India, Behrman and Deodalikar (1988) find that the expenditure income elasticity of food for the six food aggregates (120 foods grouped into 6 aggregates) is close to one, while for the quantities of the major nine nutrients the income elasticities are close to and not significantly different from zero. Cross-country estimates confirm the microeconomic results regarding the low-income elasticity of calories demand. As income increases, a larger proportion of food expenditures is spent on non-nutrient food attributes such as diversity of products consumed, freshness, taste, convenience foods which save time in their preparation, and others. Similar results are found for low-income households in Pakistan by McCarthy (1977), who finds that as income rises, increases in food expenditures are allocated mostly to quality rather than quantity of food (i.e., ϵ_{nY} close to zero). Several other studies on consumption patterns among low-income households have produced similar results. While not attempting to include a formal presentation of the statistical evidence on this relationship between income and nutrition, which is documented elsewhere, this evidence shows that when their income rises, the poor elect to consume few nutrients at the margin. Thus, using a broader definition of nutrition and its determinants — i.e., not restricted to nutrient intake — could lead to significantly different policy implications.

3. The Framework

The determinants of an individual's health and nutrition are basically decisions made by individuals or by the households in which they reside, given their assets, the level of the community's infrastructure, and the prices that they face.

If transfer programs and other policies aimed at poverty alleviation are promoted as likely to have major nutritional impacts, we need to improve our understanding about the interactions among the income transfers, the publicly provided inputs, and the household's response among the poorest segments of the target population. The design of welfare policies will depend on the social costs and benefits of the alternative public policies, where benefits relate to the response in terms of production of nutrition and health.

In the "production" of nutrition and health, the issue of the complementarity of the publicly provided inputs with respect to those inputs provided by the household are crucial and, I would argue, largely unknown. Understanding this relationship better is a central theme in this paper.

The starting point is that the nutrition level or status (N) of a household depends only in part on its nutrient intake (n). It also depends on other privately and publicly provided goods and services ².

At the household level, we can think of a process of "producing" nutrition (a nutrition production function), where the nutrition status (N) is a function of (1) the inputs of nutrients (calories, protein, vitamins, etc.) which we call n , (2) the input of non-nutrient food attributes which affect nutrition (N), such as freshness of the foods purchased, their cleanliness, their storability, which we call q , (3) the privately provided inputs which may affect nutrition (N), such as the time and care to prepare food including cleaning, cooking, boiling water, and other inputs (refrigeration) that ensure that the food does not get contaminated or spoiled, which we call p , (4) the publicly provided inputs which would include potable water, sewerage, electricity, nutritional information, etc., which we call k . Given the level of nutrient intake (1), the absence or low level of the last three types of inputs may cause food products to become spoiled or contaminated. This may lead to a reduction in the absorption of nutrients, or worse, to gastro-intestinal and other diseases accompanied by a drastic reduction in the degree of nutrient absorption, and thus a reduction in the nutritional status (N). Finally, the production of nutrition (N) is also partly determined by the individuals' health status, as well as by age, sex, and location (rural or urban). A fall in health due to causes other than a fall in (1), (2), (3), or (4) above – say, because of a reduction in medical services – will result in a fall in

² A formal development of this framework is found in Schiff and Valdés (1990b).

nutrition status (N). We posit that this nutrition production function reflects the effect of current as well as lagged values of those variables.

Only in the extreme case of famine (that is, as nutrient intake approaches zero), would all food expenditures be allocated to nutrients (1), and the impact of the other variable, particularly non-nutrient (2) would tend to zero ($q \approx 0$), and only an increase in nutrients (basic ones, calories and proteins) would have a significant impact on nutrition (N). The vast majority of the population in developing countries does not fall under this extreme case of famine.

In a broader sense, the variable of concern is the well being of the households in question. An important component of the household's welfare is the health status (H) of its members, which depends in part on their nutritional status. Like with nutrition, at the household level we can think of a process of producing health (a health production function, H), which is a function of (a) nutritional status referred to above (N), (b) privately provided inputs (p, same as (3) above), (c) publicly provided inputs (k, same as (4) above), (d) a variable (m) of current and lagged values of additional inputs affecting health, such as medical services, information on hygiene and child care, and others, and finally (e) the health production function also depends on age, sex, and location (rural or urban) of the individual. Thus, health depends on privately and publicly provided inputs directly, as well as indirectly through their effect on nutrition (N).

We expect that the functions N and H may vary according to sex, age, location and other individual characteristics, and so the partial impact of changes in each determinant on H and N may also vary according to those characteristics.

This framework allows us to further elucidate the question of whether income gains in low-income communities could reduce malnutrition (raise N), even when it has only a very marginal effect on nutrient intake at the household level. In a publication in a prestigious professional journal, Behrman and Deodaliakar (1987) question the position that improving nutrition of the poor can be achieved by increases in income, because empirically it has been found that even among very low income households (for example, in rural India in their study) the nutrient elasticity with respect to income may be close to zero. They conclude:

"... the World Bank (1981)-type optimism about the nutrient improvement to be expected with income gains in communities such as the ones under examination (rural South India), seems fundamentally mis-

leading," since "... increases in income in the present context will *not* result in substantial improvements in nutrient intakes". (p. 505).

The questions before us are:

- a) is the level of the various nutrients the relevant nutrition (N) variable, and if not, how does this affect the relationship between changes in income and nutrition?
- b) Is the income elasticity of nutrient intake a relevant criteria to assess the merits of education and other welfare programs aimed at improving nutrition?
- c) Is the level of nutrient intake a good proxy for the health and nutrition benefits derived from food consumption under circumstances other than the extreme case of famine?

As mentioned in the introduction, nutrition is one of the main determinants of health, and health is now regarded as a desirable end in itself, distinct from the general objective of improving economic welfare. How these two variables (N and H) respond when income gains occur among low-income households is then the central concern in this section.

Utilizing a simple framework we can identify the essential relationships and express them as income elasticity of nutrition (ϵ_{NY}) and of health status (ϵ_{HY}).

From the production function of nutrition (N) above we can reduce these expressions to a very simple relationship. Deriving the income elasticity of nutrition, one gets:

$$\epsilon_{NY} \equiv A + \epsilon_{NH} \epsilon_{HY}$$

where N = level of nutrition
 H = level of health
 Y = household's income
 ϵ = income elasticity

and where A consolidates the terms including the income elasticities of nutrient intake [(1) above], non-nutrient food attributes [(2) above], privately provided inputs [(3) above], and publicly provided inputs [(4) above].

Similarly with health status, given the production function of health described above, we derive the income elasticities, namely:

$$\epsilon_{HY} \equiv \epsilon_{HN} \epsilon_{NY} + B$$

where B consolidates the terms including the income elasticities of privately provided inputs (p above), publicly provided inputs (k above), and the other variable affecting health, such as medical services, information on hygiene and child care, and others (m above).

Solving for ϵ_{NY} and ϵ_{HY} we obtain:

$$\epsilon_{NY} = \frac{A + \epsilon_{NH}B}{1 - \epsilon_{NH} \epsilon_{HN}}$$

$$\epsilon_{HY} = \frac{B + \epsilon_{HN}A}{1 - \epsilon_{NH} \epsilon_{HN}}$$

We postulate that $\epsilon_{qY}, \epsilon_{pY}, \epsilon_{kY}, \epsilon_{mY} > 0$, that is, increases in household's income will tend to be accompanied by an increase in the demand for food "quality" — e.g., freshness, cleanliness, and taste of purchased foods (q) — in the care in preparing food, and in the use of household appliances such as refrigerators (p), and in more income spent on potable water, electricity, and sewerage systems (k). Also, richer households will use more medical and other health related services, and may provide health related child care (m). Thus, given that $A > 0$ and $B > 0$, which implies that $\epsilon_{NY} > 0$ and $\epsilon_{HY} > 0$, consequently, if nutrition is interpreted according to this framework, then the impact of income on nutrition (N) may be significant, even though nutrient intake remains unchanged or increases only slightly. Furthermore, if the ultimate concern is with improving the health status H (N being one input in the production of H), then again the impact of income on health status H may be quite important.

The fact that the nutrient income elasticity is close to zero ($\epsilon_{NY} = 0$) and the food expenditure elasticities are close to 1.0 ($\epsilon_{FY} = 1$) implies that the demand for non-nutrient attributes (variety, storability, cleanliness) is high at those low income levels ($\epsilon_{qY} > 1$).

This framework is consistent with the finding, for example by Shah (1983) in rural India, and more recently by Behrman and Deodaliar (1987), that even at such a low level of family income, as income increases, households demand a wider variety of food products with a larger quantity of non-nutritive attributes (freshness, taste, processing, etc.), while the actual increase in nutrient intake associated with increases in the household's income is not significantly different from zero. Thus, families have a choice of spending incre-

ments in food expenditures on nutrients (n), but choose to spend their additional income on other food attributes (q), rather than on nutrients. And this choice, depending on which element of q is chosen, might even lead to an increase in nutrition (N) or health (H).

Thus, the common practice of estimating the number of hungry and undernourished by comparing calories and other nutrient intakes with requirement standards implies that, in addition to ignoring the impact of inputs of non-nutrient attributes (q) and privately provided inputs (p) on nutrition (N), no weight is given to household's preferences. No matter how closely related, food adequacy (measured by nutrient intake) and nutrition level are not the same thing. The problem of food adequacy may or may not reveal itself as a nutrition problem; and a nutrition problem may or may not be the result of an inadequate supply of food.

The problem with interpreting the estimates of the millions of malnourished people based on the intake/requirements relationship are now well recognized. For instance, Sukhatme (1977) and later Srinivasan (1983) and Poleman (1983) concluded that the use of average nutrient requirement as a criterion for classifying a person as undernourished cannot be justified. However, even if the figures about the millions of undernourished were cut by a half or a third, the magnitude of the malnutrition problem in LDCs remains alarming. But the fact that nutrient intake does not increase with income is not in itself a cause of concern. Rather, the opposite may be true as it may indicate dietary adequacy in the sense that these households can increase their intake of nutrients but prefer to spend additional income on other items, including some with food attributes. The extreme case of famine is different. Under such condition, one expects that all income is spent on the cheapest food (starchy staples) and thus raising calorie intake then becomes the social priority.

4. Policy Implications

If, as is usually the case in estimates of malnutrition using general deficiencies in terms of intake/requirement ratios, nutritional status is measured by food intake, and given that nutrient consumption has been found to be rather unresponsive to changes in income, then a number of current interventions such as a transfer program will be ineffective means to improve nutrition. Similarly, as argued by Alderman (1989), a weak link between income and nutrition implies

that nutrition is to some degree buffered from the downswings in the local economy. Under such scenario, in order for income to have an impact on nutrition, policies must be designed to raise the income elasticity of nutrient intake (ϵ_{nY}), which could be done through education, particularly that of the mother.

Thus, it would seem that such a focus on food intake (n) to improve nutrition (N) is too restricted, failing to capture the complementarity between the privately and publicly provided inputs in the production of health and nutrition.

