



**Sustaining a Globalized World: Future  
Paths to Developing a Sustainable Society  
Zukunftspfade für eine nachhaltige  
Gesellschaftsentwicklung**

**Aventis Triangle Forum  
Watermill Center  
19-21 July 2000  
Southampton, N.Y.**



Robert Wilson, one of the hosts of the Aventis Triangle Forum, is a passionate collector of art from around the world, including a unique collection of chairs , which is exhibited each summer at the Watermill Center. The cover photo and the photo above show selected arrangements from this collection.

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**Prof. Dr. Dr.h.c. Werner Weidenfeld, Director of the Center for Applied Policy Research (C•A•P)**

Speed and complexity are trademarks of modern globalization. The process of internationalizing many facts of life continues to increase. The resulting changes, together with revolutionary technological innovations, particularly in the field of genetic and information technology, are greatly transforming the familiar structures of our society. Changes in multinational corporations' production methods, expanding and volatile capital markets, the increasing value of technological know-how, the Internet, and a growing number of politically active networks and players, have become the defining characteristics of our times.

The conventional models of law and order, as well as government styles, appear to be overtaxed by the challenges brought on by social and technological change. The range and speed of change require a tremendous ability to adapt from modern societies. Various public groups such as independent and non-governmental organizations are able to assist this process due to their role as the "middle man".

Beyond individual means of coping with change lies the question of how strategic leadership impulses and societal innovation can be formulated and spread into a broader debate. This question was the main agenda of the Aventis Triangle Forum, which in 2000 brought together leading decision makers from North America, Europe, and Asia at the inspiring Watermill Center of the American theater director Robert Wilson. It was the second forum of its kind for the Center for Applied Policy Research (C•A•P) and the Aventis Foundation, and dealt with questions about the future, building upon the creative dialogue that arose from the project "How We Want To Live Tomorrow".

The purpose of this initiative is to discuss the sustainable forms of social cohesion in a discourse that brings all walks of life together, where the broad horizon of experiences from players from different geographical and social backgrounds is included and utilized. There was much discussion about the correlation between globalization, innovation and social stability.

Increasing social imbalance, rapidly changing economic processes and new kinds of sensitivity in an ever-more connected world formed the background for the discourse. In an age of globalization, how can political transparency, efficiency, and democratic participation be achieved without global forms of democracy and state status? To what extent can technology help to solve political, social,

and economic problems such as population growth and nutrition, aging populations, poverty or the exploitation of natural resources? And finally, what are the prerequisites of politically legitimate global co-operation in a rapidly shrinking world?

These are questions that were thoroughly dealt with in Southampton and supported by the C•A•P paper, which structured the discussion. It became evident that the nation state will maintain its important function as a framework for order. However, it must be both strengthened and assisted by other globally effective and politically legitimate forms of order. To reach an agreement on functioning mechanisms of politics will take time. There are still no simple solutions to the many problems, with some only becoming evident in failed approaches.

One thing rang clear during the debate: federal and conventional inter-state politics are no longer sufficient in solving these problems. New players such as supranational institutions, environmental and consumer groups or foundations are gaining significance. Non-governmental organizations' influence is noticeably increasing. A network model that connects the public with the private sector could contribute much to the legitimacy of global politics, linking local situations with national characteristics and global necessary courses of action.

Prof. Dr. Dr. h.c. Werner Weidenfeld



Leading the Aventis Triangle Forum:  
Jürgen Dormann, Prof. Dr. Dr.h.c. Werner  
Weidenfeld and Robert Wilson (from l. to r.)

The constantly changing interaction between culture and the role of companies makes the public side of business exciting and challenging. The sheer volume of private and public communication is exploding as a result of technical advances made possible by digitization, networks and miniaturization. This is impacting every area of human existence and is redefining the way we work, play, learn, teach, research and make music. Boundaries are disappearing or are at least becoming blurred. Boundaries of time, territory and social role as well as boundaries between work and leisure can easily be crossed. Company boundaries are also disappearing: traditionally rigid communication and work processes are being taken apart and put back together again into flexible international networks. Do companies still have fences with the outside world? How do companies define what is internal and what is external?

In the western industrialized countries, half of all employees work exclusively with information today; in a few years the proportion of knowledge workers and information managers in the workforce will be even greater. The sectors currently showing the strongest growth are based on knowledge and communication: e-commerce, information technology, telecommunications, as well as biotechnology and pharmaceuticals - in general the new economy.

If it's true that communication shapes and defines culture, then the developments underway right now mean that we are in the midst of a deep-seated cultural change. The way in which we perceive and shape the "self-created world of man" is changing at an unprecedented speed.

A second field of knowledge experiencing a similarly dynamic development is playing a more independent role: modern biosciences. Progress made in decoding the human genome is changing the way we define culture and nature. With each day that "giant leaps continue to be made in reading the book of life," as a major newspaper recently wrote, the possibilities of intervening in the processes of nature as never before and "reengineering nature in entirely new ways are expanding. With every section of the human genome that is mapped and understood, the possibilities grow of treating the causes of previously incurable diseases, diagnosing them more precisely, and preventing them in the first place. Scientific work is moving from trial and error to knowledge and control. In agriculture, plants and animals can be bred in a more targeted manner and beyond their species. The resulting opportunities for the health and nutrition of human beings are breathtaking - but so are the potential consequences, the ethical issues, and the risks. Should we do all that we are capable of doing? Where will our limits be, who will set them, and who will enforce them? Can the environmental consequences be estimated? Can misuse be ruled out?



Jürgen Dormann, Chairman of the Board of Trustees, Aventis Foundation Frankfurt/M. and Chairman of the Board of Management, Aventis, S.A., Strasbourg

As an innovation-driven life sciences company, we at Aventis have a keen interest in all bioscience topics and rely on information technology. Our success depends on our ability to keep pace with technological and socio-cultural developments. We have to make business decisions based on assumptions of future technological possibilities and their acceptance by society. Against this backdrop, what can and what should the Aventis Foundation contribute to society? It can initiate or support projects that attempt to deal with these issues in a scientific, artistic or literary framework. One example is the Aventis Triangle Forum.

Jürgen Dormann

## I. Innovation and social stability: The vision of a sustainable development of society

The relationship between technological change, social innovation, political renewal and social stability will be of key importance in the future. It is a matter of prosperity and safety, and the stability of existing or desired living conditions – both personal and collective. A stable society gives the individual the chance to realise his possibilities and, at the same time, guarantees social cohesion by means of functioning mechanisms of social solidarity. To achieve this there must be a consensus about fundamental common values, suitable institutions, sufficient material means and technological resources. A stable society fosters the identity of the people belonging to it and is a prerequisite for ecologically, socially and economically sustainable development. A society which is organized on a sustainable basis strives for ecological and economic sustainability and, at the same time, social fairness. Here each generation should take care that the degree of pollution is limited to that which the air, water or ground can tolerate or which can be broken down using suitable techniques. Economic sustainability means that a country pursues economically sensible concepts and, in the long term, does not spend more money than it earns. In short, no uncovered cheques are made out to the future in a sustainable society.

|| No uncovered cheques made  
out to the future ||

The impact resulting from the transition from the industrial to the transnational information society throws doubt upon the target vision of a sustainable development of society. The transition from the agricultural to the industrial society impressively demonstrated the importance of the relationship between technological change and changes in the society and the social question raised with it. Instruments of social solidarity which previously worked well, lost their meaning in this period of change. It took a relatively long period of time to moderate the distribution conflicts linked with it and to replace the obsolete forms of social integration with new integration mechanisms.

