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International Institutions for Sustainability

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Proceedings

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1 Executive Summary

These proceedings document the results of the workshop on “International Institutions for Sustainability” which was held on June 12th & 13th 2003. It is the second of a whole series of workshops that contribute to the research project on “Economics and Sustainable Development”. This research project aims at surveying economic approaches to sustainable development in a wide context of related scientific disciplines. It attempts to make out promising lines of economic research that can bridge the gap between mainstream neoclassical economics and ecological economics. The project is conducted by the German Institute for Economic Research (DIW) and funded by the German Federal Ministry of Education and Research (BMBF) which is considering to fund a major research programme on „Sustainability and Economics“.

This second workshop on international institutions consisted of several expert presentations as well as a concluding discussion to identify pressing research needs. The outcome of the latter is an agenda for economic research with regard to sustainable development. In particular, the workshop participants recommended:

- Studying the history of ecological economics from different scientific perspectives
- Integrating physical indicators and non-monetary language into the analysis and description of north-south trade relations
- Linking environment issues with development and human rights
- Assessing the role ideology plays in economic analysis, e.g. public choice
- Considering behavioural aspects in a problem-oriented interdisciplinary approach
- Applying game theory in general and, more specifically, evolutionary game theory to concrete, practical problems
- Examining the role of public private partnerships
- Comparing distinct economic approaches with those from other scientific disciplines related to the same issue in a competitive learning process
- Using new institutional economic approaches with respect to property right problems and constitutional economics to solve normative issues
- Analysing policy failures in the framework of public choice

- Applying evolutionary economics to study discovery and diffusion of knowledge as well as routine behaviour in organisations and institutions
- Studying regulatory environmental policies competition and related conditions leading to a race to the top or the bottom respectively
- Analysing least cost solutions for worldwide technological development paths
- Investigating the use of indicators of sustainability in public discourse
- Assessing the environmental prospects of long-term commodity agreements between the north and the south
- Examining institutional options for supporting learning processes leading to a convergence of international perspectives on sustainable development
- Studying the influence of international environmental processes on national processes in developing countries
- Examining the impact of environmental impact assessments on trade liberalisation at the country level

Preceding these research policy recommendations, two distinct topics were discussed by the participating experts: “trade and environment issues: how to overcome north-south conflicts” and “a regime for global sustainable governance”.

Prof. Joan Martinez-Alier gave his presentation about “globalisation and the poor: an ecological perspective”. His starting point is the observation that the clash between economy and environment manifests itself in the increasing demands for raw materials and for sinks for waste in the large parts of the planet inhabited by humans, and in the planet as a whole. Environmental improvements in some nations might occur because of the displacement of pollution to other nations. With the economy not “dematerialising” in per capita terms, local and global conflicts on the sharing of the burdens of pollution and on the access to natural resources increase. These conflicts are expressed in a multitude of languages of valuation. As opposed to mainstream economics in which theories of production and consumption, compensation and substitution reign supreme, diverse standards of value are deployed in ecological economics to take nature into account. This allows to better study the environmental conflicts described above. Ecological economics recognises the social and ecological limitations of the economy, and addresses the value of things which cannot be given a price, such as livelihood,

quality of life, species diversity or the sacredness of indigenous peoples' lands. Finally, proposals for new international policies regarding trade and the environment should be consistent with the environmentalism of the poor and the global movement for environmental justice.

Dr. Michael Finus elaborated on solved and unresolved issues in game theory regarding the trade and environment debate. His point of departure is the design of an environmental treaty which is crucial for its success. Related issues are sanctions, monitoring, transfers, issue linkage, global abatement and allocation of abatement duties and membership rules. Sanctions only work if they represent a credible threat. The viability of monitoring depends on its costs and the reliability of self-monitoring. Transfers are problematic because of free-riding between donor and recipient and within the group of donors. Issue-linkage also suffers from free-riding in membership models and repeated game models. In membership models, public good agreements on the environment and club good agreements on trade are linked. In repeated game models in which asymmetric games are linked, non-compliance can be problematic. Global abatement issues also experience these challenges. In this context, an interesting question would be when an inefficient but equal allocation would be better than an efficient but unequal one. In conclusion, a principal issue is free-riding in different contexts of the treaty design. Research should generalize and expand on existing game theory and combine it with political and institutional sciences for conducting empirical research.

Dr. Imme Scholz's contribution focussed on development aspects of the trade and environment conflict and institutional learning processes. The latter are important when talking about the perceived rational options of involved actors. Additionally, not only the design of a treaty but also the chances of implementation do matter. When developing countries look at trade policies and environmental standards, they often understand them as limits of their development potential. Then, the question arises who should pay for additional costs of avoiding a certain negative effect on the environment. Issue linkage such as technological assistance in exchange for environmental commitments cannot work solely on the international level, but also has to emphasise local support. The same is true for property right problems occurring at the local level. Therefore, a dynamic learning process between the international level and local actors has to be fostered. Furthermore, there is an enormous gap between northern countries' discourses and what the north is willing to pay in practise. Issue linkage is also hindered by many developing countries which see the WTO as dominated by the north and where environmental issues would be dealt with in a manner detrimental to the south. Developing coun-

tries often do not have the human resources necessary to enter global negotiations on an equal footing with the north. Economic research should concentrate on innovation theory and routines regarding organisations and institutions to examine which factors foster learning by government, civil society and economic actors.

In the following round, different topics were discussed such as the contribution of local environmentalism, the role of long-term commodity agreements, the positive and negative impacts of trade and globalisation on the environment, the costs of structural change, the importance of ideology in economic analysis, the significance of transportation regarding development, the aggregation of preferences in the political system, the prospects and requirements for an World Environment Organisation (WEO), and, finally the chances and boundaries of game theoretic approaches.

Prof. Timothy Swanson gave a presentation on the impact of the Montreal Protocol and the costs of global environmental agreements. Global resources render global cooperation necessary and resources make national boundaries the baselines for bargaining. The question then becomes whether global cooperation can inhere in a world divided into nation states. This is aggravated by the absence of a universal perspective on the nature of and solution to global problems. One proposition is that in international agreements in general, states sign up to the level of obligations that they already intend to achieve. As to the Montreal Protocol, it can be asked who bears the costs of the elimination of CFC production. The aggregate impact of the Protocol may be estimated by comparing the terms of the protocol with what would have occurred (in aggregate) in its absence. Assuming that CFCs remained the most cost effective technique for performing their functions, the Montreal Protocol resulted in significant estimated reduction of global CFC production. Assuming furthermore that developing countries are entitled to the same levels of unilateral management undertaken by developed countries until 1988, then virtually the entire burden of the Montreal Protocol falls on the least developed states. To conclude with, the solutions to many global problems involve changing the development path for the last-developing states.

The subsequent discussion centred on general differences among international environmental agreements, possible substitutes for CFCs, paths of technological change, the later adjustments made to the goals of the Montreal protocol, the consideration of avoidance costs, and the worldwide implementability of regulatory environmental schemes.

Dr. Frank Biermann spoke about the challenges of hierarchy, polarity and plurality with respect to earth system management from a political science perspective. Hierarchy relates to the linking of global, regional, and local levels for effective global solutions to world-wide environmental problems. Polarity has to do with the question whether we live in a unipolar or multipolar world, whether we strive at global harmonisation or fragmentation and, in particular, how we manage north-south relations. Plurality refers to the key actors of global environmental governance, to their behaviour and to issues of global democracy. As to the proposal of a WEO, it would have many advantages such as, among other things, efficiency gains compared to the current fragmentation of environmental regimes. Regarding multipolar governance, recent jurisprudence has broadened the range of governmental options for unilateral environmental decision-making under WTO law which helps pioneering countries to develop innovative solutions without violating WTO rules. However, this development may lead to a global harmonisation of standards on the level of the major importing markets in the industrialised world. Therefore, it is time for a global compact on trade and environment. Finally, concerning multiactor governance, the new role of public-private partnerships, their performance and legitimacy has to be better understood.

Prof. Bernd Siebenhüner stressed the importance of learning for managing the challenge of global sustainable development governance. This challenge has many facets such as, e.g., compliance deficits of regulatory policies, lacking acceptance for direct intervention into individual decisions, long time horizons and manifold uncertainties and a need for stakeholder involvement. The challenges indicate a need for social learning and innovation processes. Elements of social learning for sustainable development include sustainability knowledge, inter- and transdisciplinarity, long-term perspectives, moral development, societal conflict resolution and discursive capabilities, and capacity to solve environmental and social problems through institution building and learning mechanisms. Practically, social learning can be studied in international and private organisations, governments, citizen groups, scientific assessments, global and local networks and others. Promising theories to approach learning processes comprise learning theories, (political) evolutionary economics, organisational learning (management studies), institutional change (institutionalism), and behavioural theories. By means of these theories, research questions can be asked, e.g., as to what is specific about learning towards sustainable development, and what hampers social and individual learning in various contexts?

Dr. Michael Wohlgemuth gave an overview on how the issue of appropriate international governance can be discussed more systematically. He showed four possible dimensions of how governance can be approached. The first issue is whether there should be centralisation, decentralisation or poly-centralisation of governance. Second, there could be regulatory competition with a race to the top or to the bottom. Third, the regulation of global environmental problems could be conducted via command and control policies or via incentives. Last but not least, there are private actors like NGOs who play an increasing role for global sustainability issues. The economic research agenda is twofold. Further advancement could be made in the political economic analysis, comprising e.g. New Institutional Economics or Evolutionary Economics as well as in further investing issues like the conditions of regulatory competition, the role of reputation, polycentric governance arrangements and learning, incentives for the provision of public goods.

Prof. Peter Söderbaum presented three possible interpretations of sustainable development and discussed related challenges at the level of the theory of science, of paradigms in economics, of ideology and of institutions. Besides “business as usual” and “ecological modernisation”, there is a third interpretation of sustainable development which aims at radically reconsidering these levels. Concerning theory of science, the ‘fact’ that values and ideology are always with us in social science research was emphasised. The assumptions of neoclassical economics and of other theoretical perspectives have to be discussed openly in ideological terms and the subjectivity of scholars and actors in society has to be addressed through interviews and in other ways. As to paradigm, a “new microeconomics” could be built on ‘Political Economic Person’ assumptions and go beyond “monetary reductionism”, consumerism and cost-benefit analysis for decision-making; it should cover market as well as non-market relationships and different interpretations of market relationships. In understanding institutional change processes ‘mental maps’, models or interpretations play a key role. Finally rather than creating a WEO, the WTO could also be radically reconstructed to become a World Culture and Environment Organisation (WCEO) with the purpose of handling trade disputes as one means of achieving essential welfare objectives.