If, instead, the most important policy objective is to raise the level of nutrition (N) or health (H), the approach developed above suggests that, except in the case of famines, there is a variety of alternative policy instruments available and their relative merits may change according to location (rural or urban), initial conditions as to infrastructure, etc.

Education undoubtedly plays an important role in the process of raising nutrition. Not only can it raise the level of food intake; one might expect the nutrition-related and health-related child care to improve with the level of the mother's education. In his study for India, Padmanabha (1982) finds that infant mortality falls both in rural and urban areas as the literacy and formal educational level of the mother increases. The evidence may not be entirely conclusive as income may be positively correlated with the mother's education and was not controlled. Garcia and Pinstrip-Andersen in their study on the Philippines find that the mother's education strongly affects the food consumption and nutritional status of pre-schoolers.

If the concern is with the production of health, and taking infant mortality as one indicator of health (H), Padmanabha (1982) argues that in rural areas in India the main causes of death are tetanus, pneumonia, dysentery, and typhoid, which are mainly conditioned by the absence or availability of basic facilities of reliable water supply, sanitation (k), and basic child care services (nu), so that nutrient intake does not seem to be the major factor. This confirms the results obtained by Castaneda (1989) for Chile, where he finds that the most important variable explaining the remarkable reduction of infant mortality in Chile from 107 per 1,000 in 1965 to 19.4 per 1,000 in 1986 was the increase in urban coverage of potable water and sewerage. Differences in such coverage were found to be statistically more important than the positive impact of the available nutritional programs addressed to mothers (which in turn appeared to have more impact than child oriented programs). Thus, governments may have to in-

crease the level and quality of publicly provided inputs (k and m above) in order to have a lasting impact on nutrition and health.

Providing information and education on hygiene and child care may also be effective ways of raising nutrition N as well as health H (by raising the input of non-food attributes (q), privately provided inputs (p), and medical services (m)). Direct demonstration in the rural areas like in the Iringa Integrated Nutrition Program in Tanzania, or provision of information via television, which has been very successful in raising privately provided inputs (p) and (m) in Chile, are logical approaches to exploit the complementarities in the production of health and nutrition.

Also, policies designed to raise the nutrient content of some food ingredients, such as food fortification programs, lead to an increase in the level of nutrition N by raising n .

Conceptually, the framework presented above can help in the evaluation of public investment programs to raise health (H) and nutrition (n) for the poorer households. However, in order to devise effective policies to raise H and N , research efforts should be directed at the empirical estimation of the nature of the production functions of health (H) and nutrition (N), in order to capture the relationship between income and privately provided inputs (p and q). And even if such impacts were known, the choice of public policies depends also on the costs of providing the services, i.e., the cost of raising k and m . Such knowledge of the production responses and the costs of providing the services would help authorities identify and select cheaper and more efficient programs designed to raise the nutritional and health status of the poorer households.

One would expect that the parameters of these functions N and H differ according to age, sex, income class, and rural and urban characteristics. The estimation of these parameters is, in my opinion, part of the research agenda.

5. The Distinction between Urban and Rural Populations

The distinction between urban and rural households could raise a particular complex issue. For governments to provide medical services (m) and drinking water and sewers (k) in urban areas is probably considerably less expensive than to provide it for rural areas. In the latter, the cost per household scattered over large areas would be considerably higher. On the benefits side, they are probably lower in

rural areas, considering that the lower population densities in rural areas would reduce the need for publicly provided sewers, drinking water and other such services.

Thus, if the low levels of N and H are the social concern, raising those levels in urban areas by increasing expenditures on k and m may be an efficient public policy. However, this may very well not be the case for rural areas because of higher costs and lower benefits of providing k and m . What then is the prescription for rural areas? One important implication is that in rural areas their nutritional and health status will then largely depend on the levels of privately provided and allocated inputs (p and q), which are provided by the households. These levels depend on income, so that raising rural household's income can raise their nutritional and health status. For example, it may be easier to make a significant impact on incomes in a rural community through a variety of agricultural programs and policies than it is to appreciably increase the provision of sewerage or of health care delivery. We are back then to the long-debated question on how to best raise farm income. One way would be to reduce the taxation of agricultural production caused by sector-specific and economy-wide policies in LDCs³. Another would be to increase public expenditure in those factors which raise land and labor productivity. Anticipating that in real life these two components are complementary to each other, in principle both are necessary and the right balance between them is an empirical question to be addressed at a particular country situation.

6. Concluding Comments

While food is continuously referred to in this paper, little is said about agriculture. In the context of this Conference, concerned with poverty alleviation, this apparent omission is peculiar, considering that in developing countries most of the poorest households live in rural areas.

There is, however, a potentially strong link with agriculture, because, as the analysis suggests, in rural areas their nutritional and health status will largely depend on the levels of privately provided inputs (p and q), which are provided by the households. These levels depend on income, so that raising rural income can raise their nutritional and health status.

³ An analysis of the impact of those policies for 18 developing countries during 1960-84 is provided in Krueger, Schiff and Valdés, 1988.

The evidence suggests that the development strategies since World War II in most developing countries grossly undervalued the potential contribution of agriculture to economic development. The origins of the then pessimistic attitude towards agriculture and agricultural exports in particular can be found in the perception at the time that a more outward orientation would lead to a continuation of colonial patterns — a high dependence on a very narrow range of exports, confined to a slow rate of growth, in products subject to a great variability in supply, and with low elasticity of supply. Even in cases where export growth had been substantial, there was a general perception that agricultural exports had not acted as a propulsive sector for the rest of the economy, in the sense of not having a sustained and widespread stimulating effect through its links with the rest of the economy.

However, one of the lessons of the various trade strategies for the industrial sector since the 1960s is that their impact on overall economic growth performance has been more successful under export-oriented strategies. Although we do not yet have a systematic empirical analysis of agriculture at hand, as we have for the industrial sector, it will be submitted that agricultural export-led growth has real potential in a variety of settings. Such a strategy has enormous potential as part of an employment generation and thus anti-poverty program, in addition to the contribution to export revenues. This potential is reinforced by recent evidence showing that agricultural exports are heavily taxed in most LDCs — as a result of the combined effect of sectoral and economywide policies (from industrial protection and macroeconomic policies) — and by the evidence of the strong response of agricultural exports to incentives, including Sub-Saharan Africa.

Preliminary estimates for 18 LDCs show that in most of these 18 countries, the agricultural sector “lost” approximately one-fourth of agricultural GDP during 1960-84, as a result of the sectoral and economywide price interventions (Schiff and Valdés 1990a). The cumulative effect, year after year, of such a transfer of income out of agriculture must have had enormous repercussion in aggravating poverty in rural areas. According to the conceptual link between income, nutrition, and health developed earlier, this evidence on income transfers suggests that these domestic economic policies probably had very negative effects on nutrition and health of the poorest segments of the population. Policy reform in the developing countries and agricultural trade liberalization in rich industrial countries can have important repercussions in reducing rural poverty in developing countries.

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"SOLIDARITY FOR AGRICULTURE PROMOTION"

EMILE NOËL

1. Introduction

I wish to write about one area of experience, namely the European Community's experience in promoting the development of agriculture in Sub-Saharan Africa, and the thoughts and conclusions it led to.

Development assistance from the European Community (through the European Development Fund) started in 1958, 30 years ago. It principally related, as it still does (though not exclusively) to Africa - today to practically the whole of Sub-Saharan Africa. It has gone on for sufficiently long and had sufficient extent (over 15 thousand million Ecu committed to date) for us to be able to learn some lessons from it.

The first projects financed by the Commission of the European Communities (European Development Fund) aimed at consolidating infrastructures (roads, hospitals, schools, etc;), but in the 1960s not inconsiderable sums were allocated to export cultivation — so-called cash crops — that could provide hard currency, such as ground nuts, coffee, tea, oil-palms, cotton etc.

In the 1970s, problems of Africa's nutritional security became increasingly acute. This was reflected in a commitment by the Community to expand food cultivation (particularly of cereals). During the 1980s, the gravity of the position has brought a move beyond sectoral operations to the application of "nutritional strategies", combining aid projects and government policies into a coherent whole.

I shall look successively at the following two sets of operation: the expansion of cash crops and nutritional strategies. The finding will be that the modernization of agriculture in Africa can have only very limited scope unless fitted into a much broader, more complex set of measures.

2. Agriculture Modernization

As far as cash crops are concerned, measures financed by the European Fund have in general had a twofold objective: to improve the "dominant" cash crop agriculture, as being in some way the national speciality of the country concerned, and to seek to diversify commercial agriculture in order to contain the negative consequences of all monoculture at the production level, and, particularly, at the export marketing level because of the instability of world prices.

The modernization of this commercial agriculture was carried on by recourse to customary techniques: improvement of seeds or plants, improvements to farm inputs (fertilizers, pesticides, insecticides), mechanization, technical assistance, help with training etc. Significant, and even spectacular, results were obtained for instance with the success of the "palm tree schemes" in the Ivory Coast, and of tea growing in Rwanda, which has become the country's second cash crop.

It soon became apparent that agricultural modernization alone was not a satisfactory response to needs, and that it had to be fitted into more complex programmes — "integrated rural development" programmes, to use the terminology current in the 1970s.

On the spot, extension and modernization of cash crop agriculture takes on its full meaning in development terms only if it primarily benefits local populations. One cannot rule out formation of "industrial blocs" with the profit advantages they bring, but also with the risks of hoarding or diversion of profits that are hard to ignore. Nevertheless, human advancement is much better assured by recourse to small planters, village planters, who have to be interested, encouraged, given leadership and *trained*. This accordingly calls, at the prior stage, for training of those who will be able, on the spot, to advise the farmers (agricultural trainers) and for the availability of agricultural engineers and technicians (initially expatriated, thereafter increasingly indigenous). This also presupposes a continuity of effort, so that village farmers can gain the experience needed to keep the enterprise going autonomously.

On the spot, again, the success of agricultural modernization requires its underpinning by the creation of an adequate infrastructure (water supplies, vehicle tracks or roads, food processing or agro-industrial complexes to handle initial processing of products, marketing and storage structures). The commitment of the national and local

authorities and flexibility in approaches by aid providers are conditions for success.

Action on the spot must further be supported by a scientific research effort in order to bring it eventually to maximum efficiency. The Community's approach has been to support research programmes on specific lines centring around the main crops (cocoa, coffee, oil seeds, for instance) by giving them an increasingly regional dimension, with the setting up of structures for coordination among research teams and laboratories operating in the various countries.

Action on the ground might have seemed enough thirty years ago. Today, the globalization of the economy adds a further factor of uncertainty. The developing countries have entered the world market through their exports of basic agricultural products. They depend on it, but they do not control it, and their overall economic balance and at bottom the living conditions of their producers are tied to world price levels. Falls in demand, price collapses and other market fluctuations may be mere bliss for industrial countries. For African countries, with their particularly fragile economies, they are major dramas.