The transition from the nationally and territorially constituted industrial society to a society characterized by globality and technology indicates an equally serious upheaval. Here there is a similarity to the railway in the 19th century which enabled people, trade and industry to be supplied with goods from far away, thus promoting urbanization, mass production and international commodity markets. The distinguishing features of the present day, however, are the modular production processes of enterprises working transnationally, the day-to-day global flow of foreign currency and capital and the increasing number of global communication networks. As was the case at the time of the industrial revolution, this development has far-reaching consequences in terms of political activity.

Concepts for future forms of sustainable political activity must take three developments into consideration which result directly from globalization and technological innovation:

- Increasing asymmetries in societal relationships;
- Conditions linked to an accelerated economy;
- Mutual sensibilities in a networked world.



The Forum's dramatically arranged meeting space

|| Globalization and  
technological innovations demand  
social adaption ||





Contrary to common opinion, the systemic character of these developments is crucial. They are signs of the technological, economical and social new era which cannot be approached with simple solutions. Instead we must ask ourselves how undesirable systemic developments can be constructively regulated by means of self-organization, cooperation and the regulation of conflicts at the various levels of political activity, i.e. local, national, regional and transnational, in order to clearly outline the vision of a sustainable social development. Technology decisively sets the tone of modern life and encroaches on our social coexistence considerably. Chances and challenges confront each other, and the question arises of, whether and how technological innovations could become tools of long-term action.

|| Complexity and acceleration  
are symptomatic  
of modern globality ||

#### **Increasing asymmetries in social relationships**

Social asymmetries are already a reality today, and in the course of economic globalization and technological change they will become even more severe in the future. This is apparent not only within societies but also between them. Individualized life concepts and forms of employment, widening income gaps, ethnic conflicts, discrimination, and an increasing rate of crime are signs of increasing disintegration. The increasing social asymmetries indicate that the conventional compensating social mechanisms are losing their effectiveness, acceptance and thus their legitimacy. International asymmetries result from the lack of competitive strength, varying access possibilities to capital and natural resources, or the inflexible concepts of closed societies.

|| Globality and technology create  
social asymmetries ||

Technological change opens new potential for growth but is, at the same time, a reason for the discontinuity of economic developments. This occurs in an established industry when new product or process techniques are introduced which "devalue" the knowledge of the enterprises, thus making the development of new stocks of knowledge necessary. Technological change is always accompanied by the appearance of new, fast-growing enterprises on the market and the decline of established firms. The Internet, for example, is radically changing production forms and marketing models.

Microelectronics and information technology have not only made many new products possible. They have also torn down the barriers between branches which were once separate entities. Individual and mass communication, telecommunication and data processing are continually growing and coming closer together building one single new industry. In a similar way, molecular biology will radically change the face of the agricultural economy. The characteristic factors of agriculture - the soil, natural resources and hard work - are rapidly losing their importance. Agriculture is increasingly producing high-tech products, is becoming more and more capital intensive, and is supported by laboratory research.

In addition to economic ruptures, technological change also causes social ones. As was the case during the industrial revolution, it changed the structure of social institutions and communication processes as well as the way they worked. Globalization and new technologies have always contributed to more prosperity, the emergence of new branches of economic activity and new jobs as well as an increase of the standard of living. At the same time, however, considerable demands arose in terms of social adaption. Industrialization shattered the class system of feudal society, which was characterized by the guilds and the preindustrial manufactories, a system which once provided the people with a degree of

## Are globality and new technologies creating the social problems of the 21st century?

protection. Along with industrialization and urbanization, the fear for one's livelihood became part of the fate of the proletariat. At the same time, this development marked the birth of the social market economy, as a result of which it was eventually possible to channel the energy of unleashed capitalism into a socially acceptable form. The socially organized free market economy thus proved to be the correct answer to the social change at that time.

As in the 19th and 20th century, the revolutionary potential of globalization and technological change throws up the question what the social consequences will be. Who are the winners and who are the losers at the beginning of this new century, and will losing become a mass phenomenon? We are most certainly not talking about a return to Manchester capitalism because the mechanism is not the same: It may be true that 50 million people make use of the Internet today, but at the same time half of the world's population has never made a telephone call. The poorest of the developing countries are practically excluded from digital progress; more than 90 per cent of the Internet connections are to be found in the industrial countries. Instead of the exploitation typical for industrial capitalism, another form of discrimination, namely exclusion, may occur. Will a new and rather small class of technological insiders who, can bear the speed and complexity, govern the future development of society and control a rather large class of technological outsiders, thus driving a new social polarization forward?

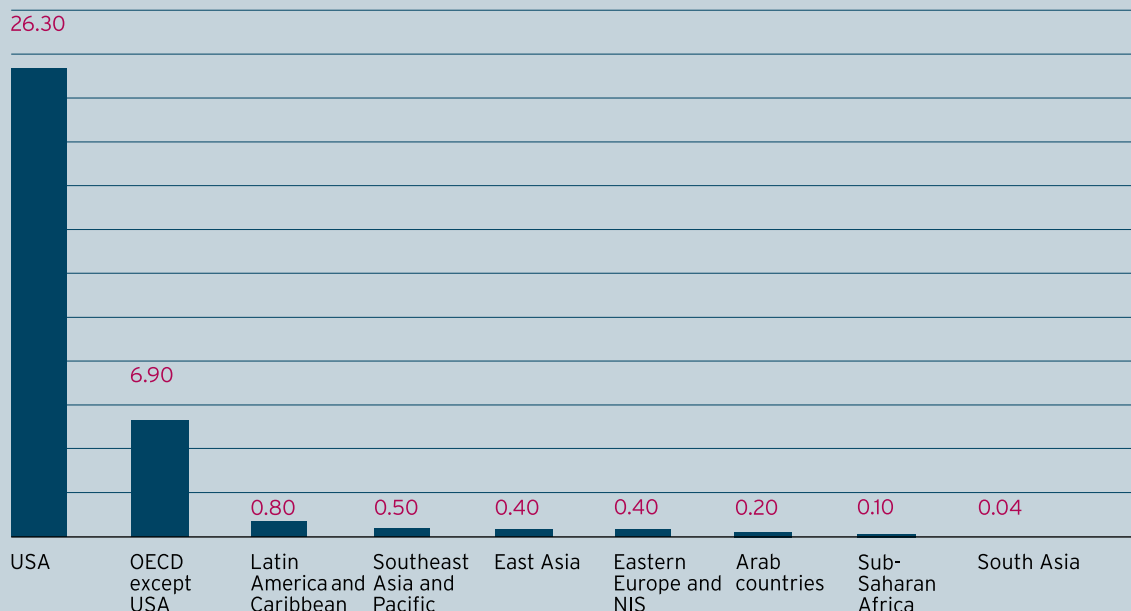
## Globalisation and new technologies are the motor of social asymmetries

Prospects of such grave social asymmetries demand great political sensitivity. Similar to the economy, technological innovations significantly devalue the existing social orientation and necessitate the development of functioning alternatives. These alternatives, as the basis of new social forms and possibilities of organization, challenge the established social hierarchies, institutions and communication patterns. They can already be recognized today in, or are at least indicated by, the developments on the labour market, and in a new intergovernmental development gap. In addition to the great opportunities they bring with them, new technologies also contain the seeds of future social asymmetries as demonstrated, for example, by biotechnology.