The following discussion dealt with possible conflicts between WTO and WEO, the comparability of WTO with other institutions, centralisation versus decentralisation of the various existing environmental regimes, the institutional facilitation of social learning processes, the

possible goals of a WEO, and the separability of environmental from sustainable development issues in developing countries.

2 Introduction

The workshop “International Institutions for Sustainability” is part of a DIW research project on “Sustainability and Economics“, which is funded by the German Federal Ministry of Education and Research (BMBF). This survey project consists of several workshops on economic and related sciences approaches to sustainable development and a questionnaire on “Economics and Sustainable Development”. The first three workshops in 2003 are “Intergenerational Justice and Sustainability” (15th & 16th May), “International Institutions for Sustainability” (12th & 13th June), and “Measuring Sustainability” (3rd & 4th July).

The project is motivated by the observation of a scientific divide in economics. One indicator of this divide is the fact that the concept of sustainable development is still being ignored by many mainstream neoclassical economists. As an alternative line of research the merger-movement of “Ecological Economics” has formed. It investigates various aspects of sustainability and consists of many different scientific approaches, joined by their frontiers with mainstream neoclassical economics. Also, in general, the theoretical and methodological contribution of economics to sustainable development (SD) seems to need further elaboration. The survey project thus aims to identify both, pressing research needs and promising lines of economic research. It also aims to identify concepts that may bridge the gap between economic approaches (e.g. neoclassical economics, ecological economics, evolutionary economics) and provide a multi-dimensional mindset to overcome the current constellation of “schools of thought”. The project is based on an integrative concept, which we have labelled “Sustainability Economics” (SE). The key features of the Sustainability Economics concept are:

- a) A comprehensive approach encompassing the ecological, economic and social dimensions of sustainability,
- b) the development of economic methods and concepts that deal with problems of sustainability,
- c) a strengthening of policy-orientated economic approaches for sustainability,
- d) an integration of sustainability concepts of general economics (such as sustainable finance) into the environmental economics SD debate,
- e) and an identification of “bridges” between different economic “schools of thoughts” by means of studying integration and disintegration processes in general science and exploring venues of interdisciplinary approaches.

The survey is carried out through a series of workshops and a questionnaire on “Economics and Sustainable Development”. These proceedings document the results of the second workshop on “International Institutions for Sustainability” which took place on June 12th & 13th 2003.

The proceedings from all workshop of this research project including the questionnaire results will be published and made available at our website www.sustainableeconomics.de in 2003 and 2004.

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4 Presentation by Prof. Joan Martinez-Alier: “Globalisation and the Poor: An Ecological Perspective”

4.1.1 Introduction

- Environmental preservation and protection have been understood as desires, which could develop only after the material necessities of life were already abundantly covered.
- The movement for Environmental Justice in the U.S.A. (and also in South Africa) and the wider and more diffuse worldwide movement of the ENVIRONMENTALISM OF THE POOR have bankrupted this view, which was prevalent until recently.
- The clash between economy and environment (which is studied by ecological economics) does not manifest itself only in the attacks on remaining pristine Nature but also in the increasing demands for raw materials and for sinks for waste in the large parts of the planet inhabited by humans, and in the planet as a whole.
- The fact that raw materials are cheap and that sinks have a zero price, is not a sign of abundance but a result of a given distribution of property rights, power and income.
- For instance, reduction of global carbon dioxide emissions may be obtained through local nuclear or hydroelectric energy projects, or by absorption of carbon dioxide through controversial local tree plantations.
- For instance, environmental improvements in some nations might occur because of the displacement of pollution to other nations.
- The case for a general “win-win” solution (better environment with economic growth) is far from proven.
- On the contrary, since the economy is not “dematerializing” in per capita terms, there are increasing local and global conflicts on the sharing of the burdens of pollution (including the enhanced greenhouse effect), and on the access to natural resources.
- Therefore, this report emphasizes ecological distribution conflicts, and it studies the languages of valuation used in such conflicts.
- In economic theories of production and consumption, compensation and substitution reign supreme. Not so in ecological economics, where diverse standards of value are deployed “to take Nature into account”.

- In the ecological economics theory of consumption, no other good can substitute or compensate for the minimum amount of endosomatic energy essential for human livelihood.
- This does not imply a biological view of human needs, on the contrary, the human species exhibits enormous intra-specific socially caused differences in the use of exosomatic energy (to use Lotka's term).

4.1.2 Needs and Satisfactors

- Production may become less intensive in terms of energy and materials, but the environmental load of the economy is driven by consumption.
- Rich citizens may choose to satisfy their needs or wants by new patterns of consumption that are themselves highly resource-intensive, such as the fashion for eating shrimp imported from tropical countries at the expense of mangrove destruction, or the use of gold.
- The approach of ecological economics builds upon Georgescu-Roegen's "principle of irreducibility of needs". [Georgescu-Roegen 1971].
- According to Max-Neef [Ekins and Max-Neef 1992], all humans have the same needs, described as:

- Subsistence
 - Creation
 - Understanding
 - Protection
 - Freedom
 - Leisure
 - Participation
 - Affection
 - Identity
- There is no generalized principle of substitution among them. Such needs can be satisfied by a variety of ‘satisfactors’.
 - One may ask why people travel so much, or why so houses are built with new materials instead of restoring old ones or recycling materials, etc.
 - Research by Jackson and Marks (1999) on the trend to use ‘satisfactors’ that are increasingly intensive in energy and materials to satisfy predominantly non-material needs has found that the expectations that an economy that has less industry will be less resource intensive, are premature.

4.1.3 Ecological Distribution Conflicts

- A few of these ecological distribution conflicts (i.e. conflicts on the access to natural resources or on the burdens of pollution) will be described.
- The conclusion is reached that there is considerable activism around the world centred on environmental justice, not yet aware of its own potential strength as a global movement.
- It is composed of a multitude of individual groups, sometimes linked by issue-oriented international networks.

4.1.4 Conflicts and Resistance Movements¹

- *Environmental racism* (USA), the disproportionate burden of pollution in areas inhabited by African Americans, Latinos, Native Americans. Environmental justice is the movement against environmental racism. Environmental blackmail has been used to describe situations in which either LULU (locally unacceptable land use) is finally accepted, or the local population stays without jobs. One well known source is Bullard (1993).
- *Toxic struggles*. This is the name given in the U.S. to fights against risks from heavy metals, dioxins, etc. Sources are Gibbs, 1981, Hofrichter, 1993.

¹ For a more encompassing list of resistance movements the reader is referred to Martinez-Alier (forthcoming).

- *Indigenous environmentalism*. Use of territorial rights and ethnic resistance against the external use of resources (e.g. Crees against Hydro Quebec, Ogoni and Ijaw against Shell). Good sources are Gedicks, 1993, 2001.
- *Social ecofeminism, environmental feminism*. The environmental activism of women, motivated by their social situation. The idiom of such struggles is not necessarily that of feminism and/or environmentalism. (Bina Agarwal, 1992).
- *Environmentalism of the poor*. Social conflicts with an ecological content, today and in history, of the poor against the relatively rich, not only but mainly in rural conflicts (as explained in Guha's history of Chipko, 1989, rev. edn. 1999, and in Guha and Martinez-Alier, 1997).
- There is a chronology of such conflicts. When did they start, when were they identified, when will they disappear?
For instance, claims of an ecological debt on account of CFC emissions are perhaps less valid today than before the Montreal Protocol was signed while claims on account of CO₂ will increase since the Kyoto Protocol does not modify the general situation of injustice in access to carbon sinks and reservoirs, and moreover it is not yet fully operative.
- There is also a geography of such conflicts. Some are local, and some are global. Some are fought in an explicitly environmental language, and some in other languages. Many of them are unknown to Northern public opinion.
One thing is clear, however - there are closer and closer connections between local conflicts and explicit, global environmentalism. One can no longer separate local and global, because of the increased horizontal, south-south networking.

4.1.5 Proposals for New International Policies

- New items for the political agenda often come from outside governmental circles.
- Some policies are suggested here that would be backed by the networks grown from the sort of local conflicts described in the present paper.
- They would not yet be backed by Southern governments and even less by Northern governments, but they are consistent with the environmentalism of the poor and the global movement for environmental justice.

4.1.5.1 Trade

- Southern governments sometimes complain with reason against Northern protectionism (on textiles, for instance) despite the rhetoric of free trade, but they also complain with much less reason against “green protectionism” from the North (as in the tuna-dolphin or shrimp-turtle cases). They are wrong to emphasize “green protectionism” because the overwhelming reality is that of ill-paid energy and material flows from South to North. The isolated cases of “green protectionism” are really red herrings, in comparison to the flow of ecologically unequal trade that benefits the North.
- Material Flows and Trade:
 - The European Union (Giljum and Eisenmenger 2003) imports four times more tons than it exports.
 - Latin America exports six times more tons than it imports
 - Environmentally sustainable trade cannot rely solely on harmonisation of environmental standards or on internalisation of external costs (which anyway is not taking place). It depends to a large extent on the scale of material and energy flows, as well as on the scale of land use.
- Therefore, new policies based on the following ideas should be forthcoming:
 - The scope and limits of Fair Trade, its roots in consumer awareness of “unfair” trade and debates on declining terms of trade.
 - The conditions under which “commodity chains” are amenable to “fair trade”, e.g. “green” wood imports, “green” coffee, but not “green” copper or oil. For example, farmed shrimp often implies environmental destruction in comparison low input traditional silvo-fisheries.
 - The scope for international environmental commodity agreements.
 - Theories of “ecologically unequal exchange” vs. “comparative advantage”, vs. “staple theory of growth” – problems of measurement and the policy implications.
 - “Environmental terms of trade”, computations of embodied pollution and of carbon intensities of exports/imports.
 - The links between the (cheap) price of raw materials imports, and recycling policies in rich countries.

4.1.6 Corporate Environmental Accountability:

- Policies should take into account the need to curtail or redirect the de facto role of business in international environmental governance. This would imply the extension of EMAS or other systems of environmental accounting or auditing (or certification) to overseas operations, not only relying on voluntary approaches to corporate social responsibility (CRS) in the context of foreign direct investment.
- Rules for environmental liability should be developed, based on the experience of specific studies of claims of environmental liabilities in court cases (pasivos ambientales in Latin America, e.g. Repsol in Neuquén, Argentina, 2002), in order to produce recommendations for international or regional legislation.
- The principles of externality valuation taking into account irreversibilities, social and economic asymmetries between the actors, and the variety of incommensurable languages of valuation, drawing on the experience of American practice (CERCLA-Superfund, domestically; ATCA, internationally).
- Norms not only of domestic, but also overseas application of technological standards (they should be different, in many cases) should be enforced.
- Environmental liability as a stimulus for technological change should be considered as a strong argument for corporate accountability, to be added to considerations of environmental justice and economic efficiency (which requires the internalization of externalities).