Action on the spot must, therefore, go hand in hand with diplomatic action. The European Community has long supported the conclusions of international product agreements and the setting up of a common stabilization fund. We have had to note the failure of these projects over the last fifteen years. Far from arriving at the conclusion of new agreements, we have had to face the evaporation or weakening of the few agreements existing. The tensions and then sit-backs that surrounded the extension of the cocoa agreement are the most recent illustration of the decline of this policy.

The European Community was accordingly led during the 1970s to propose to its partners in the Lomé Convention (forty-six at the time, since grown to sixty-six on renewal of the current convention) a system for stabilizing export revenue from their basic products. This system — STABEX — is aimed at exports to the Community and covers some thirty agricultural products (groundnuts, coffee and cocoa being the most important). Transfers under the system are in most cases granted in the form of subvention and, for a limited number of countries, in the form of interest-free loans for long-term repayment. In this way, in other thirteen years (1975-88), 2,25 billion Ecu have been transferred to fifty or so ACP countries.

Despite the effort put forth, the balance sheet of actions carried out for twenty-nine years now remains disappointing. The negative developments internationally — the debt crisis and the instability of ex-

change rates — have greatly compromised the benefits deriving from modernization and other operations on the spot. The fact that the contagion of “illicit” crops (cannabis, coca) is now affecting Africa illustrates how precarious the position is.

3. The E.C. Endeavours

The situation as regard food crops is still more worrying. In the 1950s, the majority of African countries were self-sufficient. Today, the food shortage in Sub-Saharan Africa can be estimated at 10 million tons of cereals (over 20% of average production), some 40% of which is met from food aid. Unless present trends are modified, the deficit will probably reach 50 million tons early in the next millennium.

This decline in the nutritional situation of Africa was already apparent from the beginning of the 1970s. That was when the Community began devoting more funds to the development of food crops. From 1975 onwards they received more support than commercial crops and starting from the 1980s meeting food needs became the primary objective. Food crops henceforth received two-thirds of funds intended for agricultural development, themselves representing between 70 and 80% of appropriations to the European Funds. The effects of this effort will be apparent only in the long term. Much more than for commercial crops, the development of food agriculture depends on multiple factors that must be acted on simultaneously — hence the term “nutritional strategy” that is used today.

The two fold underlying fact is that, on the one hand, barring natural catastrophes most rural areas in Africa are self-sufficient, and on the other that food agriculture is part of the traditional organization of peasant societies, making it hard to introduce modern, intensive methods.

The consequence is that, by contrast with what has been the case for commercial crops, recourse to classical methods of modernization (improved seeds, fertilizers, better methods of cultivation) has brought only very slight improvement in yield — an average of some 0.5 to 1% per year — still limited, moreover, to certain products like maize and to areas with a more stable rainfall pattern. Climatic variation, particularly marked in the early 1980s, and the resulting unpredictability of the next harvest discouraged producers from being interested in changes in working methods or in technical improvements. While agricultural research may provide some help by introducing

drought-resistant crop varieties and by improving production methods to optimize utilization of available water resources, these measures can however bring effects only in the long term.

Better stability of production can be secured in some areas by agricultural and water-control improvements allowing replacement of rain-based agriculture by irrigation (particularly for rice). The results have been technically unequal given the extent and complexity of the work to be done and the support and maintenance problems they raised. From the economic viewpoint, profitability has in most cases not been ensured, with the cost of locally produced rice remaining well above that of imported rice.

Small-scale water engineering (wells, solar pumps) can allow specific interventions taking into account the diversity of situations in Africa. This may improve nutritional security at village level in the face of climatic risks, but is not an adequate response to the total food problem.

The fact is that the economic environment is an essential factor in the advancement of food agriculture. It must be stable and encouraging. But the massive urbanization of Africa has led most governments to intervene in the market by setting cereal prices (in particular) in authoritarian fashion at too low levels, unremunerative to the villagers, and by setting up semi-governmental marketing structures that are often too cumbersome and inefficient. This means that feeding the towns comes to depend increasingly on cereal imports, at artificially low prices because of world over-production. The desperate situation arrived at is that hard currency revenue derived from cash crops is used to finance imports of food products. Facing the competition of international surpluses and often inappropriate food aid in this way, rural areas find themselves walled off into their self-sufficiency alone, while town populations almost irreversibly change their food habits by replacing local products by imported cereals.

All this has led the European Community over the last few years to start a "policy dialogue" on nutritional security with a large number of African countries, to seek to arrive at reciprocal commitments. Governments undertake to reform their policies, particularly as regards prices and marketing: raising prices paid to producers as an incentive to production; denationalization and decentralization of storage and marketing to allow more room for private trade, which is more flexible. The Community undertakes to supply the necessary technical and financial support for rural development action. In this overall action, food aid has a place as an instrument for regulating the

market from one year to the next. Through the use of counterpart funds, it also allows the social impact of price increases in urban areas to be spread out and attenuated.

The strategy of nutritional security has an international aspect too. Encouragement of national production, paid at the proper rate, may make some *protection* against the outside essential. Adjustment to exchange rates (generally over-valued) would often be the best solution — but it may be politically difficult, entailing recourse to the classical means (quotas, import licences, customs, tariffs), themselves heavily criticized by international agencies (IMF, World Bank) and some aid donors in the adjustment measures they advocate to get rid of those countries' debts.

The Community has accordingly (with some success) embarked on an international campaign to get its major partners and the world agencies to take a more flexible position. It has at the same time stressed that it could accept protection measures, and supported the modernization on the spot of markets and of agriculture, which would in time lead to higher productivity once farmers were assured of outlets and of a proper reward.

4. Conclusions

I have sought in this deliberately brief summary to show both the importance of the development and modernization of agriculture in Sub-Saharan Africa and the extreme complexity of the means to be used to secure it, in particular the need to act at the local level, at the level of national policies by the countries receiving aid (in respect for their independence) and at the international level. These findings, arrived at on the basis of measures of aid to African countries, among the poorest on the planet, are probably valid for some of the other developing countries too. It is perhaps in the promotion of agricultural production, the basis of everyday life, that the active, determined solidarity so rightly advocated by the Encyclical "*Sollicitudo Rei Socialis*" can at every level, particularly at the international level, find its full application.

"UNESCO'S PROPOSAL: EDUCATION AND TRAINING WITHIN THE FRAMEWORK OF INTERNATIONAL COOPERATION"

FEDERICO MAYOR

1. Introduction

The importance of science and technology for development is not questioned. However, less well known is their impact on society as a whole, being as much a product of society as a factor in shaping its future. A country that fails to master the use of science and technology and fails to train the necessary technicians and scientists will not be able to attain the goals it has established for its economic, social and cultural development. It is not enough to disseminate imported science and technology; it is imperative to develop national skills that make it possible to satisfy specific needs of societies at their present stage of development and to lead to further development. Economic development is necessary but not sufficient; science teaching must give a deeper understanding of the natural and human environment in which today's children live, and which will be the normal setting for their activities as tomorrow's adults.

Unesco is the United Nations Educational, Scientific and Cultural Organization. With science and education in its name, Unesco is naturally led to elaborate a strong programme in science education and training. The Organization has assisted nations to improve at all levels their science education programmes to develop the necessary expertise and to help individuals to adapt to, and influence, their rapidly changing economic and social conditions.

This programme addresses itself to all levels and methodologies in science education. There are programmes for primary schools, for secondary schools and for the university level up to the post-doctoral level. Use of modern technologies is encouraged, including learning packages, and other cost effective methods.

In promoting international cooperation, UNESCO seeks the support of, and works with the scientific community both through government and its institutions and through non-governmental organisations, particularly the International Council of Scientific Unions (ISCU).

Being an intergovernmental organisation, most of whose member states are poor third world countries, UNESCO constantly seeks to promote the quality of science and the well being of scientists working in developing countries. It seeks to harness the energies of the rich countries both in terms of resources and manpower to help scientists in developing countries help themselves.

2. The Lack of Resources

Education and training in science does reflect the social and cultural needs of the country of origin. However, many countries have little or no science culture and thus must base their scientific development on science developed in other countries. This does provide the fruits of science but also lends to science education an unreal quality in that the obligation of teaching institutions is to produce scientists who will work in their own environment. Additionally, education and training is expensive and many countries do not have the available resources to provide proper programmes.

This lack of resources is another barrier which UNESCO seeks to overcome. The most basis, the provision of text books and written material has been a preoccupation of UNESCO since its foundation.

At primary and secondary levels as well as technical training, this written material must appear in the local language. At university level it means the provision of impossibly expensive library facilities.

In deploring the paucity of library facilities recently one eminent scientist from the Third World was stung to comment "that at least one central science library should be considered as part of the birth-right of scientific communities in developing countries".

Again, lack of resources, does in many cases preclude laboratory teaching and training. An Indian Professor noting "that the cost of locally manufactured equipment had risen 15 fold over the past twenty years, lamented that university science teaching in post-secondary colleges was fast becoming a chalk and blackboard exercise".

Moving further, what is to happen to post-graduate training in third world institutions? Overseas training is prohibitive and local institutions have a woeful lack of every needed resource.

Within all these arguments is the realisation that no country can hope to develop in the long-term, without a basic capacity for fundamental scientific research, training and education science and technology will only grow when an indigenous scientific culture develops.

This, then, for the main part, is the world in which UNESCO must endeavour to promote education and training in science by encouraging, interdependence, cooperation and development.

3. The Problem of Science Teaching Equipment

Science is international. It traverses boundaries and cultures. More and more scientists in well endowed institutions are becoming more and more concerned, and, let it be said, more and more helpful to their colleagues in poor institutions.

Many science teachers are now working in UNESCO Programmes, helping their colleagues seek solutions to problems caused by poverty.

Examples abound. The Indian Professor cited earlier did not just complain. He set to work to preach the philosophy of *low cost locally produced equipment*.

He based his programme on what was available locally. The equipment was designed by university science teachers and built by staff and students. This programme also provided an opportunity to design modern experiments.

One may remember other efforts along these lines, which resulted in poor quality equipment. This is not the case here. The equipment produced (pH meters; small lasers; visible spectrometers and conductance bridges to name a few) have all been tested and compared with those commercially available. "It may be local and cheap but it is as good or better than the commercial item".

Let me just enumerate the advantages of this type of programme. It starts from grass-root enthusiasm. It removes the need for technical back-up which in any case does not normally exist. It encourages curriculum development and the inclusion of modern science into the earlier years of teaching. It overcomes the problems

caused by lack of foreign currency. It gives confidence to the teachers in handling the equipment. It shows that teachers can help themselves.

So you may say — the problem of science teaching equipment can be solved. Yes, and also no. Yes, although it will require much more effort before it is freely available to all. No, because this must become part of a complete programme — a programme that calls for interdependence and cooperation to solve the problems of training young people for science based vocations in developing countries.