### Labour markets

Globalization is at its most advanced on the international finance markets and at its least on the labour markets. It is accompanied by progressive economic structural change. In the long term, the proportional importance of industry, agriculture and services has shifted in favour of the information and service sector. In 2010 the share of services, for example in Germany, is expected to be higher

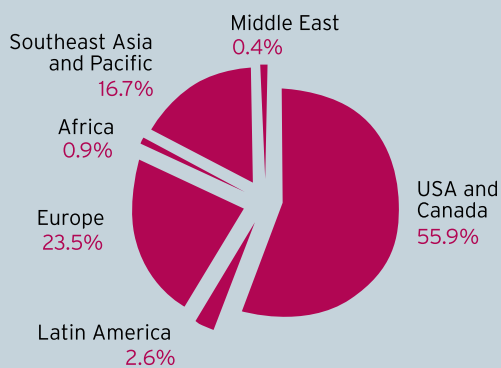
Internet Users as Percentage of Population



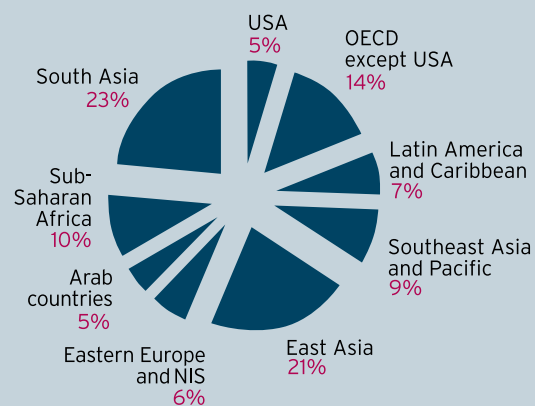
UNDP,  
World Bank,  
OECD

A pie chart illustrating the distribution of the world's population by region. The chart is divided into six segments of varying sizes, each representing a different region and its corresponding percentage of the total population. The segments are colored in a light blue/teal shade. The regions and their percentages are: USA and Canada (55.9%), Southeast Asia and Pacific (16.7%), Europe (23.5%), Latin America (2.6%), Africa (0.9%), and Middle East (0.4%).

Region	Percentage
USA and Canada	55.9%
Southeast Asia and Pacific	16.7%
Europe	23.5%
Latin America	2.6%
Africa	0.9%
Middle East	0.4%



Region	Percentage
USA	5%
OECD except USA	14%
Latin America and Caribbean	7%
Southeast Asia and Pacific	9%
East Asia	21%
Eastern Europe and NIS	6%
Arab countries	5%
Sub-Saharan Africa	10%
South Asia	23%



UNDP,  
World Bank,  
OECD

than 70 per cent in comparison with about 60 per cent in 1991. This trend, along with the transition from industrial society to information and knowledge-based society, impulses are arising which will bring about far-reaching changes on the labour markets and the typical appearance of individual occupations. The revolutionary change of value-added activities and occupational forms are only hesitantly being taken into account by the systems of social security. As a result, there is an increasing number of wage and salary earners who are not protected by these social systems. The virtualization of the world of employment is ending the "normal employer-employee relationship" and its social embeddedness. In 1998, for example, this normal employer-employee relationship applied to only 55 per cent of the people in Western Germany. In 1980 the figure was 80 per cent.

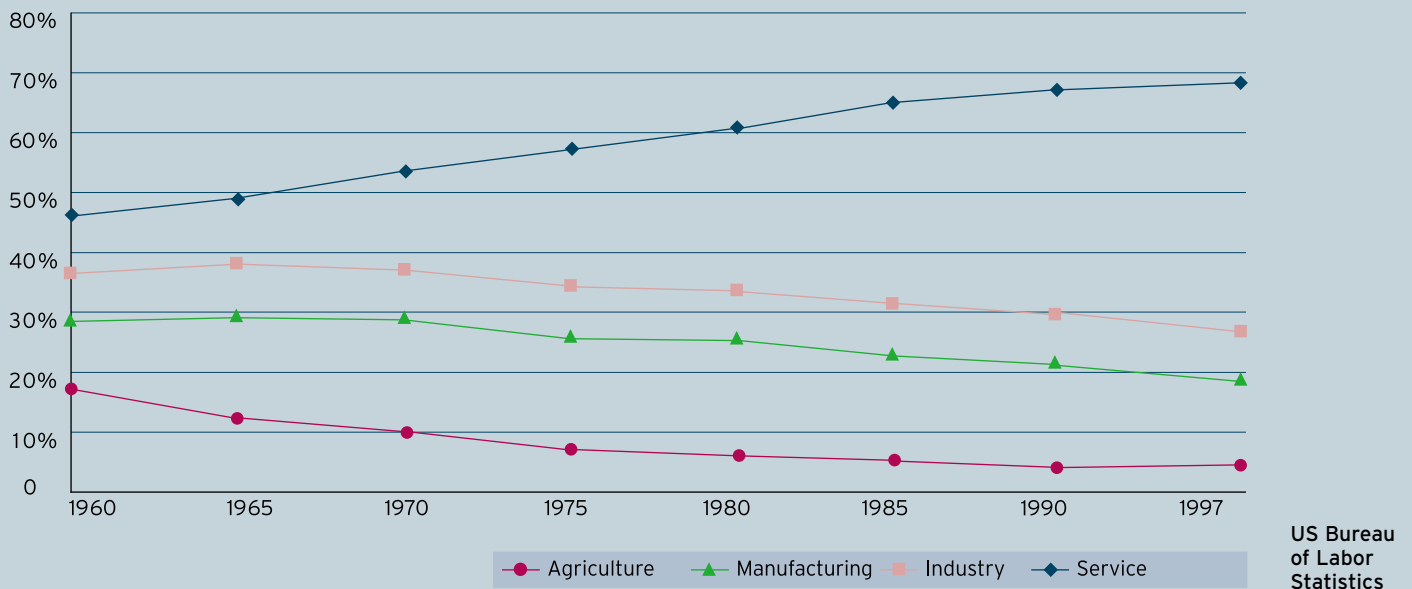
Whereas jobs will continue to be lost in the traditional industrial sectors and agriculture as a result of rationalization, the professional groups of knowledge-based workers, highly-qualified skilled workers, and a new group of self-employed people will successfully cope with the structural change. The fundamental characteristics of the latter are their high qualifications and personal mobility. A falling demand for human work in agriculture and industry is being accompanied by an increasing demand for services. However, services will not sufficiently substitute the loss of "traditional" jobs because this sector is also open to further productivity increases as substantiated by the development in the banking and insurance sectors. If a person cannot successfully adapt to the change, the continuity of his working life will be endangered by unemployment and a reduction in income. For the individual this means that an increase in flexibility and mobility will be necessary which not everyone will be able to endure. It will thus be necessary to adjust the social component of the market economy without driving it into bankruptcy.