4.1.7 Climate Change Issues

- There are several guiding questions for a new North-South Deal to approach. Should the Kyoto Protocol be seen from the South as a first step to combat climate change or as a gigantic “grandfathering” of emission rights? Is the AOSIS one main force for more urgent reductions? Are there other potential allies?
- The debate on the “carbon debt” to the South (computed as unpaid abatement costs or as present-valued future damage) should be a debate on the distribution of property rights on carbon sinks and reservoirs (and other forms of “burden sharing”) which might help to bring some Southern governments into a more active role towards a policy of “contraction, convergence and, in the meantime, compensation”.

- A new environmental policy is required based on eco-charges on fossil fuel extraction and exports collected in the exporting countries (or by international bodies) as “natural capital depletion taxes” (or *retenciones ambientales* in Latin America), i.e. a fiscal implementation of a rule of “weak sustainability”.
- Such revenues to be recycled (accepting therefore an environmental-social conditionality) towards poverty reduction/alternative energy technologies in the South (with much room for technology transfer). The main actors here should be the OPEC countries.

4.1.8 A New Agrarian Deal

- New agrarian policies should consider “Farmers’ Rights” a much more ambitious instrument than at present, for a world policy in support of traditional agroecological production, and against genetic erosion of plants and animal races.
- Monetary incentives (through “fair” bioprospecting contracts) could be considered, but emphasis on local use values of biodiversity in order to preserve knowledge of genetic resources, and the genetic resources themselves.
- The role of new global pro-peasant movements and networks (Via Campesina, RAFI-ETC) should be supported. They propose an end to agricultural export subsidies, and also protection for small farmers, emphasizing the multifunctionality of agriculture (which is also a EU platform).
- Payment for environmental services and for the conservation/coevolution of genetic resources could be the chosen instruments with a clear win-win outcome on poverty reduction and environmental quality. However, the proposals from such new stakeholders clash with the agricultural policies from the US and also with the proposals from governments in the Cairns group and with many agricultural lobbies in the EU.

4.1.9 Other Issues

- The unsustainability of new tree plantations should also be made clear, bearing in mind “plantations are not forests”.
- In conclusion, new international policies in these and many other fields: fisheries, transport, urban development, water use, energy technologies are needed.

4.1.10 Conclusion

- In my book *The Environmentalism of the Poor: a study of ecological conflicts and valuation* (Edward Elgar Publ.) I integrate two areas: Political Ecology and Ecological Economics.

Political Ecology studies ecological distribution conflicts, focusing on local resistance to environmental exploitation and struggles for environmental justice (or, in the South, Environmentalism of the Poor) throughout the world.

- Ecological Economics shows that economic growth requires increasing amounts of energy and materials (there is no absolute "dematerialization"). It recognises the social and ecological limitations of the economy, and addresses the value of things which cannot be given a price, such as livelihood, quality of life, species diversity or the sacredness of indigenous peoples' lands. Both of these approaches are needed for economic, social and environmental policy.

5 Session I: “Trade and Environment Issues: How to Overcome North-South Conflicts ?“

5.1 Introduction by Bernd Fischer

Ladies and gentlemen, let me use this opportunity to give you a belated, but nevertheless cordial welcome to this expert workshop on “International Institutions for Sustainability”. I would like to thank the German Institute for Economic Research, namely Mrs. Dröge and her team, for its preparation and invitation.

The German Federal Ministry of Education and Research (BMBF) is funding this workshop – or let me rather say – this series of exploratory sessions. The BMBF is currently planning a considerable number of economics–related projects within the next years dealing with sustainability problems. That’s why within the next months we want to put our feelers into economic science in order to explore sustainability research clusters attractive for economists. Like we did with social scientists a few years ago in the context of socio-ecological research.

That programme has followed an integrated, trans-disciplinary method. There are several definitions of trans-disciplinarity. The one we use in the BMBF means starting from sustainability problems rather than research disciplines and looking for solutions to these problems. Starting off real and complex sustainability problems will usually require interdisciplinary analysis and synthesis, thus integrating human and social sciences, economics and natural sciences. Furthermore: a definition of social problems and the real life application of solutions need integration of relevant social actors into the research process. The sooner – the better! Because we need more effective policy recommendations. Sometimes this is also called “mode 2 research”.

Now what we have experienced so far in Germany is that mere economic modelling versus politics and society seem not to fit together so well. At least that’s what the Research Council (Wissenschaftsrat) evaluated last year.

Our science policy aims therefore are:

- The BMBF wants to facilitate the communication of economists with other sustainability scientists.

- The BMBF wants to help to enlarge the interface between sustainability policy and economic research.

In other words: getting from “economics and sustainability” to “economics for sustainability”!

When I talk about sustainability I refer to the Rio 1992 definition which meant more than a new “brand name” for environmentalism and environmental politics. It was a new paradigm for international and local policy, combining economic, social and environmental needs in intra- and intergenerational perspectives.

Now my central questions for this and the following rounds of experts:

- From the point of view of economists, what are the core sustainability problems to be solved? Considering the Rio 1992 definition.
- Where are the interesting links between sustainability science and economics? Where do we find promising economic contributions to the sustainability debate? And in which fields does sustainability research need more and better economic advice?

In this respect, I also have a personal question, because I am an economist by training: Is free trade and economic globalisation good or bad for the participating economies? For which industries and enterprises? Is it good or bad for the environment?

As we all know one comprehensive overall economic theory does not exist. So the defined problems and contributions may vary considerably, depending on your theoretical perspective, may it be neoclassical, evolutionary or Austrian, institutional, neo-Malthusian, Keynesian, or even classical-marxist! Although representatives of some “schools” are missing today, I hope get as many perspectives integrated as possible. But I would also like to know whether the theoretical debates within economics are really relevant once we do interdisciplinary and trans-disciplinary research.

So Mrs. Feist and me, we are here to listen and learn, not so much about the latest specializations in economic theory, but about big lines and promising links of economic theories to sustainability sciences and policy – but also about their restrictions. Thank you for your attention.

5.2 Statement by Dr. Michael Finus

M. FINUS: I am from the University of Hagen. My background is agricultural economics and international economics. For me, it is hard to attribute game theory to a specific economic school of thought, since game theory is the science of incentives.

The design of a treaty is crucial for its success. I will talk about related issues here such as sanctions, monitoring, transfers, issue linkage, global abatement and allocation of abatement duties and membership rules. I would say that we know quite a lot about the first three items. We know how to analyse the concepts, but there is a big lack of practical solutions.

5.2.1 Sanctions

If you threaten to punish somebody, this is only credible if the threatening government is not worse off. That is why trade embargos or bans usually do not work. This concept explains the problems. As I said, we have the tool to analyse sanctions, but the problem is now to develop practical solutions. Which threats are credible and where are the weaknesses? There are, e.g., nearly no sanctions in environmental agreements. But take the Montreal Protocol: if a developing country is not decreasing CFCs it will not get any transfers anymore. Yes, to some extent it is a real punishment. But because of the feature of the agreements, this can only last for a certain amount of time; moreover, it only works for developing countries. Another example would be the Kyoto protocol: there is an option to exclude countries that do not comply with the protocol. They will be excluded from the permit trading system. But then you find out that this exclusion is not very clever. If, e.g., Russia is excluded, the price for permits will increase and other countries are worse off. Therefore, exclusion is not a credible punishment. You should not exclude a permit supplier, but some of the selling price has to be allocated to a fund. This is one option to solve the problem. Another one is that the buyer has to pay a mark-up. As can be seen here, there are indeed possibilities for practical sanctions. Further research would be to develop practical sanctions, to analyse their credibility and to propose modifications and improvements.

5.2.2 Monitoring

There are problems related to the costs of monitoring and the reliability of self-monitoring. Research should focus at strengthening of reputation effects via NGOs and international organisations (UNEP).

5.2.3 Transfers

There are two problems. First, there is free-riding between donor and recipient and, second, free-riding within the group of donors. Research recommendations include: the strengthening of reputation effects via a rating system, gradual payment based on performance, establishing a fund to back up sanctions, and gradual implementation of a permit system.

That is what I wanted to say about the first three points. The others are different: here, we have some theoretical evidence but there are no real general results around, so that there must be more theoretical efforts. I will now cover issue-linkage.

5.2.4 Issue-linkage

In the literature, you find a lot about free-riding . There are two types: 1. Non-participation (Membership models) 2. Non-compliance (repeated game models)

5.2.4.1 (Non-) Participation

The motivation here is the linkage of a *public good* agreement with a *club good* agreement. Examples for the latter are research and development agreements and trade agreements. If you link them, you say that you can only enjoy the benefits of the latter if you agree on the public good. The latter would be a trade agreement, the former would be an environmental problem. But there must not be large spill-overs. The driving force would be the degree of excludability from the club agreement which has to be high.

Critical applied issues are that, first, empirical evidence is rather weak. Second, transaction costs might be high for issue-linkage. That is an issue. Another one may be mixed membership. In theory, it is absent whereas in reality, it is a practical issue that has to be solved. Critical theoretical issues are the generality of the results and welfare conclusions. In the general literature, from the number of participants you cannot conclude to the success. Also, driving forces are critical. The club agreement must be exclusive. The new literature on coalitions shows that you can trade the club agreement as negative externality for outsiders (incentive for them to join the club). An international environmental agreement would be a positive externality (reducing emissions). Another issue is open versus exclusive membership. To some it up, more work has to be done regarding issue linkage.

5.2.4.2 (Non-) Compliance

The basic motivation is the linkage of asymmetric games. Instead of using transfers you use package deals. The driving force is that the linkage increases the number of strategies to achieve an objective.

Critical applied issues are related to empirical evidence and research, transaction costs and mixed membership. Also, there are several critical theoretical issues: First, motivation. In the literature, the authors say that in reality we have transfers. Then they model issue linkage. In a steady context it would not work, but in a dynamic it would. Instead of paying transfers you basically exchange issues. So far, however, the literature lacks an explanation why issue-linkage should be more successful than transfers. It has to be explained why it should be preferable to transfers. Other critical theoretical issues are prisoners' dilemma games, degree of asymmetry, stability concept (credibility of sanctions), additive payoffs when issues are substitutes (positive effect) or when issues are complements (negative effects)

5.2.5 Global abatement and abatement duties

The problems here are non-compliance and non-participation. Research should ask the following two questions: When is less more? And when is an inefficient but equal allocation better than an efficient but unequal one?