4. The Project

This can be done. Interdependence is not only desirable but is a concept that scientists readily understand. Cooperation for development is everyday being better understood. What can and will UNESCO do? The following example project will illustrate the type of action envisaged.

Within the framework of its University Science Teaching Programme, UNESCO is launching a new international project to assist developing countries to improve the quality and effectiveness of introductory university courses in physics, chemistry and biology. The project will primarily be concerned with those courses that provide the foundation for further studies in other fields of science and in engineering. It is motivated by the widely shared view that existing courses in most countries do not adequately cover key topics of modern, contemporary science and that insufficient emphasis is given to experiments and student laboratory work.

The project will initially concentrate on physics and chemistry. It will build on the accumulated expertise of already existing UNESCO activities in university physics and chemistry teaching such as:

- Local production of laboratory equipment
- Curriculum development programmes of the Unesco networks
- Applications of microcomputers
- Education technology
- Advisory services to faculties of science of universities in developing countries
- Cooperation with international and regional non-governmental organizations.

The project will provide a new focus for international cooper-

ation on university science teaching where university scientists from industrialized and developing countries can share experiences, expertise and ideas, and collaborate in the development of teaching materials.

At the start will be the elaboration of source materials for the courses including reading material, experiments for lecture demonstrations and the laboratory, audio-visual teaching aids, microcomputer applications, tutorial sessions, and reference materials. This will be followed by the establishment of pilot projects for the courses at interested universities in developing countries. Special efforts will be made to secure extra-budgetary funding for these projects in order to make the courses fully operational. Once developed, tested and implemented at various universities, the courses will serve as useful models for other universities.

The active collaboration of university scientists in developing countries will be essential for the success of the programme. This will be true in particular for the teaching staff of those universities that will host pilot projects. Assistance will be given to this staff to enable them to attend workshops related to the course development, to participate in international and regional conferences on university science education, to undertake study visits to universities that cooperate in the development of the foundation courses and to invite foreign experts as resource persons and trainers.

5. Concluding Remarks

In developing UNESCO's science teaching programme, we will seek the advice of the international science community. It is our aim to stimulate the exchange of ideas and information, to support pilot project, to promote creativity and innovation, thus preferring the richness of diversity to the monotype of standardised solution packages. There is no single answer applicable worldwide. But those who may wish to seek our cooperation will be helped to work towards the solution of their problems: to choose or to adapt from the work of others, and to create, to try out, to test, to revise and to implement their own innovations that fit best to their own local needs. I cordially invite the scientists to cooperate with UNESCO in this task.

“SOLIDARITY FOR ENVIRONMENTAL PROTECTION AND WATER RESOURCES”

G.B. MARINI-BETTÒLO

1. Introduction

The interdependence of economy, environment and development has been recently fully analysed and discussed in the WCDE report, the so-called Brundtland Report. This document may constitute a basis for further study of this important problem and will be a starting point for our present analysis.

The main results I would now like to stress of the WCDE document are:

- a) environmental protection and economic growth are compatible. In effect it was shown that in the long term a plan for development which disregards the environmental factor, although apparently more rewarding in immediate economic terms, will later be the cause of great damages and will require great investments, whereas a management respectful of the environment will be rewarding in both ecological and economic terms;
- b) the present model of unlimited economic growth, especially with respect to the use of natural resources, cannot be continued in the future because it leads to a depletion of our natural resources. Therefore the WCDE report suggests a new model, a development called “sustainable development” which takes into account the needs of future generations.

Although it is not yet very clear how this new system can work without hindering development, nevertheless the Commission — where all countries, and mainly the developing ones, were represented — indicates the danger that human kind is facing.

If we consider the environment from the scientific point of view, we note that it consists of all the resources of humankind.

Man uses the resources for his life needs, concentrating them in limited areas, i.e., towns or factories, etc., and submitting them to his biological and mechanical metabolism (this produces a certain amount of gaseous, liquid and solid wastes), and to their dispersion in the environment. The natural biogeochemical natural processes, which make it possible to recycle these wastes, have limited capacities and are not in condition, in case of excess matter when the limits of their "carring capacity" are exceeded, to reintegrate them into the environment. In this case pollution follows, which may disrupt the natural ecological systems.

Moreover, the ingenuity of man has invested a number of new materials, such as plastics, also called xenobiotic, that do not undergo the natural breakdown and transformation processes and thus constitute a great source of permanent pollution.

Industrialized countries, as importers and transformers of raw materials, are the most polluting areas of the world, whereas the developing countries, in order to cope with the demand of the North, are depleting their natural resources at a rhythm which cannot be sustained in future years.

We may at the moment suggest as an image of the present state of the environment that this represents the surroundings of man, from which man takes all his resources and into which he also disposes his wastes.

2. Cooperating to Fight Pollution

Now I would like to write few lines about the characteristics of natural resources. The natural resources are common goods, like water, atmosphere, soil. Soil represents also arable land and the source of minerals and fossil materials (oil, coal, gas).

Through the utilization of solar energy agriculture produces vegetation, and thus food, fibers and wood.

The natural resources are generally classified as "renewable", i.e., resources of agriculture, forests and vegetation, water and hydropower, wind, tides, etc., and "non-renewable", which are the minerals and fossils, from which at the present time we obtain the major quantity of our energy needs.

I believe that we should also consider another type of resource: the "endangered renewable resources". In effect over-exploitation and bad management have caused the erosion of millions of hectares of arable lands, whereas bad management of forests and lands endangers not only the integrity of the forest but even the availability of soft and drinkable water.

The developing countries, driven by the need of foreign currency for payment of their debts, are at the present moment over-exploiting their resources. As an example we may consider the wood logging in Southeast Asia, the production of cash crops, e.g., cotton, instead of cereals in the Sahel, the uncontrolled destruction of the tropical forest in the search for new arable land.

The two horns of the environment are therefore the resources and the wastes, i.e., pollution.

The present world ecological crisis is due to the present rhythms of humankind, which overcome the natural ones, in the use and misuse of natural resources.

In the present stage of development we have two main "scenarios". The industrialized countries, concentrating on consuming and transforming the raw materials (also as energy sources) through the mechanisms of industrialization, are heavily polluting their territories, even the global environment (carbon dioxide, acid emissions, CFC, trace substances).

The "scenario" for developing countries indicates that except in large cities pollution is limited, but on the other hand, because of the climatic conditions and especially because of poverty, the environment is depleted, in some cases pillaged at a high rate. Thus natural resources are endangered by the need for arable lands, for energy, minerals and crops, or for the exports needed to pay the foreign debt. Moreover, uncontrolled industrialization may lead also to the worst form of pollution.

Development in these conditions is endangered and all measures must be taken to avoid the rapid depletion of natural resources, renewable or not, and to avoid activities which may lead to pollution. A great effort should be made by the industrialized countries in setting up development projects in a framework of cooperation which should be respectful of the environment, with regard not only to avoiding pollution (I should like to recall the unbelievable policy in recent years to establish in developing countries undesirable industries like refineries and even to export to these countries toxic wastes from North

America and Europe), but also to evaluating the impact on the environment of projects such as the construction of a dam, irrigation systems in certain areas, etc.

On the other hand, some help must be given to the poorest populations, which are in search of arable land and fuel wood, through an effort of solidarity, offering alternative solutions, such as reforestation or even planting of trees of rapid growth, or the utilization of marginal lands (e.g., the cerrado in Brazil) which requires great investments, even for limited results. Because of the anti-economical character, which only in a long time will be fruitful, economic criteria should not be considered, but in this case only the obligation of solidarity, in accordance with the concept expressed by John Paul II in "*Sollicitudo Rei Socialis*", that we must share among all countries the resources, which represent a common good.

3. Solidarity for the Environment Protection

Where the interaction of man on nature is more relevant, the ecosystems to be protected in development are the industrialized areas, the agricultural lands, the urban areas.

In order to prevent environmental damages, the transfer of technologies to developing countries should always take into account the environmental impact. Therefore new advanced technologies, possibly using new production cycles, should be introduced instead of exporting old polluting plants.

This represents an extra cost, but it will avoid what happened in the rapid industrialization forty years ago in Eastern Europe, when the environment was not considered, and that is now one of the most polluted areas of the world. This should not happen in the South, where environment is in great part uncontaminated. Agricultural productivity, which is needed to cope with population growth at present, is based on the growing input of energy: mechanization, fertilizers and pesticides.

Pesticides are even more necessary in the tropics than in temperate countries, owing to the greater number of pests and their aggressiveness, but they are also highly polluting, as are fertilizers too.

In order to give Southern populations food security with respect for the environment, it is necessary to develop new strategies based on biotechnologies, that is, the selection, or even production, of plant varieties resistant to insects and diseases, and the adoption of new

systems of natural fertilization, from the use of *Azolla* to that of particular symbiotic microorganisms which may utilize for fertilization atmospheric nitrogen, that is, *Rhizobium* for Leguminosae, and now *Azospirillum* for cereals. Under this aspect also the correct use of Micorhorrhizae for the betterment of cultivars should be studied and adopted in the different regions.

The formation of urban areas, or, better, of megalopolises because of the conditions of poverty of the rural population in developing countries, uncontrolled, may lead in future years to pollution, which endangers not only the environment but also human health.

The huge megalopolises of the South are generally composed of a modern center, with all the tools of a modern advanced world, surrounded by shanty towns or bidonvilles, where millions of persons live in miserable conditions, with scarce food and little energy, and in a state of great poverty. It is very common to see in the towns of Africa the people hunting for pieces of wood, branches of trees or other combustibles, and buying water from occasional ambulants.

In these conditions, when population reaches the level of millions, the environment is completely polluted and infectious, and parasitic diseases are thus widespread. Civil authorities, because of their limited budget, are generally not in condition to sustain a rational urbanization. In my opinion, to cope with the need for a continuous urbanization a great effort should be made. We must also remember that in the next thirty years half of the population of the Third World will be concentrated in these metropolises, where the quality of life will be extremely low, due to disease, hunger and environmental pollution.

Independently of the efforts to keep people in rural areas by increasing their standard of living with the integration of agriculture and small industrial enterprises, the urban areas should need a great financial effort in order to protect the health of their citizens through the environment, i.e., through the distribution of water, of energy, sewers and waste disposal facilities. A great effort to be made considering only its human value of solidarity.

4. Energy and Environment

Among the objectives to achieve for development, energy is the most important one. The Pontifical Academy of Sciences has given in the past years a substantial contribution to the knowledge of this problem in two Study Weeks, in 1968 and 1984, which were oriented

in particular to the problem of Energy in Developing Countries. I think that it may be interesting to quote here the important points of the conclusions of the Study Week on Energy and Survival:

"In the condition of underdevelopment everything is scarce: food, shelter, clothing, medical services, education. So is energy — an indispensable and pervasive ingredient of almost all other essentials for living and a precondition for widening people's options — one way of describing progress. Because of its sudden, steep increase in price over the past decade, energy has justly attracted special attention. Nonetheless, one must keep in mind that lack of energy is only one, albeit important, aspect of underdevelopment and poverty. It is a consequence — not a cause — of poverty, though its scarcity in turn contributes to difficulties and impedes development. Moreover, most developing countries are experiencing high population growth rates, a factor which adds to energy demand while keeping the per capita gap between rich and poor countries from narrowing.