Experience shows that a high degree of state welfare does not represent a hindrance to successful participation in the economic globalization. On the contrary, it is actually a basic part of the economic globalization because it has contributed towards a fair allocation of the risks and the costs of global economic interdependence. A glance at the countries of the European Union which have a relatively low rate of unemployment and which are, at the same time, closely tied up in the system of international economic interdependence, reveals that almost all of these have a relatively high level of social welfare. Holland, Austria and Denmark could be named here as good examples. This observation is all the more important because these small countries hardly have the opportunity of pursuing an autonomous economic policy. Prices, wages and salaries and interest rates are, for the most part, determined from outside without significant influence from these countries' leaders.

Asymmetries  
on the labour markets and  
in the social security systems  
are already present today



Labor Market Structure (Average of USA, Canada, Australia, Japan, France, Germany, Italy, Netherlands, Sweden, UK)



### Intergovernmental development gap

Globalization and technological progress do not simply increase the traditional development gap between developed and developing countries; they lead to different directions of development. This results in asymmetries between highly-developed economies and newly-industrializing countries on the one side and developing countries on the other side. For the time being, only a part of the human race will be able to take advantage of the opportunities of the global and technological change. Whereas parts of sub-Saharan Africa, Latin America and Asia will lose contact with these developments, other countries such as Malaysia, Thailand, South Korea and Singapore will develop into competitive and modern countries. In concert with the liberalization of the world markets and by means of the transfer of technology, the fight against poverty can succeed with the strength of the global and liberalized markets.

New development gap and unknown relationships between countries

An example of this is Thailand. High economic growth over a period of two decades catapulted this country out of the arms of the poorest into the circle of the newly-industrializing countries. Thailand was able to free itself from the dependence upon the monetary aid of the rich nations, profited from free trade and built cars as well as power and phone networks with the help of foreign investments. This country embodied, along with Malaysia and Singapore, a new development model. Globalization enables newly-industrializing countries, which react cleverly to attain a particular stage of development without having to go through the classical stages of industrial and infrastructural development. Other countries do not have this chance. This results in unknown intergovernmental asymmetries which create a new pattern of development gap between countries. This can disrupt the continuity of customary neighbourly relations. It is conceivable that the tigers of south-east Asia will continue to develop quickly. If they distance themselves economically from their neighbouring countries this could lead to a new prosperity gap in the immediate area and bring about tension, dissociation and conflicts.

## || **Biotechnology**

Another example is the enormous progress in biological sciences. From here tremendous developments in the nutrition and health sectors are to be expected. Many hopes have been placed on biotechnology to ensure sufficient food. In 20 years time one billion additional people will require 200 million tonnes of rice more annually. The plant breeders are relying upon new processes in order to effectively attain their cultivation targets. According to the world food and agriculture organization FAO, genetic technology is imperative for long-term agriculture because it can give rise to sorts of plants which are resistant to diseases, which contain improved nutrients, have new qualities and can be sold on other markets. Thirty per cent of the annual world harvest is still lost to viruses, bacteria, fungi, weeds and insects. In order to feed the world's population it is important and possible to develop types of plants which still provide adequate harvests even when the supply of plant nutrients and water is unfavourable. The potential of biotechnology increases these possibilities.

In addition to this positive view regarding the integration of increasing world population, biotechnology also contains directions of development which could bring about the disintegration of societies. This would be the case if, on account of innovations in biological science, asymmetries favoured some groups and put others at a disadvantage. This is not only apparent by the varying access to food but also by discrimination in the social welfare and health system. The prospect of prolonging and improving human life calls for urgent social measures. The necessary adjustments to the health and pension systems are, however, questions which have not been answered yet. Equally unanswered are questions such as the spectrum of differentiation among those who agree to and can afford genetic modifications and those who are opposed to them for personal reasons or cannot afford them. People are increasingly worried that the day-to-day application of genetic processes will lead in the future to a division between the "creators" and the "created". The reason for this is considered to be the high concentration of know-how and its exploitation in the hands of only a few enterprises or countries. Only a few decide about the definition of human life, many others live with the effects. At the summit of the World Trade Organization (WTO) in Seattle some less-developed countries have already spoken out their fear of being degraded to test areas for biotechnical purposes - without having any noticeable influence on the application of this technology.

## || **Acceleration of economic and social change**

The forces of globalization and the new technologies unfold in the field of conflict which we call competition. Competition is the driving force behind new and increasingly better and faster innovations. Competition in this world is the accelerator of the dynamics of economic as well as technological change. The speed resulting from the system of competition thus becomes a dominant element of our time. The motive force results from the system itself, which demands advances in productivity and strong economic dynamics if a company wants to successfully assert itself against competition.

In addition, the speed of competition also depends on the technological progress, in particular the digitalization of the information. At a time when the so-called "New Economy" of the information era is on everyone's lips, the information and communication trends of miniaturization, standardization, integration and networking are the prerequisites of increasing the degree of speed even further. Driven on by digitalization, the improvement of technical performance and the priceperformance ratio in the communications and information sector have made enormous leaps. This means that everybody - the self-employed person, the middle class and the multinational company - profits from it. The price for a three-minute telephone call between New York and London has, for example, fallen by a factor of 300 in the last 65 years. Computing capacities are doubled every 18 months. More computing capacity is hidden in a modern mobile phone than in the first lunar module, and the Apollo mission at that time could have been controlled with an average PC of today.

|| New technologies also call  
for social adaption ||



|| Acceleration  
results from competition and  
technological progress ||



The global markets made possible by the progress in information technology thus shorten our time horizon. Economic development is becoming more and more short-term - often at the cost of social and individual basic needs. This is evident in the short-term strategies of enterprises and their investments, in the disregard of the natural human rhythms, nature itself, and in increasingly short product cycles. Acceleration means that people are pushed into conflict: On the one side they must be extremely flexible, on the other side they desire continuity in their life and living conditions. In the coming future, a graduate will change his employee at least twelve times and his field of work three times in the course of his average professional life of 35 years. This tendency will also increase in other countries and will provoke a conflict of feelings in many people. On the one hand there is optimistic trust in new opportunities for the individual and social development. On the other hand there is a fear of the loss of material wealth and social warmth and security. Accordingly, 50 per cent of the German population feels threatened by the acceleration of life. In particular, the continual pressure arising from the need to adjust to changing conditions at work as well as the flood of information and stimuli from the media are considered as an extreme burden.