5.2.6 Membership rules

The problem here is free-riding. Research questions are: When is low participation better than high participation? When is exclusive better than open membership? When are regional better than global agreements? Does a minimum participation clause raise participation?

5.2.7 Conclusions

Generalize and expand on existing game theoretic research on treaty design. Combine game theory and political as well as institutional sciences and empirical research.

5.3 Statement by Dr. Imme Scholz

I. SCHOLZ: I work in the German Development Institute with a focus on global environmental policy and natural resource management, in particular on deforestation in the Brazilian Amazon.

From this work, I know about the problems associated with unclear local property rights, “global commons” and/or national public goods of global relevance. Who has the right to decide about the use of natural resources and to set priorities between conflicting objectives? The local population, local or national governments or the international community? How are the costs and benefits of different options perceived? In developing countries, the central question is often defined as being: how much development versus how much protection? But especially in the Amazon new social actors are emerging who claim that there is no such contradiction and that there are ways of reconciling economic, social and ecological objectives.

My point of departure, therefore, are social and institutional learning processes which emerge from conflicts about the use/non-use of natural resources and environments: First, what are the perceived rational options of the involved actors? Are environmental costs included in these options? By which actors and why? Environmental learning processes are crucial for broadening the range of factors perceived by the actors when negotiating about conflict resolution. Second, not only the design of a solution or a treaty but also the chances of implementation do matter. This is important since implementation can take a lot of time.

When developing countries look at trade policies and the application of environmental standards to exports, they perceive the latter as limiting their development potential in the short run. Since their economic specialisation is often natural-resource dependent, economic growth is necessarily associated with environmental costs. Since some years, however, trade unions, NGOs and other grassroots movements are voicing the social impact related with these environmental costs and force public and private investors to revise their cost-benefit analysis, even in the short run. The question then becomes: who should pay for additional costs of avoiding this negative balance? Many developing countries rightly claim that they do not have the necessary resources.

This means that issue linkage, i.e. linking trade rules with objectives of environmental policy, would call for technological and financial assistance for developing countries if environmental commitments are made. This assistance is necessary at national and local levels where developing countries need help for capacity building, in order to enforce and implement environmental policies. It is those local processes which need to be supported. Otherwise we will continue to have implementation problems at other levels. Also - here I refer to the notion of a World Environment Organisation (WEO) - most conflicts about natural resources are very much local problems. The related property rights have to be defined at the local level. The

question then is: (how) can dynamic learning processes between the international level and local public and private actors be fostered? Unfortunately, we only speak about power relations. How can we turn these relations into real learning situations where economic, social and ecological costs and benefits are evaluated in a different way?

To illustrate this: In Europe, many suppose the Amazon to be a *global commons*, due to its important function for regulating regional and global climate and water cycles. But in Brazil, the public debate on the Amazon centred for decades on *national sovereignty*. International attempts to support the protection of the Amazon rainforest were rejected and met with mistrust. But since 1992 things are changing. The industrialised countries, mainly Germany, finance a huge programme, the PPG7, in order to strengthen environmental management capacities in the Amazon. Today, foreigners can engage in the Brazilian debate, support from European governments and the US is accepted and many international NGOs are deeply involved in partnerships with local NGOs and social movements. The Federal Brazilian government used to be split on the issue of environment versus development goals in the Amazon, many local governments still are. But there has been a lot of progress in the past that can be linked to the international debate and to the practical experience of international cooperation. In this respect, the PPG7 can be considered as a successful process of environmental learning and institution-building.

As to the history of multilateral environmental agreements, such as the Rio conventions, the real benefits accruing to developing countries in terms of financial aid and technology transfer are still very small, despite all pledges made since 1992. There is not only an enormous gap between local and global challenges, but also between northern countries' discourses and what the north is willing to pay in practise to the south when it comes to the protection of global environmental goods or national environmental goods of global relevance. In this way, there is a real dilemma for developing countries to make decisions between development and environment in the short run.

The bargaining power of developing countries could perhaps be strengthened in some important cases by linking issues when negotiating multilaterally, as many reservoirs of natural resources and important biota and ecosystems are located in developing countries. In many cases, however, it will not really help because the conditions for effective bargaining are not given.

The other argument is about separating environment from trade issues. On the one hand, many developing countries want to prevent the WTO to include environmental issues in its mandate because they perceive the WTO as a powerful organisation dominated by industrialised countries and their political priorities. In general, developing countries do not have the necessary human resources to participate in international trade negotiations on an equal footing with the industrialised countries. On the other hand, we need more momentum for linking environmental and trade issues. It is important to pose challenges in order to show the aim we are focusing at.

Economic research should concentrate on innovation theory and routines regarding organisations and institutions in order to examine which factors foster learning by government, civil society and economic actors. The focus should not be on perceived scarcities but rather on dynamic processes and the corridor for technological and institutional innovations. So, I make the case for evolutionary economics. Also, the importance of multilateral processes for the evolution of national processes should be considered.

6 Presentation by Prof. Timothy Swanson: “The Impact of the Montreal Protocol: Who Bears the Costs of Global Environmental Agreements?”

6.1.1 International Environmental Agreements as Global Governance

- Transboundary resources rendering national boundaries superfluous
- Global resources rendering global cooperation necessary
 - Resources render national boundaries the baselines for bargaining

6.1.2 Can Global Cooperation Inhere in a World Divided into Nation States?

- Absence of Global Monitoring and Implementation
 - No Aggregate Impact
- Absence of Universal Perspective on the nature of and solution to Global Problems
 - No Agreement on Distributive Impact

6.1.3 Absence of Aggregate Impact

- Countries’ obligations are not enforced
- No additional cooperation is achievable
 - States sign up to the level of obligations that they already intend to achieve
e.g. UN ECE Protocol on Sulphur Dioxide and EU Large Plants Combustion Directive (Murdoch and Sandler 1997)

6.1.4 Failure to Agree Distributive Impact

- Different countries perceive the same problem differently
- Reasons include: physical circumstances (latitude, longitude), prior investments, development status

E.g. Northeast Atlantic Fisheries Commission (Underdahl)

6.1.5 What Impact of the Montreal Protocol?

- Nearly 200 states have signed the Protocol
- Does this demonstrate the Protocol’s impact or does this demonstrate that it is in fact a nullity? (Barrett 1994; Murdoch and Sandler 1997)

6.1.6 The Distributive Impact of the Montreal Protocol

- The impact of ozone destruction is the creation of holes that allow additional UV radiation within the lower atmosphere
 - Who benefits from the Protocol?
- The terms of the Montreal Protocol provides that all member states must eliminate CFC production by 2000, with Art. 5 countries given a 10 year hiatus
 - Who bears the cost of the Protocol?

6.1.7 Estimating the Impacts of the Montreal Protocol

- The aggregate impact of the Montreal Protocol may be estimated by comparing the terms of the Protocol with what would have occurred (in aggregate) in its absence
- The distributive impact of the Montreal Protocol may be estimated by assessing how individual states would have occurred in its absence

6.1.8 Society's Changing Relationship with CFCs

Table 1: Stages of Ozone Management and Regimes

Stage I	Stage II	Stage III
Non-Management	Unilateral Management	Joint Management
Non-cooperative Behaviour		Cooperative Behaviour
1930s	Mid-1970s	1/1/89
Invention of CFCs	Discovery of Ozone Depletion	Montreal Protocol

6.1.9 Modelling CFC Usage in Absence of International Management

- There is an important positive effect of incomes on CFC use, as CFCs widely used in consumer consumption goods (electronics production, packaging, and esp. refrigeration)
- There is a secondary negative effect of incomes on CFC management, as CFC use is seen to degrade the state's environment (Stokey)

6.1.10 Forecasted CFC Usage in Absence of an Ozone Hole

- Estimated relationship between production of CFCs and Income prior to 1970 demonstrated geometric growth in CFCs
- Knowledge of ozone depletion (Molina and Rowland 1974) and unilateral management by individual states reduced global CFC production 1975-1988

6.1.11 Estimating the Relationship Between Income and Unilateral Management

- Different countries perceived ozone depletion differently, and made different efforts to reduce CFC production (e.g. timing of aerosol bans)
- The estimation indicates an “Environmental Kuznets Curve” with turning point of approx. USD16,000

6.1.12 Forecasting from the EKC

- Positive Implication of EKC
What level of CFC production would have occurred in the absence of the Protocol?
- Normative Implication of EKC
What level of CFC production is each state foregoing by reason of the CFC ban?

6.1.13 Impacts of the Montreal Protocol

- Aggregate Impact
Assuming that CFCs remained the most cost effective technique for performing their functions, the Montreal Protocol resulted in an estimated reduction of global CFC production from 108 kg. (2050) to 0 kg. (2010 -)
- Distributive Impacts
Assuming that developing countries are entitled to the same levels of unilateral management undertaken by developed countries (1975-1988), then virtually the entire burden of the Montreal Protocol falls on the least developed states

6.1.14 A Caveat on the Loss of Development Options and Technological Change

Depending on assumptions about technological change, the fact that the developing countries' lost production occurs in the distant future (because they are so very poor today) means that appropriate investments and rapid technological change might render those physical losses meaningless

6.1.15 Conclusions

- Resources do not respect boundaries and so international governance institutions must continue to develop
- Bargaining over the birth of these institutions is difficult because each state perceives the same (global!) problem so differently
- The solutions to many global problems involve changing the development path for the last-developing states (FCCC, Biodiversity, etc.)

6.1.16 Shifting the Path of Development?

Purchasing rights to particular pathways to development is problematic:

- Compensation is complicated by assumptions about technological change (better to have prizes for new technologies?)
- Shifting developing countries onto new pathways involves new risks for them and for the globe.

6.1.17 What Impact?

Some may wish to believe that international negotiations over international governance are fruitless, but they are plagued by costs and benefits, just as are domestic variety. The future of the 80% of the population that lives in the developing countries will determine the future of us all. Building that future is what international institution-building is about.

7 Session II: “A Regime for Global Sustainable Governance”

7.1 Statement by Dr. Frank Biermann

7.1.1 Sustainability Economics - Sustainability Governance

- The Earth System is in Crisis
- The Governance Challenge: Earth System Management in a World of 180+ Nation States

There are three main questions: hierarchy, polarity and plurality.