Energy problems are many-sided, involving scientific, technical, managerial, as well as political, economic, social, cultural and ethical factors. To look exclusively at the economic aspects, generally the most pressing, leads to a faulty perception of reality and in turn to mistaken policies.

There is great diversity among developing countries, and among different income groups and different regions within each country. Generalisations have their usefulness as first approximations, but remedies must be tailored to fit specifics. That is to say, there is no generally valid solution, or set of measures, in the energy field. Plans and projects can be successful only if they are addressed to the solution of specific problems.

There is a widespread lack of solid, detailed, tested information on energy use, let alone needs, within developing countries. This is particularly true in relation to non-commercial fuels, such as the fuelwood which is estimated to fill more than half the energy demand in many developing countries. Thus, one must regard with reservation any claims to precision put forward for comprehensive information, or all-embracing assertions made in the absence of reliable data.

As a result of inadequate knowledge, it is difficult, as a rule, to assess energy needs for development, or to evaluate the most suitable forms in which energy may be supplied. Effective energy planning thus becomes a complex and difficult endeavour. This is not to say, however, that efforts aimed at the setting up of energy planning systems in developing countries should be neglected.

In many developing countries, urbanisation is accelerating rapidly. This raises the demand for commercial fuels, many of which are usually imported. The cost of these imports, especially of oil, constitutes a serious economic burden to many developing countries. For the majority it slows economic growth, particularly when it is coupled with a debt service burden, that at the prevailing high interest rates requires continuing large foreign exchange outlays or, if obtainable, additional borrowing. The latter of course only tightens the vicious circle: higher debts — larger borrowings — slower or no growth.

The urgency of short-term needs and problems (heavy debt burden, oil import costs, economic recession, unemployment, and others) cause long-term energy choices to be neglected. Prominent among these are prevention of deforestation, the search for alternatives to oil, the production and utilisation of natural gas, the use of renewable energy sources, the indigenous exploitation and/or conversion of coal, the modification of the country's transport system, a transition toward greater stress on energy-saving, etc."

A better distribution of energy sources is necessary in order to reach a higher living standard in the South, even if that requires also an improvement in the capacity to pay for the energy in the rather poor survival economy of the rural areas of South America, Africa and Asia.

I believe that this is a challenge we should face in the spirit of solidarity in order to break the cycle of poverty-underdevelopment. Even in this case continuous education for the better use of energy sources should be contemporarily developed.

5. The Case of Fuel-Wood

At present the fuel-wood needs, as the primary source of domestic energy in developing countries, constitute a great danger for the environment, and thus for the ecological equilibria. In the Sahel there are figures which indicate that the consumption of fuel-wood is 50 kg.s per week per family. In Kenya some nomadic populations destroy for the same purpose from 70 to 100 trees per year per family.

If this destruction rate may be acceptable for certain regions, it can lead to desertification in marginal lands, where vegetation represents an important defense against desertification.

Regarding fuel wood, it was reported that 70% of the people in

developing countries burn an average of 700 kg.s of wood per person annually with a minimum of 350 kg.s in certain countries, up to a maximum of 2900 kg.s.

For this purpose a reforestation program has been developed in many countries, and trees of rapid growth, like acacia, have been planted; but even then the wood is collected faster than it can regrow. This is an example of the difficulties in keeping pace between the natural cycles and the human rhythms.

Biomasses, i.e., dung, crop residues, charcoal, are also used but the need of fuel-wood is not diminished because wood is considered a "free good".

Charcoal production, on the other hand, although it is better as fuel than other biomasses, constitutes a permanent threat of massive forest destruction, also because of the inadequate techniques used for this purpose.

It was also indicated that "in the year 2000 about 2.4 billion people may be living in areas where wood is extremely scarce". This corresponds to the high rate of urbanization in developing countries, which may represent a transfer of half of the population of rural areas to towns or better to the suburbs of towns.

This analysis does not account for the preoccupation with the rise of carbon dioxide content in the atmosphere.

Developing countries have huge reserves of hydropower, mainly in Africa and South America, but its use can be made only through an efficient distribution system of electric power and an adequate market. That is the ability of a single family to buy the electric energy. I have some personal evidence that poverty, largely diffused in rural populations, makes it difficult to reach this goal.

In this case, in order to break the poverty-development cycle, every effort should be made in a solidarity spirit towards a better standard of life, through better income, for the families. This requires skill in establishing integrated systems at the village level of agriculture and transforming activities for the available raw materials. This may imply also the introduction of a new type of cultivars and a better management of the lands.

Development implies for the Third World a growing input of energy, and especially a more efficient use of the present energy consumed. As an example, at present some iron industries use charcoal produced from wood with a tremendous waste of energy and heavy environmental consequences. The cooking in primitive conditions

may require even eight times the energy of a gas stove; the same happens with primitive kerosene lamps in regard to electric light.

In agriculture, to double the present food production through mechanization, fertilizers and irrigation, a substantial increase of energy is necessary to cope with the population growth.

6. Water and Development

As we know, water represents both the indispensable substratum for all living matter and the fluid necessary to the cycle of energy on the earth for the utilization of solar radiation. The presence of water distinguishes Earth from the other planets.

As an indispensable factor for life, water has become a limiting factor for the development of human beings, animals and plants, being a fundamental factor of all eco-systems.

Independently from the water of the oceans and seas, water is needed by humans for drinking, for hygienic purposes and for their activities such as industries, by animals for drinking or for living, and by plants for their vital cycles. In fact, any cell needs water in which the living organic matter is dispersed in colloidal form.

This point has been recently cleared, indicating that "human life is constrained by the limits posed by the global water cycle, and the natural laws governing that circulation system".

For the purpose of the present meeting, that is, the supply and availability of water for development, we should focus our attention on the problem of drinking water and water for hygienic purpose, as well as water for agriculture and industry.

At the present stage of our knowledge, water constitutes a fundamental resource and a limiting factor of development in all countries, and although considered a renewable resource the availability of drinking water becomes continuously more scarce, even in response to growing demand.

In approaching the problem of water resources and energy we must consider the interconnections with the environment. In fact, deforestation as well as reforestation may affect both water balance and the environment.

For drinking water, quality is essential because water represents also the vehicle of 80% of communicable diseases and constitutes a fundamental need for the quality of life. The same is true of the water for hygienic purposes.

In rural areas and even in many urban settlements of the Third World drinking water is obtained from rivers or lakes without purification; and generally it is polluted and thus causes a number of diseases.

Growing population makes it necessary to plan for a substantial increase of the quantity of drinking water, whereas the mismanagement of water resources, like the pollution of ground water, deforestation, etc., makes it always more difficult to cope with the minimum needs of populations at regional and even at global levels. In fact, although the water cycle moved by solar energy in the earth is always the same as an average, the transformation of the land influences the possibility of the soil to retain the water and thus to refill the water layer (aquifers) and the sources continuously diminish. The excess water from rains no longer retained by forest or adequate agriculture lands, gives rise to floods, which may cause casualties and damages.

The international surveys about water resources in the world indicate that water consumption is rising in geometric progression, doubling over a period of twenty years.

The 1975 estimate by UNESCO reported for 1975 a consumption of about 3000 km³ per year in the world. Today we are rapidly approaching the doubling of this figure.

The concentration of millions of persons in cities increases the consumption of water, which becomes essential for fundamental needs like drinking and cooking. In many overcrowded towns water is sold in absolutely negative hygiene conditions.

To cope with population growth in the next ten years, it is necessary to double the availability of water supplies in developing countries. However, the insufficient care for water management and the perturbation of the eco-systems endanger the future of the water supply. In a recent report of India's Planning Commission we read that "We in India are on the verge of an enormous ecological disaster, with our water reserves drying up. What is happening in Africa is going to happen in India within few decades".

Agriculture mainly in the tropics needs water for irrigation, the crop yield being directly related to the quantity of water available, which is especially necessary in arid and semi-arid lands.

In fact the water resources are unevenly distributed in the various regions of the world and subject to the seasonly unpredictable variations of hydrological cycles.

Industrialized countries consume much water for industry and

agriculture, the domestic and municipal consumption representing only about 5% of the total, whereas 70% is represented by agriculture and the remaining 25% by industry. An impressive figure shows the amount of water consumption for the production of synthetic fibers, which is 5 tons of water per kg of fiber produced.

If we consider the social aspects measured by the quantity of water per capita consumed in industrialized countries compared with that of developing countries for domestic use only, the rate is 1000 to 1. That is: whereas in a Northern cities like New York City each person can have 1000 liters per day of clean drinking water, in the Third World megalopolis water has to be bought in the streets or drawn from polluted rivers, with all the consequences for health that this may imply.

I think that this constitutes a fundamental point which hinders development, and its social aspect must be duly considered. If the world cannot overcome the shortage of drinking water and make sure of the quality, any development plan will fail. Thus water availability should be considered as one of the first priorities for development.

To solve this problem, a substantial coordinated effort should be made to share, in a spirit of solidarity, the world resources, and even to organize a water management system in order to protect present reserves of soft water in the world.

A substantial effort has been made, in Africa mainly, to make available water resources for agriculture and domestic use.

In marginal lands a number of wells have been dug and may yield substantial quantities of water, but this does not solve the problem because it very often endangers non-renewable reserves of ground water. Purification of river or lake water is feasible at a special cost and can only be considered for domestic or municipal use in cities or towns.

Large amounts of water for irrigation in agriculture can be obtained through adequate systems from rivers.

The use of desalinization processes for sea water has been considered, but large plants needed for this purpose being highly energy-consuming, have been built mainly in countries with abundant oil, like those in the Arabian peninsula.

Science must improve the correct use and management of water in irrigation systems in the tropics and avoid pollution with adequate treats. In fact, irrigation combines the dangers of water-borne diseases like schistosomiasis and malaria. Moreover, bad management in

agriculture can lead to salinization and alkalization of soils — as has happened in Sudan and even before in Iraq — and to the loss of agricultural soils.

We must bear in mind that every country and every region has different conditions and that any modification should be carefully evaluated, even through the use of mathematical models, to avoid negative effects on the environment and on the economy.

Any plan for the purchase of potable water must always consider a simultaneous plan for refuse and sewage disposal if a positive result is to be attained.

The water of rivers both in the North and in the South have been and are heavily contaminated by the indiscriminate disposal of domestic and industrial refuse, and also by the teaching of agriculture. The present water crisis in the world is directly connected with the environmental crisis, which has become more dangerous because of the newly introduced technologies and products like detergents, fertilizers and pesticides. These endanger also the self-purification processes of rivers and lakes.

To make possible the protection of water and thus its availability and distribution to the people in the cities and in rural areas sound water management is necessary, and this should include all the basins of the rivers.