#### **Mutual sensibilities in a networked world**

Social asymmetries and the acceleration of the economy are being increased by the growing complexity of social networking. Increasing interdependencies and susceptibility to disturbances, limitations of political control, and an increasing number of actors and political arenas all illustrate this trend.

#### **Increasing interdependency and susceptibility to disturbances**

Increasing interdependency and susceptibility to disturbances result at first from economic intertwining. Since the middle of the 80s, for example, the turnover in foreign exchange dealings and international security trading has increased more than tenfold. The annual cross-border transactions of fixed-interest bonds and shares have risen from 10 per cent to 250 per cent of the world's national products between 1980 and 2000. In the meantime, the trade with foreign exchange has reached a daily volume of 1.5 trillion US dollars which approximately corresponds with the annual gross national product of France. Only an extremely small part of these transactions - approximately 2 per cent - has a real economic basis. Whether the financial assets in a particular currency are held or sold depends decisively on the mood of the financial markets. Mighty pension funds and capricious institutional investors pressurize concerns for higher and higher equity returns. By means of the fast inflow and outflow of liquid capital they determine the performance of entire national economies. With the increasing number of unpredictable actors and because of the enormous accumulation of capital, the volatility of the international financial markets has reached a completely new dimension. The Asian crisis in 1997/1998 and the monetary crisis in Russia in 1998 impressively demonstrated how national economies can be deprived of liquid resources for investments very quickly and without the political actors being able to influence the developments in any significant way. In view of the magnitude of the global monetary flow, regulatory intervention such as controls on the movement of capital or exchange rate corridors which have been politically agreed upon can hardly be enforced anymore. Intervention directed at the outflow in the form of support buying by national central banks are, in many cases, no longer practicable as political instruments as was demonstrated by the monetary turbulences in the European monetary system (EMS) in 1992 and 1995.

|| Complexity and networking  
make societies more vulnerable ||



Entering discussions

|| Traditional growth paths and  
consumption patterns lead to  
ecological collapse ||

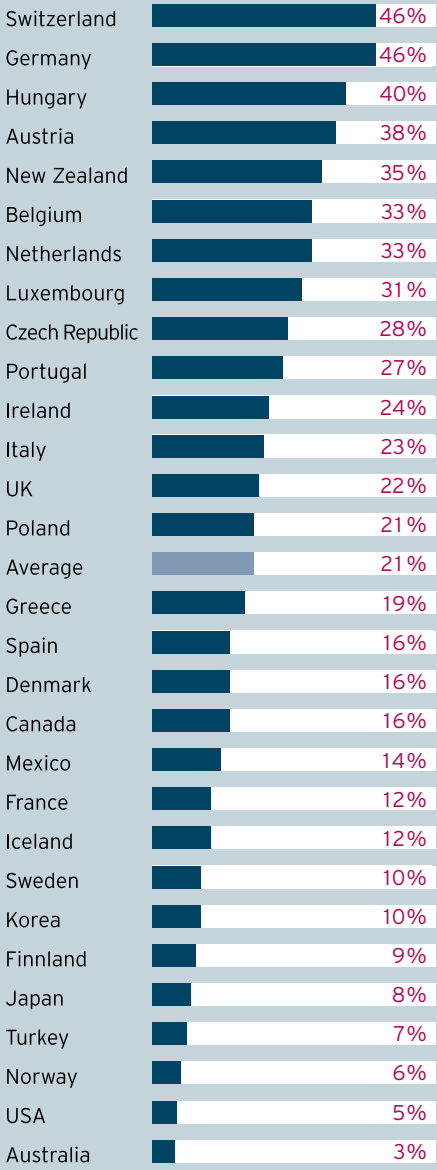
Population growth and economic growth exceeded the breaking point of ecological systems long ago. Approximately 150 to 200 species disappear from the world's gene pool every day on account of urbanization, woodland clearing, or further industrialization. Interdependencies and susceptibility to disturbances are growing here too. A human population which continues to grow and which lays claim to an increasing standard of living will turn to traditional growth paths and consumption patterns. This will drastically increase the consumption of natural resources once again. The increase in conflicts arising from the distribution of natural resources will be inevitable in this scenario. The tendency to exploit nature, for example by straightening rivers or damming them to make gigantic reservoirs, and the further use of risky technologies such as nuclear energy increases the probability and the radius of potential disturbances - above and beyond national borders.

|| **The limitations of political control**

In the face of the increasing complexity of economic and social coexistence, the failure of socialism demonstrates the limitations of meticulous planning. One of the lessons learnt in the last century was the insight that it is not possible to plan a social system which is as complex as the economy. It is equally impossible to achieve a social system which is just and fair for every individual and in every individual case no matter how detailed the provisions may be. For this reason, government action must limit itself to core functions. Interlacing, acceleration and complexity reduce the possibility of making forecasts and thus the possibility of controlling events. This is demonstrated by the history of knowledge. Forecasting, the instrument of the 70s and 80s, had to be abandoned in favour of scenario writing because of the faultiness of the former. The latter identifies several possibilities and leaves the actual outcome of developments open.

The "scientism" of the 70s, which builds on the belief in science in the Newtonian-Cartesian meaning of the phrase and which is founded on a strictly linear way of thinking and closed systems, has had to be qualified. It has been recognized that problems cannot be exactly identified by applying strict rationality and that the latter does not necessarily supply solutions to these problems. When futurology came into being as a scientific discipline in the American Rand Corporation after the Second World War, the optimistic belief dominated that the future could be exactly described. However, many of the things which were predicted by the futurologists for a particular period of time did not occur. With its analysis of "The Limits of Growth" in 1972, the Club of Rome undertook its first attempt to take a glimpse at the future. The result was a series of future world models which were in part, however, very contradictory. The analysis of these contradictions has shown that the deficiency of futurology was not a question of the shortage of data but weak spots in social theory instead - blind spots in a seemingly objective picture of the present and the future. Because historic, social, and the economic causal connections have not been properly understood or have been intentionally ignored, differing possible courses of action were the result.

**Endangered Species**  
(Percentage of all known species)



OECD

|| **The complexity of interlaced**  
**systems demonstrates**  
**the limitations of political control** ||



|| Politics must take  
non-governmental actors more  
into account and include them ||

The planning euphoria of earlier political drafts has given way to the sober recognition that social and economic developments cannot be foreseen and can only be controlled hierarchically to a limited extent. Society, nature and the economy are open and dynamic systems which create complex and unpredictable patterns of interaction. In addition, forecasts are always a social phenomenon and thus a matter of interests as well as underlying values and views of life. Norms, self-organization of social subsystems and the dynamics of open systems limit, in the consequence, the influence of political structuring and necessitate flexible strategies of action. At the same time and in face of the complex interrelationships, governments must fall back on the expertise and commitment of the private sector. The necessary return to real tasks corresponds with a new understanding of politics: less selective, symptom-related intervention, and instead the automatic regulation of interlocked and networked social subsystems.