- Hierarchy: Multi-level governance
 - Linking global, regional, national and local levels for effective global solutions to world-wide environmental problems
- Polarity: Multi-polar governance
 - A bipolar, unipolar, multipolar world?
 - Global harmonisation versus fragmentation?
 - In particular regarding North/South relations
- Plurality: Multi-actor governance
 - what are the key actors of global environmental governance,
 - and why?
 - how do they act?
 - what is global democracy?

7.1.2 Multilevel Governance: A WEO as an organisational counterweight to the WTO?

- International organisations are in a better position to initiate norm-building processes than UN subsidiary bodies
- Both the ILO and the WHO, e.g., constitutions allow the organisation
 - To adopt treaties by majority vote
 - To put pressure on members to ratify these treaties
 - To oversee implementation of the treaties, as well as
 - Require members to submit reports on implementation to the organisation

Efficiency Gains Through A WEO:

- A World Environment Organisation would also allow for efficiency gains through the emergence of a ‚global environmental capital‘.
 - This could decrease administrative costs by relocating convention secretariats to the seat of the organisation
 - Strengthen the negotiating capacity of developing countries by enabling them to set-up specialised ‚environmental embassies‘ at the seat of the organisation.

Question: How could such an organisation look like? What would be exactly its effects?

7.1.3 Multipolar Governance: American Hormones, Asian Shrimps and the trade/environment nexus

More Lenient Institutional Context for Pioneering Countries

- Recent jurisprudence has broadened the range of options for governments for unilateral environmental decision-making under WTO law.
- This helps pioneering countries to ...
 - ... develop innovative solutions without violating WTO rules
 - ... assist in the diffusion of such innovation through restrictions in trade.

7.1.4 Diffusion on Whose Terms and Whose Costs?

However, this development may lead to a global harmonisation of standards on the level of the major importing markets in the industrialised world,

- ... without participation of developing countries in decision-making
- ... without financial compensation of developing countries
- ... without adequate technological assistance to developing countries

7.1.5 Time for a Global Compact on Trade and Environment

- WTO law is in need of a consensus interpretation by both North and South.
- This should result in the precedence of multilateralism over unilateralism, ...
- ... while not stalling diffusion processes of innovation and technology.

7.1.6 Multiactor Governance: Understanding the New Role of Public-Private Cooperation

A surge of new Partnerships for Sustainable Development raises new questions for public policy research:

- How effective are these new instruments of global governance?
 - How can their performance be improved?
- How legitimate are they?
 - How can legitimacy be improved?
- (How new are they?)

7.1.7 A Possible Research Strategy

- Clustering Partnerships
- Analysing Partnerships
- Policy Advice for Stakeholders

7.2 Statement by Prof. Dr. Bernd Siebenhüner

7.2.1 A Regime for Global Sustainable Development Governance: Learning to Manage the Challenge

The Learning Challenge:

- Compliance deficits of regulatory policies
- Lacking acceptance for direct intervention into individual decisions
- Sustainability necessitates open processes
- Long time horizons and manifold uncertainties, in particular in climate change
- Need for stakeholder involvement
 - Need for social learning and innovation processes

7.2.2 Elements of Social Learning for Sustainable Development

- Sustainability knowledge
- Inter- and transdisciplinarity

- Long-term perspectives
- Moral development
- Societal conflict resolution and discursive capabilities
- Capacity to solve environmental and social problems (through institution building and learning mechanisms)

7.2.3 Research Questions

- What is specific about learning towards sustainable development?
- How could learning be conceptualised?
- How do collective actors learn vis-à-vis individuals?
- What triggers their learning?
- What hampers social and individual learning in various contexts?

7.2.4 Interesting Fields of Social Learning

- International Organisations
- Private corporations
- Citizen groups
- Scientific assessments
- Governments
- Global / local networks
- Etc.

7.2.5 Promising Theoretical Approaches

- Learning Theories
- (Political) Evolutionary Economics
- Organisational Learning (Management Studies)
- Institutional Change (Institutionalism)
- Behavioural theories

7.3 Statement by Dr. Michael Wohlgemuth

7.3.1 Appropriate International Governance I: Centralisation, Decentralisation, or Polycentralisation?

7.3.1.1 Centralised Arrangements (vertical co-ordination with uniform definition of policies)

- Pro: Economies of scale in organisation, and:
- Can help forestall free-riding in presence of (universal) common pool resources, and:
- Can effectively collect and diffuse scientific (common) knowledge.
- But: One size fits all?, and:
- Reduced adaptability & flexibility, and:
- Increased vulnerability in complex, changing environments, and:
- Reduced accountability to citizens (no “global demos”, little input legitimacy), thus:
- Increased opportunities for big, multinational interest groups to seek rents without exposure to public attention.
- Effectiveness? Lowest denominator consensus or log-rolling outcomes.

7.3.1.2 Decentralised Arrangements (spontaneous diffusion of best practice)

- Pro: Nation state governments as most visible, legitimised, and competent actor, and:
- Can effectively use local knowledge of time and place, and:
- Nation states can (aspire to) become lead markets for environmental innovations (technologies & policies) with voluntary diffusion through policy imitation (and learning); see Vogel 1995 (“California effect”); Porter 1990 (“competitive advantage”).
- Benchmark competition: national governments look for best practise, observing other governments.
- Decentralisation reflects economic, social, and political capacities, preferences and opportunity costs of environmental policies better than centralised bargaining systems.
- “Legitimacy”, “solidarity”, “rule of law”, “democracy” provide “input legitimacy” that still mostly refers to nation states.

7.3.1.3 Polycentric, Nested (Multi-tier) Arrangements

- Ostrom (1990, 2001): small, medium- and large scale self-organised resource governance systems with considerable independence to make and enforce rules for a specific area.
- Parallel adaptive systems nested within ever-larger units that are themselves parallel adaptive systems.
- Autonomy to experiment with diverse rules; access to local knowledge, rapid feedback from policy changes, learning from performance of other parallel units.
- No final, all-purpose authority
- Strengths when viewed from dynamic, complex-systems perspective: less vulnerable to external shocks, more learning, less consequential risk of failure.
- Redundancy as advantage!

7.3.1.4 A Polycentric Club Structure? Environmental Governance as “Flexible Geometry”, “Multi-speed Environmentalism”?

- (Clubs of) smaller, more committed & ambitious states with voluntary membership can be more effective than universal membership and agreement on lowest denominators.
- Prestige of adhering to exclusive club of (environmentally more) ambitious nations as political “label”; possibility of shaming non-member states.
- But also danger of “raising rivals’ cost” & environmental protectionism. WTO rules should hold.
- OECD; UNEP; GEN as policy arenas for pioneers and multipliers for diffusion of policy innovations, documenting and publishing national best practises (e.g. OECD Environmental Performance Reviews provoking political reactions; World Bank Report “Innovations in Environmental Policy”). Also: Greenpeace may act as monitor.
- Task-related (“output”) legitimacy can transcend national borders. Sectoral “demoi” for specific issue-areas may exist (thus also granting something like “input-legitimacy”).

7.3.2 Appropriate Governance II: Regulatory Competition

7.3.2.1 (Our Theories of) Regulatory Competition: Are Environmental Policies an Exceptional Case (“Ausnahmebereich”)?

- **yes:** externalities, tragedy of the commons, free-riding => race to the bottom (Delaware)

- **no:**
 - importance of discovery in complex environments,
 - lead markets for innovative technologies & policies, benchmarking,
 - legitimacy,
 - comparative advantages (no raising rivals' costs)

7.3.2.2 Why a “Race to the Top”? (Globalisation is Good for Environment ...)

- High standards in large import markets force foreign producers to adapt (e.g. California car market with higher exhaust gas standards),
- Economies of scale in production for multinationals: incentive to produce on highest technological standards also for other markets (and advertise it ...).
- Competitive advantage of nations' environmental lead markets (Porter 1990); first mover advantage of pioneer states with strict regulation developing new technologies that can eventually conquer expanding markets.
- Advantage based on first mover, learning effects or patents. Competition on quality and costs.
- But again the protectionist side-effect: raising rivals' costs
- But does “race to the top” only work with product regulations? – Not necessarily: procedures are also products (windmills, filters etc.).

7.3.3 Appropriate Governance III: Regulation by “Command-and-Control” or by Incentives?

- Public Choice (e.g. Buchanan/Tullock 1975): political bureaucracies, established firms & ideological environmentalists favour command & control over market internalisation policies (such as emission trading, taxing schemes or eco-labels) ...
- ...although the latter are more efficient (leaving to choose abatement technologies and cost-effective control to the firms).
- Why? Industry can be cartelised, it can “capture” its regulator and urge him to regulate them in a way that increases the costs of potential competitors (barriers to entry).

- Also applicable to international regimes? Agreeing on goals (e.g. emission reduction) while leaving policy options to nation states should be generally preferable to prescribing certain actions & technologies.
- But: nation state politicians may prefer centralised command-and-control as “level playing field”, as policy more easy to communicate (focus on regulatory input instead of environmental output ...) although regulation by targets (environmental indicators) should be ultimate concern.
- Opportunity costs & cost-effectiveness of environmental policies are often ignored. Some externalities should be (but are not) politically irrelevant if costs of intervention exceed anticipated gains.
- Eco-Labels: support consumer sovereignty, signal environmental (extra-) value without requiring great deal of time; provide incentives to engage in reputational competition. Reflect variations in cost-benefit assessments of producers & consumers.

7.3.3.1 Appropriate Institutional Governance IV: Private Actors

NGOs in a wider sense: (a) Environmentalist interest groups, (b) business firms (TNCs), (c) scientific community

- NGOs: useful for
 - shaming corporations that harm the environment
 - devising eco-labels
 - documenting best (or worst) practise
 - initiating and supporting innovative technologies (e.g. Greenpeace Germany promoting CFC free fridge in co-operation with business firm and university institute).
 - but: which NGO is representational for which interests (issues, countries)? Self-selected elites often favour regulatory input as “success” rather than environmental relevance and effectiveness whilst disregarding the policies’ opportunity costs.
 - To whom are NGOs accountable?
- Business (TNCs):
 - Ecological good will & reputation of growing importance. But main incentive will have to remain: profitability & providing what consumer want.

- Businesses may set standards & codes of conduct on their own (but also with interest to protect their market from competition, see above).
- “Shell Tradable Emissions Permits System” as pilot project.
- Scientific communities:
 - can be (pre-) decisive, e.g. IPCC (Intergovernmental Panel on Climate Change).
- Politics, NGOs, Business: “Private-public partnership, trisectoral networks, civil society” or “iron triangle”, collusion against taxpayer, consumer, competitor? All 3 most often focus on regulatory input rather than policy effectiveness.