This implies an international collaboration between states in the management of water resources, a common good, and even of an authority to make possible any protective action. Also in the case where many countries have to share common resources it is most important that this work be done not only on a technical basis but also with a spirit of solidarity.

In a river basin generally the upstream countries are favored by their position with respect to those downstream. They have to share in this case common resources. No country can profit by its geographic location to consume more water than the countries downstream but must share equitably this important resource in a spirit of equality.

The planning of a water basin implies a financial effort, technical capacities, and a common good will; all of which can be achieved only through collaboration of Southern and Northern experts. Such an effort can become productive only through the spirit of collaboration and the mutual renunciation that this implies. The experience acquired so far in the intentional basins of the Niger, Senegal, La Plata

and Mekong rivers, is only an example and the beginning of this common effort in developing countries.

7. Concluding Remarks

The experience and collaboration of international institutions of the United Nations — FAO for the agricultural aspects, WHO for the importance to health of drinkable water to prevent diseases, WMO for the climatic and meteorological aspects of weather forecasting (monsoons, regional precipitations, etc.) UNESCO for the training of personnel and the promotion of research in individual regions of the world and for the promotion of the International Hydrological Program is fundamental.

In order to supply a continuously increasing humanity sufficient water for various purposes, it is only necessary to stop the progressive degradation of the bodies of water which constitute a reserve for future generations. Lakes are the most endangered by pollution because of the slow rate of renewal of their water.

We must not forget that water represents also an important route of communication and trade in many countries, but also a renewable source of energy for the production of electric power or hydropower. The last application has promoted the construction of many dams, which have created artificial lakes which can constitute an important reservoir of water.

Those in tropical regions, however, are subject to evaporation and thus to an increase of their salinity; the lakes can modify the climate and have unexpected effects on the environment. The great dam of Assuan and the huge lake Nasser formed in the desert of Nubia have in effect negatively influenced agriculture in the lower Nile valley and even the fisheries in the Mediterranean at the Nile Delta.

I think that these data are sufficient to indicate the importance of the water problem, its great complexity, and the urgent need to act, in order to protect the earth's water resources, for the survival and a better quality of life for humankind.

“UNEMPLOYMENT AND THE ‘PRINCIPLE OF SOLIDARITY’”

LUIGI L. PASINETTI

1. Foreword

In this paper I am focussing on the problems of unemployment in industrial societies and I am interpreting them by using a theoretical scheme (a “pure production model”), which is alternative to the one at the basis of dominant economic theory.

I am taking this opportunity for reflections, among other things, on how and where to draw a distinction — and thus a separation between that field of analysis in which economic theory is autonomous, and in which therefore it can claim a right to no interference from outside, and the realm in which economic investigations are on the other hand not only open to contributions from the outside (for example in the form of the Church's pronouncements on social matters), but are actually in need of such outside contributions to the solution of social problems.

It is shown that this distinction emerges very clearly within the theoretical scheme that is here referred to (the “pure production model”), while it creates difficulties in the more traditional scheme (essentially a “pure exchange model”) of dominant economic theory.

2. Modern Societies as the Outcome of the “Industrial Revolution”

I think it is useful to look at the modern industrialized economic systems as essentially the outcome of that well known historical event that has been called the “industrial revolution”.

From what we have been able to observe, industrialized societies are characterized by a new social organization that has brought about

an enormous increase in the material production of goods and services, and has been associated with three prominent phenomena: growth of population, capital accumulation and technical progress.

Of these three phenomena, the first to attract the economists' attention was the growth of population, which however led them to draw pessimistic conclusions (malthusianism). Classical and Marxian economists then became mainly concerned with the phenomenon of capital accumulation. Only recently have economists begun to pay serious attention to technical progress. Up to the post-war period, technical progress had been, though with some notable but isolated exceptions, surprisingly neglected. It was surely perceived by the Classical and Marxian economists, but it was by them greatly underestimated. Later on, marginalist economists practically neglected it altogether. Yet, owing to its cumulative effects, technical progress is emerging more and more as a real crucial "prime mover" of industrial societies.

3. Involuntary Unemployment

The industrial economic systems have acquired many new characteristics, some positive, others negative. One of the negative features is the periodic emergence of mass unemployment. Industrialization has always been accompanied by some unemployment, though its magnitude has varied substantially from decade to decade. There have been decades in which, as in the 1950s and 1960s, it was kept down to roughly 3% of the working population in the average of the industrially advanced countries; and there have been decades in which it has been unacceptably high, as at the time of "the great depression" in the 1930s.

What is preoccupying is not, of course, that unemployment which is voluntarily accepted by the people concerned, for example because they do not find the current wage rate sufficiently attractive to be worth their labour (what may be called *voluntary* unemployment), or that occurring when a worker, deciding to change his/her job, must inevitably face a period of time in which he/she remains temporarily unemployed (the so called *frictional* unemployment). The preoccupation lies with that unemployment which the unemployed people are compelled to endure against their will; in the sense that they would be willing to work, at current wages, but entrepreneurs are not willing to employ them. This is what has been called *involuntary unemployment*.

4. Three Types of Involuntary Unemployment

I think one can say without the risk of being too controversial that, over the past half century, i.e. since serious preoccupations have arisen on this matter, involuntary unemployment has been discussed within at least three distinct factual contexts.

The first factual context is the one that emerged in the early 1930s. The historical circumstances are well known. At the very end of 1929, unexpectedly and all of a sudden, a "big crash" on the New York stock exchange brought with it a dramatic fall of over-all economic activity in the USA and, as a reflexion, in all industrially advanced countries. This caused the emergence of mass unemployment. In the USA, at the worst moments, unemployment even reached the peak of 25% of the working population! Let me recall that the crisis spread all over the world, but it was more acute the higher the degree of industrialization of the country concerned. What at that time appeared as inexplicable and paradoxical was that there were factories and capital equipment on the one side that remained idle, and labourers on the other side that were left unemployed, in spite of their strong, sometimes desperate, willingness to work at the current level of wages. That sort of unemployment, associated with a deep economic depression, persisted for the whole decade: from the end of 1929 to the beginning of World War II. From its theoretical explanation, notably given by J.M. Keynes (1936, who theorized it as due to lack of effective demand), this sort of unemployment has become known as "keynesian unemployment".

A second factual context soon emerged in the discussions on unemployment. It became clear that, in those countries where industrialization had not yet begun, or was incomplete, the physical capital structures that existed were insufficient to provide employment to all labourers willing to work. In this case, it is the phenomenon of capital accumulation that was revealed to be lagging behind, in the sense of not having taken place to a sufficient extent. The economic systems considered were still revealed to be, so to speak, at a precapitalistic stage, with an excess of labour availability, relatively to the existing capital structure. This is what has been called "classical unemployment".

A third factual context in which unemployment has emerged is in fact one that had been noticed right at the beginning of the industrial revolution, when it was attributed to the introduction of machinery, but was not clearly understood. It caused at times violent opposition,

on the part of the workers, against the introduction of machinery. On this respect, sadly famous have remained the so called *luddite riots* in the Midlands, in the United Kingdom, during which workers actually destroyed the machines, which they thought were taking away their jobs. Only recently is this type of unemployment beginning to be correctly understood and to be carefully analyzed. It is what is now called "structural" or also "technological unemployment".

5. Institutional Failures and the Emergence of the "Principle of Solidarity"

The factual emergence of socially undesirable states of affairs, characterized by involuntary unemployment, has played a major role in bringing about a series of complaints on what have been taken as the iniquitous aspects of existing institutions and of the social organization of our economies. At one extreme, Marx and his followers called for a radical social revolution, convinced that only a complete reshaping of social institutions and a complete change of social relations could eliminate the iniquities of capitalist systems. At the other extreme, the Liberal school has always insisted on the optimality properties of an ideal model which would be brought about by *laissez faire* policies.

In practice, in the last century, more and more people became convinced, on the strength of events, of the necessity of some sort of corrections to social relations, in the form of some interventions by communal bodies — such as central or local governments, or any form of socially organized institution — so as to give some assistance to the least fortunate workers and their families and help them in their worst predicaments. Workers Trade Unions, pressing for State legislation and provisions of various sorts, were generally formed with the conviction that the way things are organized in our societies leads to iniquities that the community as a whole must try to correct.

It is within this general trend of opinions that at the end of the last century the Church also deemed it necessary to take an explicit stand, by pronouncing on social matters. With the Encyclical Letter "Rerum Novarum" (1891), Pope Leo XIII recognized the fact that there existed a "workers' question", lately more widely called "social question", and that not only was it legitimate for the workers to take steps to improve their position of social weakness by adhering to Trade Unions, but also that all members of society, including em-

ployers and governments, local and central, had the duty to face up to the social problems brought about by industrialization and accept in various forms and various fields a social responsibility.

The "Rerum Novarum" was followed by a whole series of Encyclical Letters by successive Popes. They have become particularly frequent in recent times, up to the Encyclical Letter "Sollicitudo Rei Socialis" of two years ago (1987). Slowly, the Popes' pronouncements have made up a conspicuous set of arguments (now called the "Social Teaching" or the "Social Doctrine" of the Church) in favour of various forms of social responsibility. As far as unemployment is concerned, the arguments of the papal documents are essentially framed around what is called the "principle of solidarity".

Many questions arise: How does this "principle of solidarity" appear to economic theorists? Is there any room for it in the economists' investigations? Can the principle of solidarity be regarded as something that legitimately integrates or completes economic theory elaborations or does it appear as a sort of unjustified "interference" or "intrusion" of alien principles into the autonomous realm of economic analysis?

The answers to these questions are not straightforward. One of my contention is that they are not even independent of the type of economic theory that is adopted.

6. Mainstream Economics and the Efficiency/Equity Separation

The answers coming from the economic theory that is nowadays dominant in our universities are in fact disarmingly simple. According to the economic theory that used to be dominant before Keynes but that has again become prevalent nowadays, in a perfectly competitive economy there can be no problem of unemployment of any type — i.e. any problem of excess supply of labour — any more than there can be any problem of excess supply of any other resource.

The theoretical scheme which is adopted is basically a Walrasian model of general equilibrium, at the basis of which there is a very simple and elegant theoretical scheme that has been called a "pure exchange model" (see Debreu, 1959). The pure exchange model of general equilibrium analysis presupposes a society of individuals who are endowed with externally given resources and have well defined fields of preferences. It can be shown that, under certain (actually rather strict) conditions, the atomistic competition among individuals maxi-

misising their utilities leads the economic system to a set of equilibrium prices which have many optimality (i.e. efficiency) properties. Among others, the set of equilibrium prices has the property of ensuring the full employment of all available resources or — as is also said — the clearing of all markets.

This theoretical scheme is extended *sic et simpliciter* to cover the production processes, including all that relates to the labour market. Available labour is treated in no different way from the quantity of any other resource or commodity, and the price of labour — the wage rate — is treated as the price of any other resource or commodity. The argument goes on to conclude that the unconstrained interplay of demand and supply, if left to operate freely, will clear the labour market, in the same way as it clears the market of any commodity.