#### || The increasing number of actors is creating a new constellation of power ||

The success model of the 20th century was the democratically constituted nation state based on the separation of powers and territorial integrity and was orientated towards free-enterprise. However, in a world which is becoming more and more intermeshed and, at the same time, more and more fragmented, the nation state is often a reference level which is either too small or too big. The role of the state has accordingly changed and new actors such as supranational regimes, environment protection groups, consumer protection groups and foundations are gaining importance. The shaping of the future against this backdrop will be a cross-section task for all social actors. From the middle to the end of the last century, multinational enterprises and non-governmental organizations considerably extended their influence on social co-existence. It is, above all, the multinational enterprises which decide about the allocation of resources which correspond to the gross national product of a medium-sized national economy. At the same time, they influence the inland revenue of individual countries by means of their choice of locations and evaluation of prices in intra-industrial trade. The yearly turnover of General Motors or DaimlerChrysler is higher than the gross national product of countries such as Norway or Argentina. At the same time, the increasing number of corporate foundations is showing greater consciousness of social issues. Foundations are promoting social tasks such as education, research and intercultural dialogue and, in this way, are contributing towards social aims. They are the expression of an increasingly decentralized realization of social tasks.

Non-governmental organizations (NGOs) are gaining influence in the political sector and finding increasing resonance from the public at large. This was made particularly clear in the debate about the Brent Spar oil platform which was initiated by Greenpeace and forced Shell to dispose of the platform in an environmentally-acceptable manner. It is remarkable that not only individual NGOs are operating successfully; they are increasingly entering into coalitions for a limited period of time and for a particular purpose in order to increase their fighting strength. The Multilateral Agreement on Investment (MAI), an investment protection agreement negotiated within the framework of the OECD, was effectively criticised in public by a broad opposition of NGOs. This finally led to the defeat of the agreement, impressive proof of the power behind such campaigns. At the WTO summit in Seattle at the end of 1999 the involvement of NGOs finally took on the character of concerted action. NGOs are not politically legitimized in the traditional sense: nevertheless, they are playing an increasingly important role as guard dogs in





socio-political life. They are not bound to a particular territory and can organize their protest well by implementing modern communication technology - in particular the Internet - without appreciable loss of time or frictional loss. In addition to control or warning functions, NGOs will probably take over creative functions in the future. Agenda 21, for example, explicitly expressed its wish for the cooperative participation of such organizations in the realization of its environmental aims. Their expert knowledge and their proximity to problems and the people involved make them attractive partners for the people who conventionally fashion politics. In this connection, the NGOs will strive for an active role themselves and not only act when they are invited to do so by political bodies. Politicians and officials will have to get used to this. In the future, political action will therefore not only be controlled from state institutions from top to bottom but also organized from decentral and independent networks from bottom to top.

The asymmetries of social relationships, the acceleration of technological innovations and the mutual sensitivity of a networked world question many traditional government, administration and development models. These are becoming unsuitable for long-term action in the future.

Four challenges result from this:

- the legitimization of political action;
- the replacement of unsuitable control mechanisms;
- the modernization of decision-making processes;
- the reform of international institutions.



## II. Globalization and political legitimization

|| Interlacing calls  
for better forms of cooperation ||

|| International politics is  
insufficiently organized ||



Kriengsak Chareonwongsak on political  
legitimacy in a globalized world

|| Combining the public,  
governmental and private sectors ||

|| Establishing the legitimacy  
of a new decision-making system ||

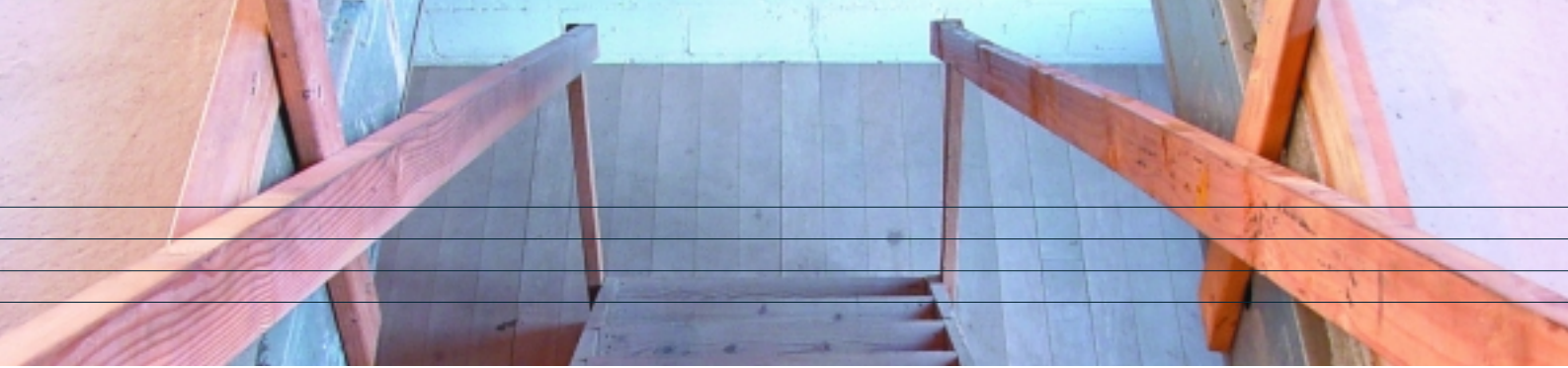
Protected by common international institutions such as the United Nations and co-ordinated processes such as the decision-making in the UN Security Council, many modern societies have opened themselves in their own interest in the course of the last 50 years. These open societies are now facing the challenge - in their own interest once again - of establishing new regimes or modernizing outdated institutions. The jump to a social system characterized by globality and technology makes a new kind of cooperation necessary. Next to the paradigm of open market economies there must be one of co-operative societies. Many of the challenges of the present day demand cooperation above and beyond national borders. An increasingly integrated world economy needs global rules regulating competition. A well-balanced economic development, the preservation of the environment, the guarantee of inner and external security or the maintenance of the global communication infrastructure can no longer be realized with national approaches. The present system of international politics is, however, insufficiently fitted out for such requirements and, in addition, is characterized by grave errors.

This is evident because of the following:

- lack of cooperation as well as co-ordination problems between the individual political levels of the international decision-making systems;
- democracy deficits and legitimization deficits in international politics;
- non-existent sanctions and conflict-solving mechanisms;
- lack of reorganization possibilities in international organizations;
- dominance and power of obstructing decision-making in the hands of just a few countries;
- diffuse role of the civil society.

The quiet loss of power of conventional politics is leading to a more intensified search for concrete organizational mechanisms. Such measures emphasize the necessity of closing gaps which the state can no longer fill or should not fill. It is a question of joining the public, governmental and economic sectors by means of partnerships, establishing different communication forms and incorporating the people more closely in public life. If the transnational society is to be the model for social life in the 21st century and the distribution of tasks is widely spread, the question about the legitimization of political activity arises: The shift of competencies from democratically legitimized institutions and actors to those who are not equally authorized to take political action results in a legitimization deficit which erodes the status quo of the separation of powers in democratically constituted societies.