7.3.4 Economic Approaches / Research Agenda

See Elinor Ostrom (2001):

“Static analysis has not ... prepared policy analysts with the knowledge needed to design resilient governance systems in a rapidly changing, complex, and interdependent world”

“Instead of assuming that designing effective governance systems is a relatively simple analytical task that can be undertaken by a team of objective analysts sitting in a nation’s capital or an international headquarters, it is important that we begin to understand the policy design process in democratic societies as involving an effort to experiment with a large number of component parts”.

7.3.4.1 Political Economic Analysis:

- New Institutional Economics (e.g. Hardin 1968, Ostrom 1990, 1993, 2001): property rights, incentives, transaction-costs, path-dependency, informal institutions (culture).
- Constitutional economics (e.g. Buchanan 1975; Wegner 1998; Vanberg 1994)
- Public Choice (e.g. Yandle 2001 over an overview):
market failure & political failure: Rent-seeking, Capture-theory, expressive voting, symbolic policy, politics in non-transparent supra-national networks uncontrolled by voters..
- Evolutionary economics (e.f. Wohlgemuth 2002 for an overview):
innovation / diffusion of new (environmental) technologies, policies, ideas, preferences.
Political learning theories (e.g. Richard Rose 1993: lesson drawing in politics); path-dependency and critical masses in policy adoption (developed countries with large markets and strict regulations as critical masses).

- Standard (neoclassical) economics:
good enough to substantiate claims in favour of, e.g., emission trading schemes.
- Game theory:
a tool used in all of the above.

7.3.4.2 Issues:

- Regulatory environmental policies competition: race to bottom or top? Under what conditions?
- Institutional preconditions for “sustainable politics” with long-term perspectives at domestic (and international) level: “political economy of policy reform”, “barriers to entry in politics” (e.g. Wohlgemuth 2000) ...
- The economics of reputation, esteem (eco-labels, “green” entrepreneurship)
- Theory of clubs: political reputation of being “in” vs. opportunistic free-rider incentives
- Polycentric, nested governance arrangements & social / political learning processes.
- Environmental politics & technologies innovation & diffusion processes & conditions.
- Selective incentives to provide public good “better environment” (Olson 1965)

7.3.4.3 Why WTO Works and Why WEO is Still a Vision

Table 2: Comparison between WTO and WEO characteristics

WTO	WEO
<p>A club based on:</p> <ul style="list-style-type: none"> • voluntary membership • non-discrimination & reciprocity • enforceable compliance, workable dispute settlement 	<p>Club or mandatory membership?</p> <ul style="list-style-type: none"> • ? • ? • ?
<p>Problem situation:</p> <ul style="list-style-type: none"> • mutual benefits exclusively for members (no free-ride) • strong economic incentives to be member • PD intra-national, but NOT: Inter-national • The more members join, the less attractive to stay/opt out 	<p>Problem situation:</p> <ul style="list-style-type: none"> • No excludability from environmental benefits • Strong economic incentives to free-ride (tragedy of commons ...) • PD at all levels with: • the more members join, the more attractive to stay/opt out
<p>Necessary rules:</p> <ul style="list-style-type: none"> • General, non-discriminatory • Open (mostly proscriptive) • Certain, simple (stabilising expectations) “universalisable” (Hayek/Kant) • Provide members with rights (market access) 	<p>Necessary rules:</p> <ul style="list-style-type: none"> • More result-oriented • More prescriptive • More uncertain, complex programmatic mutual commitments • Define obligations (targets, behaviour...)
<p>(Non-) compliance is rather</p> <ul style="list-style-type: none"> • Easy to determine • Independent of available resources and attained results: omission is not scarce (“Unterlassen ist nicht knapp”) • Strict rules, due process • Clear mandate • Little need to agree on common tasks & actions 	<p>(Non-) compliance is rather</p> <ul style="list-style-type: none"> • Difficult to determine • Dependent on “capacity”, behavioural changes and environmental impact • “soft law”, diplomacy • complex equivocal mandate • Much bargaining on joint commitment / action

7.4 Statement by Prof. Peter Söderbaum

7.4.1 “Towards a Radical Interpretation of Sustainable Development”

As I understand it, the purpose of the present workshop is to respond to two sets of questions:

- Is the present international institutional framework appropriate to deal with the challenge of Sustainable Development (SD)? Could some alternative institutional framework be identified that is more promising to meet this challenge?
- Is mainstream neoclassical economics sufficient and well adapted to deal with SD or is there a need for other supplementary or competing approaches – a ‘Sustainability Economics’ as discussed in the background paper for the workshop (Dröge and Deutsch 2003)

In an attempt to deal with these issues, I will first point to some possible interpretations of SD and then discuss the challenge facing us at four levels:

- theory of science
- paradigms (in economics mainly)
- ideology
- institutions

Gunnar Myrdal repeatedly argued that “values are always with us” in social science research (Myrdal 1978, p.778) and this short essay is certainly not an exception. I certainly do not know any ‘scientifically correct’ or ‘value-neutral’ answer to the questions raised. Ideology is involved and therefore the rules of democracy apply in addition to ideas about ‘good science’. Hopefully this contribution is part of a dialogue carried out in a spirit of pluralism concerning theoretical perspectives in economics.

While SD is generally discussed at the level of society, it must be made clear that SD for society as a whole is not possible until microeconomic units such as individuals and organizations pursue multidimensional objectives. As an example, business companies have to internalise SD in multidimensional terms. Similarly, the life-style of individuals have to be compatible with SD. It is clear that we are far from such a situation today.

7.4.2 Interpretations of Sustainable Development

Sustainable Development is generally understood as multidimensional with social, cultural, ecological, financial and other impacts involved. This approach concerns ethics in relation to future generations and ethics in relation to people in other regions. Even environmental ethics involving the living space of non-human life forms is considered and taken seriously. A precautionary principle is often invoked as part of SD although the meaning of it may vary. Finally, SD is connected with democracy as in the case of local Agenda 21 from the Rio de Janeiro agreement. There is some idea that SD starts from the local and regional levels and there is an insight that SD cannot be achieved in one region if other regions are characterized by unsustainable development (USD). We all depend on each other.

As a concept SD is still rather complex and it leaves room for many interpretations. I will here emphasize the environmental aspect and suggest three possible interpretations:

- A. 'Business as usual'. In this case it is assumed that environmental problems have already been taken care of, if there are any problems at all. Progress continues to be connected with 'economic growth' in GDP-terms at the national level and with profits and shareholder value at the business level. SD becomes equal to 'sustainable economic growth'. With economic growth in GDP-terms, all kinds of problems will be solved, it is believed. This 'business as usual' interpretation is also connected with technological optimism. Entrepreneurship, innovations and the market will solve all problems more or less automatically.
- B. 'Ecological modernization'. This interpretation may similarly be optimistic but in a more environmentally proactive sense. It is recognized that there are serious environmental and social problems that require some new thinking and action. It is believed, however, that there are 'win-win' solutions to almost all environmental problems in the sense that improved environmental performance and fulfilment of more conventional objectives will go together. As part of this interpretation it is argued that a number of UN environmental and development conferences have been arranged, that we have an environmental policy at the EU level and the national level and that there are Environmental Management Systems such as ISO 14 001 at the level of organizations. Environmental Impact Statements and Life-Cycle Analysis play a role. Environmental labelling will inform consumers and

Eco-Efficiency as well as recycling are among the key concepts. According to this interpretation and judgment, there is no need for more far reaching changes in our present kind of capitalistic economic system. Present institutional arrangements have been successfully modified to take care of the problems and this process will continue.²

- C. ‘A radical reconsideration of theory of science, paradigm, ideological orientation and institutions’. Without denying the importance of all the measures taken as part of ‘ecological modernization’, possible win-win situations included, it is here argued that something more is needed. The idea is that present paradigms, ideologies and institutions have to be reconsidered as part of a pluralistic strategy. There have been protected zones in the recent development dialogue and unless we deal with this ‘protectionism’, problems will become more serious and more difficult to handle. Sustainable Development as ideological orientation has to be taken seriously and a major shift in thinking is indispensable. As an example, we need complementary or alternative conceptual frameworks in economics as part of a pluralistic and democratic philosophy.

In my judgment, most influential actors in Sweden belong essentially to the A and B-categories as described above while I believe myself that C has to become the main philosophy. While something will be said about a desirable direction of change I have not a clear picture of where it should end. A dialogue and social learning process has been initiated that hopefully will be open-minded and fruitful.

7.4.3 Theory of science

Concerning theory of science only two points will be made here. As already indicated, the idea of a clear separation between politics and science has to be abandoned. Neoclassical economics is science but at the same time ideology³ and politics. The same is true of any alternative to neoclassical economics or any other social science paradigm. When it is recognized that ideology is involved, it becomes necessary to scrutinize neoclassical economics as a specific paradigm from a political point of view and in relation to normal ideas about a functioning democratic society. Are Economic Man assumptions compatible with normal ideas about democracy in society? Is it possible to argue that the ideas of efficiency and rationality in

² The concept of ecological modernization is discussed by Maarten Hajer (1995) among others.

neoclassical economics are neutral from an ideological point of view or do they represent specific ideological standpoints? Is it a reasonable role for science and the scientists to point out the ‘correct’ ideology for ‘efficient resource allocation’ in society? Is it at all possible to defend Cost-Benefit Analysis as currently carried out and do we need other approaches?

As I see it, we need complementary ideas of human beings in economics and as alternative I have suggested a Political Economic Person (PEP)⁴. This person is regarded as a potentially responsible ‘actor’ in a social psychological sense. Our PEP is not limited to the role of being a consumer and other market related roles. Also roles such as citizen, professional, parent are potentially relevant as part of economic analysis. In addition to many roles, there are many kinds of relationships, motives or interests. Connecting the different roles, relationships and motives of a person, one may refer to her or his ‘identity’, relationships may be brought together in ‘networks’ and a ‘ideological orientation’ is regarded as the main guiding principle.

This points in the direction of a second theory of science aspect; it is not enough to study the economy as a whole, or microeconomics, in positivistic terms. Subjectivity in its many forms has to be considered. Here among theories of science, hermeneutics, social constructivism, phenomenology, narrative analysis, critical rationalism have to be taken seriously. Rather than limiting our attention as economists to outside observations of market behaviour, we should also enter into a dialogue with relevant actors as part of an interactive learning process. Tape-recorded interviews with influential actors in relation to a particular issue becomes an important way of doing empirical research. How does Actor A interpret Sustainable Development and how does this particular interpretation influence the practical work and initiatives of Actor A? What are the barriers to SD as perceived by Actor A?