The theory therefore suggests that, when in practice one finds unemployment, one must infer that the market for labour is not operating freely — presumably the wage rate is artificially kept at a level that is too high. Let workers compete, at perfectly flexible wage rates — so the argument goes — and an equilibrium price for labour, i.e. an equilibrium wage rate, will be reached that “clears” the labour market, i.e. that makes unemployment disappear.

There is very little that can be done, according to this model, in terms of social policy, except providing for markets that are as close as possible to perfect competition. The model is closed in itself: it offers no room for outside integration. This does not mean of course the uncritical acceptance of *any* result brought about by the competitive market mechanism. The model does not exclude for example that humanitarian reasons might be invoked for the community as a whole to take care of particularly ill-endowed workers, or of needy families, when the market mechanism is for any reason impeded to operate, or also in order to correct any obviously too iniquitous distribution of the original resources (which the model takes as arbitrarily given). Yet this is something that may become relevant *outside* the operation of the market mechanism. The model as such is complete and closed, leading to the conviction that the competitive market mechanism has to be made to work as freely as possible.

With this type of theoretical scheme, it has also become customary to argue in terms of a clear distinction between the realm of efficiency and the realm of equity. In the realm of efficiency, no interference is accepted from outside economic analysis. Thus, in the case of labour unemployment, the stand is taken that the efficient positions can only be reached if the market mechanism is left to operate freely,

whatever that means in terms of level of wage rates, or sectors to be closed down or workers to be dismissed. Then, quite separately from all this, i.e. quite outside the realm of economic analysis and proper economic activity, one may well advocate generous measures by the community as a whole in favour of the less fortunate lot. To put the argument in somewhat trivial but expressive terms, let businessmen act in their profit maximising mood (i.e. basically in strictly egoistic manner) when they are at their office desk, but then encourage them to be as generous as they can when they have gone home. Within this frame of reference, any "solidarity principle" cannot have any place in economic activity: it should not enter either economic analysis or indeed business actions during the working week. But it could of course be left for generous consideration on Sundays, when the lucky part of the community can freely and generously decide on charitable initiatives.

This is the sort of attitude that has been induced by dominant economic theory. Yet it must be admitted that many traditional economists, though recognizing the cogency of these logical arguments, have nevertheless felt rather uneasy about what inevitably appears as a "schizophrenic" or "split-personality" behaviour, implied by this theoretical frame of reference and have tried various ways of getting round it (see, for example, Meade, 1974). They have not found it easy. The one sketched out above is a sort of inescapable position in which, when moving within the constraints of dominant economic theory, one inevitably ends up to.

7. The Possibility of Alternative Economic Theories

But an economic theory that is built on the foundations of the "pure exchange model" of Walrasian general equilibrium analysis is not the only economic theory that may be conceived.

Dominant economics is today so pervasively permeated by Walrasian general equilibrium analysis that most economists almost imperceptibly take it for granted that any economic argument cannot but move within that theoretical scheme. Yet this is entirely unjustified. Walrasian analysis does indeed provide an elegant and powerful theory; but nothing more than a *theory*. And a theory must not be confused with reality.

In a previous work of mine, presented to this Academy as far back as in 1963 (see Pasinetti, 1965), I precisely argued that the de-

velopment of alternative theories is not only an abstract possibility; it is something that has to a certain extent already taken place.

First of all, I argued that the pure exchange model of mainstream economics is essentially based on a conception that reduces all economic problems to problems of optimal allocation of given resources. Of course nobody denies the importance of the problem of optimal allocation of given resources — a long standing economic problem in any society, since long before the industrial revolution. But it would be unjustified to reduce *all* economic problems to problems of optimal allocation of given resources. Such a procedure leads us not only to a very restrictive conception of economics; it leads us to a profoundly misleading conception of the societies in which we live, precisely because it does not catch some of the crucial characteristics that have been brought into being by the “industrial revolution”.

Then, in the above mentioned work, I have gone on to argue that the specific features of the industrial societies require the elaboration of a different theoretical model and that this elaboration has in fact to a large extent already been carried out in various places (from Classical to Keynesian economics). In that work, my purpose was to show that — in exact symmetry to the pure exchange model of mainstream economics — it is possible to construct a model of “pure production”, which has a series of properties that are by far more suitable to grasp the basic features, to interpret the implications, and to lead us to analyze the characteristics of the economic systems that have emerged from the “industrial revolution”.

8. A Model of Pure Production

I shall not obviously reproduce here — not even in its elementary features — the model of pure production which is already contained in the proceedings of this Academy (see Pontificia Academiae Scientiarum, 1965; see also Pasinetti, 1981). I shall simply recall a few basic elements on which it is built.

The type of economic system considered is one in which a community of individuals carry out an activity of production and an activity of consumption. Goods and services are produced either for direct consumption or for intermediate purposes (capital goods), when intermediate processes are a more efficient way to achieve the ultimate aim of final consumption. The activity of production is carried out with extensive division of labour, and thus with marked spe-

cialization. Each individual produces only one type of good, or even a fraction of one type of good, thereby being able to achieve high productivity. Precisely for this concentration on specialization, new methods of production are continually being invented and productivity is increasing all the time in all sectors, though at markedly different rates from sector to sector. This means that each individual will need to obtain all the consumption goods and services he/she needs from the other sectors through exchange, and this is the source of an interdependence that strongly characterizes the economic system as a whole, which thereby emerges as a single unit. A basic principle that is behind all activities is the "learning principle", both in production and in consumption. Accordingly, the flows that characterize the economic system, in their structure as well as in their absolute amounts, are changing all the time.

This set of relations can be framed, at any specific point of time, in two systems of equations, of a type similar to that of Leontief's closed model (see Leontief, 1951). It is shown that they require the fulfilment of an over-all necessary condition (which is identical for both equation systems) and yield solutions, respectively, for relative physical quantities and for relative prices. This means that one variable has to be determined from outside each equation system — in general, the wage rate (and income distribution) in the price equation system, and the physical quantity of employment in the quantity equation system.

Quite naturally, this theoretical framework of "pure production" leads, from the solutions referring to a specific period of time, to the investigation of the *movements* of these solutions through time. And here, on the dynamic paths, a whole set of *sectoral* conditions emerge for the system to develop in dynamic equilibrium, defined as a set of paths on which the sectoral productive capacities expand at rates equal to the rates of expansion of demand for the corresponding goods and services. These form a set of capital accumulation conditions. (They in fact turn out to be sectoral specifications, i.e. a disaggregation of the condition which Harrod, 1948, and Domar, 1946, had earlier found at the macro-economic level, with reference to an aggregate model of economic growth).

At this point, the pure production model traces out very clearly a structural dynamics that is so characteristic of the industrial economic systems. This structural dynamics goes on in three separate but closely interrelated fields: i) the field of relative prices, where the structural dynamics follows as an efficiency requirement of the technological

changes in costs, ii) the field of production, where the structural dynamics follows upon the inevitably differentiated expansion of demand in the different production branches (a consequence of the well-known "Engel's curves", playing a crucial role here), and finally, iii) the field of employment, where the structural dynamics follows as the natural, and in fact inevitable, consequence of the previous two sets of structural dynamics movements, as these have to go on within the constraints set by the above-mentioned macro-economic necessary condition for a dynamic equilibrium. It is of course this third field of structural dynamics that becomes of crucial relevance to the evolution of employment, and for that matter to the emergence of unemployment through time.

9. The Three Types of Involuntary Unemployment Considered Within the Two Alternative Schemes

If we now return to the three types of involuntary unemployment mentioned earlier, we may consider whether and how they may or may not be explained.

Let me begin immediately with the pure production model recalled above, and consider in turn each of the three types of unemployment listed in section 3.

Keynesian unemployment. An analytical explanation of this type of unemployment emerges immediately from the pure production model, in terms of a non-fulfilment of the over-all necessary condition for the existence of equilibrium solutions. As explained at length in my previous work, this necessary condition is a genuinely macro-economic condition (in the sense that it remains macro-economic no matter how far one may decide to proceed with disaggregation), and its economic meaning is an expression of Keynes' principle of over-all effective demand. It emerges as not being fulfilled whenever, in any particular period of time, over-all effective demand (consumption plus investment plus government expenditure) falls below the level that would be required by the full utilization of existing productive capacities and available labour force. The result is indeed idle capacity and unemployment in some production branches. The cause is macro-economic lack of over-all effective demand — but the effects are sectoral (unemployment and idle productive capacity in some sectors).

Classical unemployment. The explanation of this type of unemployment is the existence of a gap between the technological require-

ments of production, that would entail a series of sectoral capital equipments, and the actual situation, in which these capital equipments have not yet been constructed. In analytical terms, this unemployment follows from the non-fulfillment of the sectoral capital accumulation conditions, either (or both) at the initial point of time or (and) through time, i.e. in terms of new investments. Here the effects are macro-economic — widespread surplus labour — while the causes are sectoral (lack of capital equipment in the appropriate production branches).

Technological unemployment. The explanation of this type of unemployment is more complex, as it involves the operation of the very basic elements that constitute the model of pure production; yet it emerges very clearly. The structural dynamics of costs (and hence of efficient prices) emerges as a straightforward consequence of technical change. At the same time, the growth of productivity brings about growth of wages, and in general of per-capita incomes, which compel consumers to make *new* decisions (i.e. decisions they did not make before). They need to learn and experiment new consumption paths, and thus new demand. Production units may try to influence these paths of demand to a certain extent, or may try outlets to their products abroad. However nothing ensures that the expansion of demand, and thus of production, can match the new technological opportunities. The structural dynamics of demand (and thus of efficient production) will quite normally turn out to be different from the actual possibilities offered by the structure of existing employment. There may well be sectors that need expanding their employment level; but inevitably, labour will become redundant in those branches where the inflows of technological innovations cause increases of productivities that go beyond the possibilities of expansion of demand (at home or abroad). The emergence of redundancies means the necessity either of the transfer of workers to activities other than those they had carried out before (which may not be so easy to bring about; indeed the intersectoral mobility of labour is never a painless process), or, inevitably, unemployment. And here again the analysis is referred back to the over-all macroeconomic condition setting an over-all constraint to the production possibilities of the economic system, which may or may not turn out to be satisfied. The effects of this dynamic mechanism are clearly sectoral, but the causes are a complex interaction of sectoral, macro-economic and even social factors (concerning the way in which innovations come about and are introduced).

By way of contrast, it may be useful now to bring out openly the reason why these three types of unemployment, which quite clearly find a place within the pure production model, do not find any place within the pure exchange model of traditional economics.