Thus the legitimacy of a future decision-making system will be of key importance. The central question is who - if not the nation states - will lay down the regulations which will be binding for the nation states and who will be legitimized to do so and in what form. Legitimation arises from the transparency of the decision-making process, the efficiency of concrete measures and the democratically organized participation of the citizens. Transparency, efficiency and participation are the cornerstones of legitimate political action. Asymmetry, acceleration and complexity of the social net-works justify in this context the necessity for a new political concept which establishes new forms of cooperation, a new division of labour and new integration mechanisms.



## Globality and multi-level politics

Control levels for social life will have to become more diversified and more intermeshed. The legitimacy of the regulations which have been worked out by these various levels - local government, national administrations, international authorities - calls for a clear demarcation of competency, an efficient division of labour and transparent decision-making processes. The necessity for intermeshing in a multi-level system can be described with a new term - "glocal cooperation". This is a kind of teamwork which keeps local needs and abilities in agreement with regional and global requirements. For existing global environmental problems, Agenda 21 formulated the aims and the strategies which should be implemented at a local level. Examples of this are the plans for integrated approaches towards the development, cultivation and utilization of water resources. The plans worked out within the framework of the UN and approved by the nation states formulated the problems, aims and consigned measures for local solutions in a detailed way. Thus specific tasks are delegated to different decision-making levels and actors. The national governments are called on, for example, to develop and to realize plans and investment programmes for a long-term cultivation of water resources.

As much as Agenda 21 would like be the first example of glocal cooperation, it does not have the necessary self-assertion and is thus only in a restricted sense an example of a functioning global governance. Its realization deficits are symptomatic of existing international regimes which are characterized by the lack of effective sanctions and conflict-resolution regulations. In addition, friction loss and conflicts of competence arise in the decision-making process and its realization. The central dilemma of glocal cooperation is, however, that although it is necessary to approach the problems together, the abilities of the regional and local actors differ drastically. When measures have to be realized, some countries may be overtaxed. In addition, the imbalance of power of the actors concerned can lead to emotional defensive reactions from the local or regional centres.

In order to achieve successful glocal cooperation in which conflicts are quickly and legitimately channelled and in which all actors are integrated in the dialogue without discrimination and on an equal basis, it is necessary to improve the institutional environment which balances out the field of tension between the ability to act and fairness. In addition, competencies and tasks must be clearly assigned to international organizations. Under no circumstances is the goal the organization of a sprawling world bureaucracy of the familiar pattern. Global governance must be limited here to the safe-guarding of peace, guaranteeing human rights, a long-term cultivation of global public assets, a common regulation of competition, and non-discrimination. In the face of the great variety of cultures, political systems and conceptions of social order, this limitation makes sense. Nevertheless, it will be difficult enough to formulate a cross-section of regulations which is binding for all.

|| "Glocal cooperation"

combines local circumstances

with the global necessity for action... ||



Wolfgang Reinicke (r.) speaks on the functions of political networks

|| ...but is insufficiently

organized in its present form ||

Glocal politics must take the asymmetries of social relationships into account. In the field of tension between competition and cooperation, the decision will have to be made from case to case where unhindered competition is to be given priority and where not, in order to avoid undesired socio-economic consequences. Perhaps the time is finally ripe for a kind of international politics which enables the regulations governing global co-existence to be more considerate towards autonomy but without falling back into isolationism and protectionism. The large majority of countries is very much aware of the advantages of an open economy. In some countries, however, the ruthless realization of the aims of unhindered free trade has resulted in social dislocation, thus weakening the acceptance of international regimes. By taking consideration of differences in development and social preferences in individual situations, the acceptance of international regimes and thus their legitimacy would be increased.

#### Positive integration

Intermeshing leads to increased open-mindedness towards concepts of even greater integration. The previous concert of international organizations and regimes is characterized by concepts of negative integration which, up until now, was aimed as far as possible at the opening of the national economies. Examples of this are the commercial regime of the WTO and the opening of the capital markets by the International Monetary Fund. The term "negative integration" describes the reduction of causes of friction in international co-existence which result from differences in national regulations or protectionist obstacles to trade. The beginnings of positive integration, i.e. the active organization of common challenges, have not gone far beyond declarations up until now and were neither particularly binding nor effective. Examples of this are the innumerable agreements of the International Labour Organization (ILO) and the environment agreements under the auspices of the UN.

In the 90s, the opinion increasingly asserted itself that, in the face of borderless problems, international politics needs new organizational perspectives. Thus steps are being indicated towards a paradigm change of global cooperation. Within this period of time, the density of international conferences and agreements increased considerably. The Kyoto Protocol of 1997 concerning the reduction of the world-wide emission of carbon dioxide and the Biosafety Protocol of 2000 regulating the cross-border traffic of genetically-manipulated organisms are prominent examples of this development. They also illustrate, however, the deficiencies of a global governance which is based on international law. The Biosafety Protocol, for example, lays down minimum rules governing trade with genetically-manipulated organisms, outlines measures in order to assist developing countries to set up an apparatus to control this technology but does not provide for any clear sanction mechanisms. This makes clear that, in view of the essential tasks of the future, international law must be complemented by global community law.



Old curiosities on the Forum's outskirts

|| Intermeshing forces us towards  
positive integration ||





On the sidelines: an interview with Michael Zürn

|| The renunciation  
of territorial integrity and  
national self-determination ||

**The renunciation of sovereignty**

The weakening of nation-state sovereignty is already becoming obvious today. This was demonstrated, amongst others, by the NATO intervention in Kosovo and the arrest of Gen. Augusto Pinochet, the ex-dictator of Chile, in Great Britain. In the first case, the principle of non-intervention was suspended on account of reasons of overriding importance. In the second case, the British courts ignored the sovereign immunity of another country. In the future, it will be possible to call other political representatives and heads of state to account and prosecute them if they have seriously violated human rights. Worthy of mention here is the international arrest warrant issued against the Yugoslavian premier, Slobodan Milosevic.

This development and the prospect of creating a global framework of law is in conflict with the traditional view of national sovereignty which has been based in Europe since the 17th century on territorial integrity and national self-determination. In the face of global interdependency, this concept will soon be at its limits. Although the nation state will remain an important political reference point, limits to national autonomy will be the result if global public assets are affected.