7.4.4 Paradigm

A ‘paradigm’ stands for a ‘theoretical perspective’. In describing a particular paradigm, there is no limitation to a mathematical language. In fact mathematics has proven to have serious limitations as a scientific language. Since there is ideology in each social science paradigm, the Kuhnian idea of ‘paradigm-shift’ is not very fruitful in relation to social sciences. Instead

³ ‘Ideology’ is here defined in broad terms as ideas about means-ends relationships more generally or in a particular field of activity. Ethics is understood as an essential part of ideology.

⁴ Söderbaum 1998 and 2000. Ideas of this kind have been discussed by ecological economists, for instance Jakubowski 1999, 2000, Faber et al 2000, Siebenhüner 2000.

it becomes relevant to speak of ‘paradigm co-existence’ (Söderbaum 2000). It is of course still relevant to refer to a ‘dominant paradigm’ at a particular point in time.

The ideological element in any economics paradigm suggests that it is not meaningful to refer to a school of thought as ‘political economics’ in an attempt to separate it from other schools. Neoclassical economics is ‘political economics’ in the sense that ideology is involved and the same is true of the ‘institutional version of ecological economics’ advocated here. When I have chosen to refer to individuals as ‘Political Economic Persons’ and to organizations as ‘Political Economic Organizations’ in my attempt to point in a direction that differs from the neoclassical one and to suggest a new microeconomics, the idea is rather to open the door for differences between individuals with respect to ‘ideological orientation’ and also to differences between business companies and other organizations with respect to their ‘core values’ or ideological orientation. The following elements are suggested as part of a new microeconomics that hopefully will be more in line with Sustainable Development than neoclassical microeconomics⁵.

Political Economic Person (PEP). Rather than assuming that individuals are utility maximizing consumers, it is suggested that they are guided by an ideological orientation and that roles as citizen and professional may be as relevant as market related roles in attempts to deal with social and environmental problems.

Economics and efficiency. A holistic and multi-dimensional idea of economics is assumed. Impacts of different kinds are kept separate and described in impact profiles rather than aggregated in monetary or other one-dimensional terms. No single idea of efficient resource allocation is accepted. Efficiency and rationality becomes a matter of ideological orientation and political agreements about direction of change. The efficiency idea of CBA can be accepted or rejected depending upon ideological orientation. The attractiveness of ‘eco-efficiency’ (in terms of material input-output relationships) for some actors, has to do with the fact that it responds to a different ideological orientation from that of CBA.

⁵ There is probably no single paradigm in economics that is good or the best for all purposes. In relation to present environmental and social problems neoclassical theory may have something to offer by pointing to the Polluter Pays Principle and the like but other approaches may be even more powerful. The PPP-principle, for instance, will not be implemented until there is an ideological commitment among decision-makers to take that principle seriously.

Decision-making. Rather than thinking primarily in terms of maximization or other optimisation, it is argued that the individual is making decisions or relating to her context by ‘matching’ her ideological orientation with recurrent situations or – in the case of decision-making – the impact profile of each alternative considered. Decision-making becomes more a matter of ‘pattern recognition’ than optimisation in mathematical terms although the latter need not be excluded as a possibility. Aggregation in monetary terms is regarded as ‘monetary reductionism’ and not seen as fruitful if our ambition is to know what we are doing also in non-monetary terms. Monetary analysis will still play a role but only as partial analysis.

Political Economic Organization (PEO). The only organization taken seriously in neoclassical theory is the profit-maximizing firm. Our interest refers to many kinds of organizations where business companies represent a specific case. And even for business companies, the role of monetary performance in relation to various forms of non-monetary performance becomes an open issue. It is simply a matter of ‘business concept’ or ‘core values’ of the company or in the present language; a matter of its ideological orientation.

There are many models of organizations and the ‘stakeholder model’ is one, suggesting that it is not enough to think in terms of ‘shareholder value’. Also other interested parties have to be considered such as suppliers, customers, financing institutions, employees, people living in the local neighbourhood who, for instance, may be affected by pollution. While there typically are some common interests among the stakeholders related to the organization and specific categories of stakeholders, there is also some heterogeneity. PEP is also part of the PEO-assumptions in the sense that it is recognized that each individual as actor or stakeholder will have her or his particular ideological orientation. This means that the organization is regarded as ‘polycentric’. Social change in an organization often depends on the entrepreneurship of specific individuals. When one organization implements an Environmental Management System, this is seldom the result of all individuals simultaneously becoming ‘Green’ in their ideological orientation. Rather it is the result of one or two individuals initiating a social change process that at some stage is broadened to include a large part of the organization.

Ideas about development and progress. Neoclassical economics with its specific ideology tends to legitimise a kind of consumerism where more income and more commodities are assumed to imply a better life. Similarly, the assumption of profit maximization in business and the general emphasis on markets and the belief that the market mechanism will solve many kinds of problems and that it, when encouraged through privatisation etc. will increase wel-

fare in society, are highly ideological. While a larger income may make life easier for people and monetary profits can have a positive role, our present challenge is to suggest a microeconomics that is useful in relation to Sustainable Development. As previously argued, it seems clear that SD can hardly be achieved at the macro level, if micro economic units (individuals and organizations) pursue simplistic objectives in terms of more consumption and more profits. Impacts have to be considered in multidimensional terms and an open dialogue about ideological orientations appears to be necessary.

Market and non-market relationships. In neoclassical theory, markets are at the heart of the analysis. Our starting point is instead that relationships between actors (as individuals or organizations) may be of a ‘non-market’ or ‘market’ character. The idea that everything should be interpreted in market terms is questioned. In organization theory, administrative and other kinds of relationships are considered relevant. And in the case of relationships between market actors, the supply and demand model of neoclassical theory is only one among possibilities. There is often an important social component, for instance in business-to-business relationships. The supplier of ABB and ABB often have interests in common and should not exclusively be thought of as two independent firms with separate objectives. Each company is dependent on the other and often it is useful to think in terms of competing networks of companies (Ford ed.1990). The relationship between two companies does often include more than one commodity, common technological development projects may be involved etc. Each social relationship between market actors furthermore has a history and trust is a factor in understanding changes in market relationships. I will return to this issue of understanding markets later on (Cf. Table 1).

Approaches to decision-making. While many other components of neoclassical theory are useful for some purposes, Cost-Benefit Analysis as an approach to decision-making is more questionable since it is not compatible with normal ideas of democracy. The ideas of correct prices for purposes of aggregation at the societal level represent a specific ideology and why should this particular way of trading impacts against each other rule out all other ideological orientations. Ezra Mishan, an author of textbooks in CBA (1971) argued that the use of CBA depends upon a consensus in society about this particular way of valuing one impact in relation to another. If there is no such consensus – and Mishan points especially to environmental

issues of various kinds – then the CBA manual is no longer useful and should be placed on a shelf to await a future point in time when this consensus possibly emerges (Mishan 1980).⁶

In the report by the World Commission on Dams (2000), it is argued that CBA should not be used to legitimise the building of large dams in cases where resettlement of large numbers of inhabitants is part of a project. This issue is ethical and simplistic mathematical operations are not very helpful to deal with ethical issues. They recommended different forms of Multi-Criteria Analysis as an alternative. Positional Analysis (PA) is another alternative, which builds on Political Economic Person assumptions and other elements of a different microeconomics as indicated above.⁷

7.4.5 Ideology

Ideology here stands for means-ends relationships in a broad sense and in a democracy, different ideologies are accepted and respected as long as they do not negate democracy itself. Established political ideologies are of course included but also for instance ‘issue related ideologies’ such as ‘transportation ideology’, ‘health care ideology’ or ‘environmental ideology’. A transportation ideology may emphasize time saving while more or less neglecting environmental impacts of projects considered while another transportation ideology may rely on the opposite priority with environment as the first consideration. In connections with health care, centralization or decentralization of service is similarly an important ideological divide. A specific interpretation of Sustainable Development is, of course, also a kind of ideology that can be compared with other ideological orientations.

Ideology is not much discussed among economists and students of business. This is unfortunate in many ways and may mean that important parts of the problems faced are overlooked. If one is interested in Sustainable Development, then one has to discuss how this particular ideology relates to more established political ideologies such as Liberalism and Social Democracy. Economic growth as a common element in the ideology of many political parties has to be scrutinized. Focusing exclusively on GDP is certainly not compatible with SD but

⁶ It is of course possible that neoclassical economists can be successful in lobbying for CBA to be used as part of public policy and decision-making in a specific area such as transportation or more generally. If as a result of such lobbying there are laws or other rules that CBA should be used then the economists have been politically ‘successful’ in advocating an economic growth (or ‘net value added’) ideology rather than the SD-ideology being emphasized here.

the appropriate role of GDP in relation to non-monetary indicators of various kinds is still an open issue. And what is the relationship between neoclassical economics as ideology and Neo-Liberalism? According to David Korten, while being different in some respects, these two are closely related (Korten 2001). Korten argues that neoclassical economics and Neo-Liberalism both legitimise the present kind of globalisation dominated by transnational corporations.

7.4.6 Institutions

As argued above, ecological modernization has played a role by legitimising environmental considerations and practices in different forms. Something has happened in terms of Environmental Management Systems etc. and this is good. While institutions have been modified in many ways, very little happens in terms of more fundamental institutional change. As I see it, paradigms, conceptual frameworks and language (or terminology) play an important role in institutional change processes. Each actor can influence social change processes through her or his particular interpretations of the world. The institution of ‘business company’ certainly can be interpreted as a ‘profit-maximizing machine’ as preached in neoclassical microeconomics. This particular interpretation is practically manifested in textbooks, articles, the language used by business actors, by politicians etc. At some stage, some business actors introduced the Environmental Management System of ISO 14 001. ISO 14 001 is in itself an ‘institution’ with certification organizations, environmental coordinators or controllers etc. But the interesting thing is that some actors can start (consciously or not) to interpret a ‘business company’ in a new way. Monetary performance is still there but in addition environmental performance has become part of the understanding of a business company as institution.

This is only one example of the ideological role of models such as those connected with neoclassical economics. Those who wish to see institutional change processes that will make us approach a Sustainable Development path should take a look at theories and models advocated in the business and economics literature. While neoclassical economists in university education tend to preach essentially one theory or paradigm, business management education is more open to interdisciplinary thinking and opportunities to learn from ‘other’ disciplines. While there is a kind of pluralism in terms of models, business management education may

⁷ For a description of Positional Analysis, see Söderbaum 2000. PA is compared with CBA, EIA and other approaches in Söderbaum 1996 and forthcoming.

still be quite limited in terms of ideology. Here the more recent ideas about business ethics and ‘Social Responsibility of Business’ represent steps in the ‘right’ direction in the sense of getting closer to a SD-path.