As far as the Keynesian type of unemployment is concerned, there can be no such unemployment within the traditional model, simply because labour is considered on the same footing as any other resource or commodity. If, at the prevailing wage rate, labour is in excess supply, the model says that the competitive mechanism will make the wage rate fall until the excess supply is eliminated; or else, if workers still remain out of work, that means that, at the prevailing wage rate, they prefer leisure to work — their unemployment is *voluntary*. Within the pure production model, on the other hand, labour is not a commodity but the basic factor of production, and the wage rate is not only the price of labour but also the personal income of workers. A fall in wages causes a decrease in costs in the production branches (and thus stimulates production), but it also causes a fall in effective demand in the economic system as a whole (and thus depresses production). There is no certainty that the second (negative) effect will be compensated by the first (positive) effect. This is in fact the well known criticism that Keynes moved to "classical" theory. Keynes' arguments simply emerge here as moving within the pure production model.

As far as the classical type of unemployment is concerned, traditional theory excludes it as an effect of its extension to production activity of all the basic principles developed with reference to utility theory. The principle that is here extended is that of substitution. Within mainstream economic theory, it is inevitable to conceive production as the technical outcome of a production function in which the factors of production, notably labour and capital, are *always* susceptible of being substituted for each other. If this were the case, no matter how much labour there is, there would always exist a sufficiently low capital intensive (and sufficiently high labour intensive) technique of production that ensures the full employment of the whole labour force, at the appropriate factor price (i.e. the appropriate low wage). But, to begin with, mainstream economic theory does not exclude that the wage rate might well turn out to be unacceptably low. And, moreover, a recent capital theory debate (see Pasinetti *et al.*, 1966) has conclusively shown (though mainstream economic theory has inexplicably been very reluctant to accept) that a monotonic inverse relation (which is a necessary requirement of traditional theory) between capi-

tal intensity and the corresponding factor price does not in general exist.

Finally, as far as technological unemployment is concerned, one must admit that traditional economic theory is quite simply unable to consider it, because of its essentially static foundations.

Technological unemployment arises because of the dynamic inter-action between technical change and the structural evolution of demand. Both phenomena have been neglected by mainstream economic theory, which has remained intrinsically unable to incorporate them.

10. Features of the Pure Production Model and an Important Implication

From among the many typical features of the pure production model recalled above, let me single out at least four that seem to be particularly relevant for our purposes.

First of all the model, while specifying the efficient features of the economic system, remains entirely *open* as to the type of institutions that may be set up to bring those efficient features about. (In this respect, it differs crucially from the pure exchange model, in which there is one single specific institution that is implicitly presupposed — a perfectly competitive market mechanism). The pure production model does *not* exclude that perfectly competitive markets might be appropriate in some circumstances, but it considers them as one possibility. The model requires successive specific analyses to be carried out in order to single out the institutions that are the most appropriate to the actual realization of the efficient features of the economic system.

Secondly, the model brings into the open the fundamental importance of a macro-economic condition that is constraining over-all effective demand. This may in fact be considered as a tribute to the deep intuition of John Maynard Keynes, who was not able to make this condition emerge from a formal model, yet understood its crucial importance and made of it the foundation of his revolutionary work (Keynes, 1936). The basic point is that over-all effective demand links together the whole economic system, making of it a whole economic unit. All its parts are thereby revealed to be interdependent, quite separately from, and on the top of, any interdependence arising on the side of inter-industry relations. It is important to realize the source of this interdependence: namely specialization in production, on the one

side, and extreme wideness of the range of consumption habits and possibilities, on the other side. And it is important to realize that this feature would make the whole economic system interdependent (demand-interdependent!) even if there were no interdependence – in the sense of inter-industry relations *à la Leontief* – on the side of technology.

Thirdly, while the above mentioned macro-economic condition imposes a very strict constraint to the economic system considered as a whole, at the same time it does not impose any constraint on *how* its own fulfillment may come about. Over-all effective demand must reach a certain level to ensure full employment, but its composition is entirely open to choice, for individuals, for groups of individuals or for the community as a whole. This means that there is no unique way to pursue full employment. Uniqueness of solutions, as far as the production and employment structures are concerned, is out of question.

Fourthly, the unceasing pace of technical progress makes the efficient positions of the economic system *change* as time goes on. In particular, what is an efficient structure of employment at a specific point of time will in general no longer be an efficient structure of employment in the following period of time.

From these features, we may draw immediately at least one important implication for the purpose of the present discussion.

An industrial society may bring about a series of negative consequences on the people working in specific sectors, (e.g. unemployment, see especially the second and fourth features listed above), that *can in no sense be considered as the fault of those people*, but have to be related to the organization of the economic system as a whole. When in a recession the fall of over-all effective demand translates itself into the fall of demand for products or services of a few particular branches, while the demand for other products and services remains unaffected, some workers lose their jobs entirely, while others do not lose anything. To put the problem in an extreme but sharp way, a fall of over-all demand of let us say 5% does mean that all workers are required to work for 5% less of their time (which would be easily acceptable); it means that 5% of the workers lose their jobs entirely, while the other 95% go on working as before. The specialization in production, on the one side, and the shape of consumers' choices, on the other, make this an intrinsic characteristic of any industrial economic system. The same may be said when particularly significant innovations in some lines of technology or at some points of the organization-

al structure make labour redundant in those lines of production, and sometimes, by way of reflection, in others.

The logical implication of all this is that the community as a whole cannot escape the responsibility of taking charge of these negative consequences, since they are due to the organizational characteristics of production economic systems as such. It is quite clear that some institutional mechanism will have to be devised to try to avoid them in the first place, and to alleviate their most painful effects when it has become impossible to avoid them. The same may be said also with reference to technological unemployment.

The relevant point that emerges from all this is that these logical implications concerning social responsibility of the community taken as a whole do not follow from any humanitarian reasons. They follow from the more fundamental requirement of preserving efficiency, of which full employment is one of the most important aspects in the economic system as a whole.

11. A Methodological Shift

It may become evident at this point that the pure production model recalled above also suggests a sort of shift in economic methodology. The separation between the field of pure economic analysis and the field of economic investigations that are open to outside contributions, which traditional economics has associated with the efficiency/equity separation (see section 5 above), no longer applies to the theoretical framework of a production model.

A different criterion becomes relevant. The separation must be drawn within a theoretical framework that has different dimensions. Very simply, I may put the discriminatory line in the following way. Within the pure production model, there are certain basic economic relations, relating specifically to the structure and evolution of population, of technology and of consumers' choices, that are revealed to be so fundamental as to be quite independent of any institutional set-up. In the investigation of these relations, especially when enquiring into compatibility requirements, i.e. into those conditions that must be satisfied in order to achieve certain efficiency positions, economic analysis must be recognized as entirely autonomous. But there then follows a series of successive fields of investigations, that are concerned with *behavioural* relations (at micro, sectoral, and macro-economic levels), which may be typical or characteristic of specific

institutional set-ups or of specific societies. Here economic analysis is no longer autonomous; not only does it become open to contributions and integrations coming from other social sciences, and in general from outside economic analysis, but actually *requires* to be so integrated and completed.

This distinction — and the corresponding separation of tasks and competence — is obviously of crucial importance for our purposes.

12. Back to the Papal Pronouncements

It is time to go back to the questions raised in section 5 above with reference to possible interference of papal pronouncements with economic theory.

Let me bring together a few quotations.

In the most recent Encyclical Letters I read statements of the following type:

— “It is not for the Church to analyze scientifically the consequences that these [historically observable] changes may have on human society.” (*Laborem Exercens*, I.1);

— “The Church does not have *technical solutions* to offer for the problem of underdevelopment as such ...” (*Sollicitudo Rei Socialis*, VI.41, italics in the text);

— “The Church's social doctrine is not a 'third way' between *liberal capitalism* and *Marxist collectivism*, nor even a possible alternative to other solutions ...” (*Sollicitudo Rei Socialis*, VI.41, italics in the text).

Moreover I read that, in her advices, the Church tries to proceed “with the support also of rational reflexion and of the human sciences” (*Sollicitudo Rei Socialis*, I.1).

These propositions seem to reveal a rather respectful, attentive, and at the same time detached attitude toward sciences in general and economics in particular.

At the same time, I also find statements of a second type, which are of a quite different nature. Here are few significant ones:

— “...the Church is “expert in humanity” (*Sollicitudo Rei Socialis*, VI.41);

— “...the Church considers it her task always to call attention to the dignity and rights of those who work, to condemn situations in which that dignity and those rights are violated, and to help to guide

the above-mentioned [historically observable] changes so as to ensure authentic progress by man and society." (*Laborem Exercens*, I.1);

— "...we cannot fail to be struck by a *disconcerting fact* of immense proportions: the fact that, while conspicuous natural resources remain unused, there are huge numbers of people who are unemployed or underemployed and countless multitudes of people suffering from hunger...there is something wrong with the organization of work and employment, precisely at the most critical and socially most important points." (*Laborem Exercens*, IV.18, repeated in *Sollicitudo Rei Socialis*, III.18, italics in the text).

As may be noticed, these statements (which I have called of the second type) are quite different from the previous ones. Here the Church is making very specific claims of duties and competence, to single out what is wrong and what should be done. Especially in the last propositions stated above, which by the way, after being stated in one Encyclical Letter have been repeated in the following one, the Church is making a quite open call to public authorities to intervene to put right what is indicated as "something wrong with the organization of work and employment". This is done in the name of the principles of "subsidiarity" and of "solidarity". What moreover is interesting is that this is done by stating a precise justification: "...this happens not through the *fault* of the needy people, and even less through a sort of *inevitability* dependent on natural conditions or circumstances..." (*Sollicitudo Rei Socialis*, II.9, italics in the text). It is explicitly said that the Church herself is abstaining from indicating specific means, but "seeks to lead people to respond...to their vocation as responsible builders of earthly society" (*ibid.* I.1).

13. Concluding Remarks on the Question of Interference with Economic Theory

There can be no denying that the Church's pronouncements stated above — mainly those of the second type — are causing problems to traditional economists. My suggestion simply is that this is so only because traditional economists are moving within the strict constraints of arguments that have the "pure exchange model" at their foundations, a theoretical model which is inadequate to face the problems of industrial societies.

It is interesting at the same time to notice that there is nothing in the above pronouncements, which economists can object to, or may

feel uneasy about, when they are moving within the "pure production model" of classical/keynesian/structural dynamics theory. This model is indeed open to contributions from outside, and actually requires such contributions, with reference to the fields of economic analysis and economic policy that concern the actual construction of our institutions.

If one simply puts the above quotations within the methodological frame of reference hinted at in section 10 above, concerning the separation of the field of investigation that must be reserved to the autonomy of economic analysis and the field of investigation that is open to outside contributions, one immediately realizes that the first field of investigation is explicitly excluded from the Church's pronouncements; and rightly so. The second field of investigation, on the other hand, is precisely the one which the Church's pronouncements are concerned with.

To conclude: if the Church, in her claim to be "expert of humanity", gives advices on the moral principles to be put behind the criteria for a responsible construction of our institutions, can economists object? The main point of this paper is that they would be not merely very unwise; they would be entirely unjustified, if they did.

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