7.4.7 The case of international institutions in relation to SD

The World Bank, the International Monetary Fund (IMF) and the World Trade Organization have all been heavily criticized as part of the ongoing globalisation debate. Other international or UN initiatives have been less criticized by Civil Society Organizations, representatives of indigenous people included. The mentioned World Commission on Dams (WCD) is an example. In this case there has instead been some criticism from establishment circles, especially those who ideologically believe in the necessity of new dams for electricity generation and other purposes. Also internationally operating construction companies and those who supply equipment for water power plants etc. may have a role in this.

It seems clear that the World Bank, IMF and WTO have all too heavily relied on neoclassical economics as its conceptual frame of reference. The tendency has been to pretend that economic theory is science and nothing else and to deny the ideological character of this particular frame of reference. The ideology of neoclassical theory is furthermore very close to the ideology of some very influential actors. Neoclassical theory tends to be good for transnational corporations who wish to penetrate every part of the globe where it can be profitable for them. It is their freedom to trade as they wish that appears to be the main consideration of WTO.

Neoclassical market and international trade theory is simplistic in many ways. In Table 1, I have tried to compare the neoclassical idea of markets with a view more in line with institutional theory. While neoclassical economics claims to point out the most efficient solution, the institutional approach as here indicated is more complex and open-ended with respect to ethics and ideology. Multi-functionality, for instance, has become an issue in international trade negotiations and this can be seen as a reaction to the simplistic neoclassical ‘one-commodity at a time’ model.

Table 3: The ‘Market’ as a phenomenon; two schemes of interpretation.

	Neoclassical	Institutional
View of the individual	Economic Man	Political Economic Person
View of the organization	Profit-maximizing firm	Political Economic Organization
Interaction between buyer and seller	Supply and demand	Multifaceted relationship between responsible actors
Goods and services	Homogeneity, one commodity at a time	Also heterogeneity, multiple transactions, multi-functionality
Motives for transaction	Profits or utility related to quantity and price (optimisation)	Ideological considerations; ‘monetary price and beyond’ (matching)
Relation to other actors	Emphasis on personal gain and benefits for the firm (Belief in the ‘invisible hand’)	Inclusive (‘I & We Paradigm, ‘Person in Community’)
Features of relationship	Independence: contract between parties with conflicting interests	Also cooperation. Considerations of trust and fairness
Time aspect	History not important	History important. Path dependence

Source: Modified version of Söderbaum 2001, p.193.

Actors connected with the mentioned organizations have regarded themselves as specialists and experts on economic theory. Their understanding of economic theory and how it should be applied in relation to international trade tend to define the kind of arguments that are accepted at specific arenas and those that are not. Markets are believed to do a good job when ‘barriers of trade’ such as tariffs and quotas are removed. Competition is the path to progress in society and progress in a country or region is essentially a matter of growth in GDP-terms. ‘Free trade’ in some sense is good and ‘protectionism’ is bad, it is believed.

In the early 1960s, I was teaching international economics at the Department of Economics, Uppsala University. The textbooks used by Enke and Salera (1957) and later Kindleberger (1958) pointed to the benefits of ‘free trade’ and warned against ‘protectionism’, the only possible exception being referred to as the ‘infant industry argument’ (implying that some industries can be protected for a limited time to learn about efficient production). But even this

argument had its limitations, it was argued. The companies involved can become accustomed to a high level of protection and lobby for its continuation. What is good for the company may then be ‘inefficient’ and bad for society.

My early interest in international economics has since then been followed up every now and then. How do the textbook writers deal with ‘protectionism’? And how do they deal with environmental issues? Is ‘environment’ a word that one can find in the subject index? How many pages are used to relate ‘trade’ and ‘environment’ (or ‘natural resources’) to each other?

So far, I have always been disappointed when looking into these 600-800 page textbooks. My explanation or hypothesis is that there is something in neoclassical theory and ideology that closes the door for a number of issues that are judged important by an increasing number of politicians, professionals of various kinds and citizens. This theory – ideological as it is – does not appear to be compatible with the present political dialogues at different arenas, whether local, regional, national or global.⁸ Something new is needed and rather than attempting to extend neoclassical theory, it seems as if a platform with a set of different basic assumptions about human beings, business companies, efficiency etc. has a better chance of being successful.

In the one-commodity world of neoclassical theory, wheat is regarded as homogenous and sold at a monetary price in the market. Sellers and buyers should look for the best possible price. If the price is low, this suggests that the suppliers have been efficient and that few trade barriers have affected trade. The low-cost suppliers may be located in some other region or country and their sales may outcompete local suppliers of wheat in your own region. The losers should start producing other food products, it is argued, where they may be more efficient and can compete in local and international markets – or perhaps seek employment in other companies successfully producing other commodities. Another option is to migrate to the countries where production at the time is efficient in terms of international competitiveness. Flexibility in this sense is regarded as a key to efficiency improvements and economic growth.

⁸ Even a celebrated neoclassical economist such as Paul Krugman does not perform satisfactorily according to the criteria mentioned (Krugman and Obstfeld 2000).

However, this story is only a partial story and it is a matter of your ideological judgment whether the impacts mentioned and other impacts (not being part of the story) represents progress in society or not.

Focusing exclusively on monetary prices while assuming that quality of wheat is equal and no other impacts relevant is a gross simplification. This simplification does not go well with the multidimensional idea of Sustainable Development as previously described. When carefully scrutinized 1 ton of wheat from one supplier may differ from 1 ton of wheat from another supplier, for instance in terms of content of toxic substances. And the farmer, while producing cereals of specific kinds, is also 'producing' an open landscape with its aesthetic qualities. Employment at home is perhaps preferable to employment abroad and some of us prefer 'ecological agriculture' to 'conventional agriculture' because we do not want to see pesticide residuals in water bodies. The conventional farmer is not only producing wheat but other products as well and sometimes even other 'food' products such as polluted water.

This alternative story can go on. Long-distance transportation of food (and water) can be costly in environmental terms as degradation of natural resources even in cases where the monetary cost of transportation is low. Reasoning of this kind has led to the 'multi-functionality' argument used by Norway, Switzerland and the EU in WTO-negotiations. At issue is however whether the actors connected with WTO will understand since a large part of the international trade regime is based on neoclassical economics and their ability to understand is limited by the education they have received.

Such a multi-layered idea of development, starting at the local and regional level, would then lead to a reconsideration of trade regulation where some kinds of protection of local culture, health and environment is legitimate. Small and middle-sized business is similarly encouraged and the present worship of growing transnational companies downplayed a bit. We have lately seen an increasing number of failures of transnational corporations and this even in one-dimensional monetary terms.

Short distance trade will reduce environmental impacts from transportation more often than not. It is furthermore a matter of one's ideological orientation whether 'protectionism' in a specific situation is legitimate or not. Personally, I see good reasons to protect the health of a population when it is threatened by the impacts of trade. Similarly, environmental protection is often legitimate as we have learned from the Stockholm conference in 1972 onwards. A lo-

cal, regional or national culture may need protection from commodities that may threaten this culture and so on.

A World Trade Organization should not primarily ‘protect’ the interests of transnational companies to penetrate every part of the world as is now the case. Competition may certainly be needed in many places (for instance at Departments of Economics where it tends to be systematically avoided) but competition may as well be destructive in relation to local and regional Sustainable Development objectives of a non-monetary kind.

7.4.8 A World Environmental Organization?

Should one more world organization be added to those that already exist? Do we need a World Environmental Organization comparable to the World Health Organization and with the purpose of counter-balancing the role and activities of the World Trade Organization? Should the many protocols of the present global environmental governance regime be coordinated through one organization?

I think that the idea of an World Environmental Organization reflects an understanding that something needs to be done. The World Trade Organization, while still being strongly supported in some governmental and business circles has lost some of its legitimacy in relation to other governmental and even business actors.⁹ As we all know, many citizens and Civil Society Organizations are worried about the present situation. The same is true of actors connected with churches and even the World Council of Churches.

Adding a World Environmental Organization, while leaving the WTO essentially intact, would not solve many problems, I believe. Another option would be a radical reconstruction of WTO to become a World Culture and Environmental Organization (WCEO) with the purpose of handling trade disputes. Trade should be seen as one among means of achieving essential welfare objectives, such as those connected with culture, environment and health rather than the present tendency to see trade and growth of some powerful business companies as more important than anything else. A change in name has of course to be followed by

⁹ It would be a mistake to believe that scepticism to the neoclassical idea of ‘free trade’ is a new phenomenon. Even Charles Kindleberger in a book from 1962 (p. 245) pointed to a number of skeptics or persons being less enthusiastic about the ‘gains from foreign trade’. Gunnar Myrdal was mentioned in this context.

a new philosophy and system of rules. With few exceptions, the present staff has to be replaced etc.

7.4.9 Recommendations:

Neoclassical economics certainly has a role in dealing with monetary policy, financial policy and the like. But in relation to the challenges connected with Sustainable Development, neoclassical theory has to be reformulated and modified to open the door for a number of welfare considerations that so far have played a limited role. Historically the most influential international institutions such as the World Bank, the IMF, the WTO and OECD have relied heavily on neoclassical theory. A mixture of science and ideology has been involved and it is time now to admit the ideological character of neoclassical theory. Pluralism in economics seems to be the appropriate response to the present criticism whether it is more general or related to specific fields of study (see Fulbrook 2003). The Myrdal imperative that ‘values are always with us’ has to be taken seriously.

Pluralism is also the recommendation in terms of theory of science and ideology or ideological orientation. Subjectivity is very relevant in addition to objective measurement. A critical examination of the beliefs of influential actors in the present market dominated system has to be carried out and will hopefully lead to an open attitude to institutional change processes of various kinds. I am back to tape-recorded interviews – or better dialogue – with different actors. In this way each actor will get additional chances to influence others or reconsider her or his own role.

Finally, the critical role of universities and the university system more generally should be emphasized even more. I regard this workshop as an example of such a dialogue in situations where society is faced with some very difficult challenges. I do like to see that the present workshop is the result of initiatives from actors in the political sphere. If economics is politics as I have argued, then politicians and indeed all citizens have a role in evaluating and guiding economic research. Actors within universities are part of society and – as all others – have to relate to the imperatives of democracy.

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