The problem tied up with the notion of sovereignty is demonstrated by, for example, environmental policy: The present understanding of national sovereignty is developing fatal dynamics. The destruction of ecosystems, the excessive consumption of resources and the creation of ecological risks are treated as being politically and legally the internal concern of the nations involved, although the future of the entire human race is at stake. The legitimate right to national self-determination must be carefully taken into consideration and reconciled with everybody's right to an environment worth living in. In order to reverse this trend, the basic principle must establish itself that the conservation of the ecological basis of existence is a matter of common interest and that national autonomy has its limits. This principle may not be degraded to a basis for political rhetoric as has been the case since the environment summit in Rio in 1992. Suitable legal sanctions and conflict-regulating mechanisms now have to be developed in order to be able to call countries to account in accordance with clearly defined conditions. In order to reduce disadvantages for long-term ecological production forms in a globally-integrated economy, binding and enforceable environmental protection stipulations - analogous to government legislation - are necessary for all competitors. In addition, politicians can ensure that the "polluter pays" principle is as firmly anchored as possible on the national as well as the international level and that fiscal incentives support the development of long-term ecological production forms.



|| Strengthening the beginnings of a  
"global domestic policy" by  
reforming international institutions ||

|| Democratic decision-making  
processes and transparency  
legitimate international action ||

### Reform of international institutions

There will not be a world government in the foreseeable future and this is neither necessary nor desirable. Nevertheless, it is becoming more and more important to strengthen the existing beginnings of a "global domestic policy" and to bring them into line. A part of this task is to co-ordinate the institutions within the international decision-making systems which often operate side-by-side but without contact, i.e. to recognise different system logics and to intelligently intermesh them. In contrast to the Biosafety Protocol, which came into existence as the result of an environment agreement, the WTO, for example, stands under the paradigm of free trade. Whereas the WTO is dominated to a great extent by the member states of the OECD and, above all, the USA, and the WTO's system of sanctions only really provides the "mighty" with the appropriate sanctions, most of the developing countries regard the UN organizations as being the more appropriate forum for the preservation and protection of their interests.

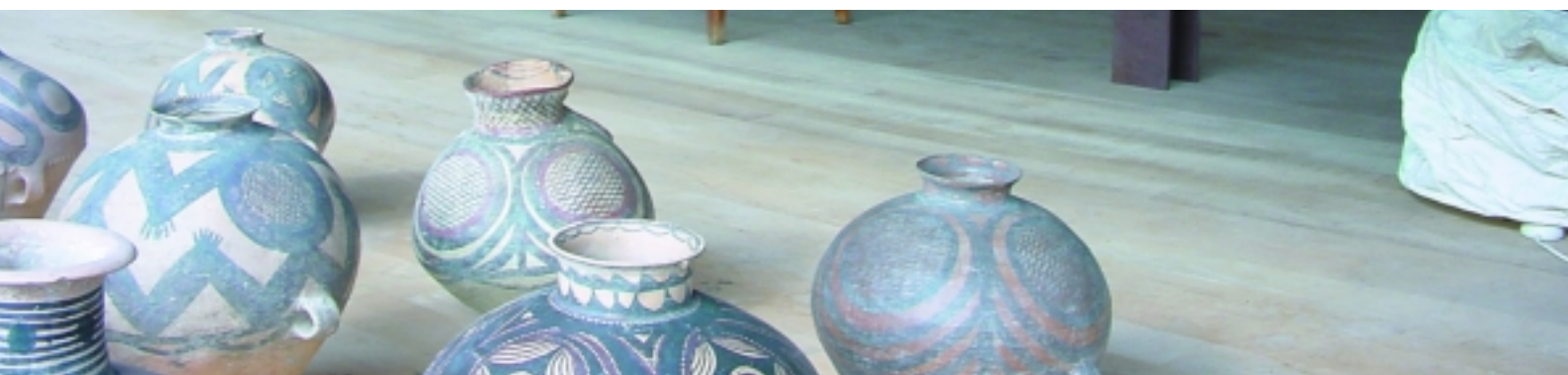
In addition, international institutions will have to open up to the general public, make their processes more transparent and democratic and become less anonymous. Despite the democratic architecture of the WTO, the decisions of the organization are dominated in reality by just a few industrial countries. Beyond that, the participation of reputable, non-governmental organizations in the process of setting up global regulations should be taken into consideration even if critical voices in the developing countries would initially like to see a democratization of the processes in terms of themselves. The number of consumer associations and environmental organizations is continually increasing. These assume a more and more important role in the public discussion and are, in many places, more trusted than government negotiation delegations. An example of such cooperation is the initiative of the German foreign office which has, since 1998, increasingly involved non-governmental organizations in their considerations about global affairs. Such cooperation can moderate conflicts before they really begin, even on an international level. Otherwise these efforts can lead to failure as was shown, for example, by the disaster of the WTO negotiations in Seattle.

In the face of the accelerating change, the construction of global coexistence must also anticipate the necessity of its own adaption. Institutions are therefore necessary which are not obstructed by the job of mastering old problems and conflicts, thus making anticipatory action impossible. In this context there must be a time limit for regulations, a continual updating of aims and an evaluation of measures which have been taken. If changes are to find access in social reality more quickly, the institutions will have to choose mechanisms which make their own versatility possible.

### Taking advantage of technological innovations

Not only the increasing intermeshing of societies calls for new political concepts; New technologies change the conditions behind political activity, too. Intermeshing and new technologies are closely interrelated to one another and cannot be analysed separately from one another. Whereas, for example, the digitalization of information technology was - and is - the motor of globalization, globalization is the motor of the further development of information technology on account of the competition in the technological innovation sector. The effects of intermeshing, interdependency and susceptibility to disturbances, the limits of political control and new constellations of power are very closely connected to the application and the effects of new technologies. They represent, in this context, new challenges for political activity and offer, at the same time, solutions for problems arising from them. If consciously and consequently applied, they can contribute towards the legitimacy of politics.

|| In addition to intermeshing,  
technological developments  
change the conditions  
behind political activity ||



### III. Technological innovation as a resource for political action

Technologies erode the room  
for manoeuvre, but also  
open new political resources

Debates have polarised the technological change between Frankenfood and the solution of the world's food problem, between transparent people and unlimited self-realization. Seen in a sober light, however, the question poses itself today, on the one hand, where the technological innovations are eroding the room for manoeuvre and, on the other hand, which contribution they can offer as a new resource towards political action.

The discussion about politics and technical progress oscillates far too much between the claim that politics should take care to prevent that which should not be and, on the other extreme, that politics should accept technological development as a kind of natural process to which it must accordingly adapt itself. Politics, however, is active, and can influence technological developments as well as constructively making use of them. For this purpose it is necessary to minimize the risks to social stability and to prepare the way for them where they open up paths for social development.

#### Erosion of the political room for manoeuvre

Technological innovations reduce the political room for manoeuvre and confront the conventional political actors with diminishing power. This is illustrated by the loss of the governmental decision-making, application and distribution monopolies.

#### Loss of industrial-political and military-technical power

In the industrial society, the innovation and the control over new technologies was, to a very great extent, in the hands of governmental institutions. An example of this in Europe was the development of nuclear energy which has been controlled within the framework of the EURATOM agreements by governmental bureaucracies since the beginning of the 50s. Such technologies demand enormous material resources, and these were only at the disposal of governmental institutions or far-spread bureaucracies. The weapons of mass destruction of the 20th century were developed under the guidance of the armed forces and the national governments. In order to produce them, great amounts of raw materials and the appropriate plants were necessary. Today, potential dangers arising from new technologies are coming out of private laboratories. New technologies have a greater commercial character and need less raw material. This makes control over them much more difficult. In the application sector of these new technologies there is the slumbering potential that they could be used for destructive purposes. This, especially new biological weapons and the possibility of cyber war, is in the minds of politically-responsible actors. That is the reason why the destructive potential of tomorrow demands governmental action today in order to successfully counter new forms of political blackmail or physical destruction.

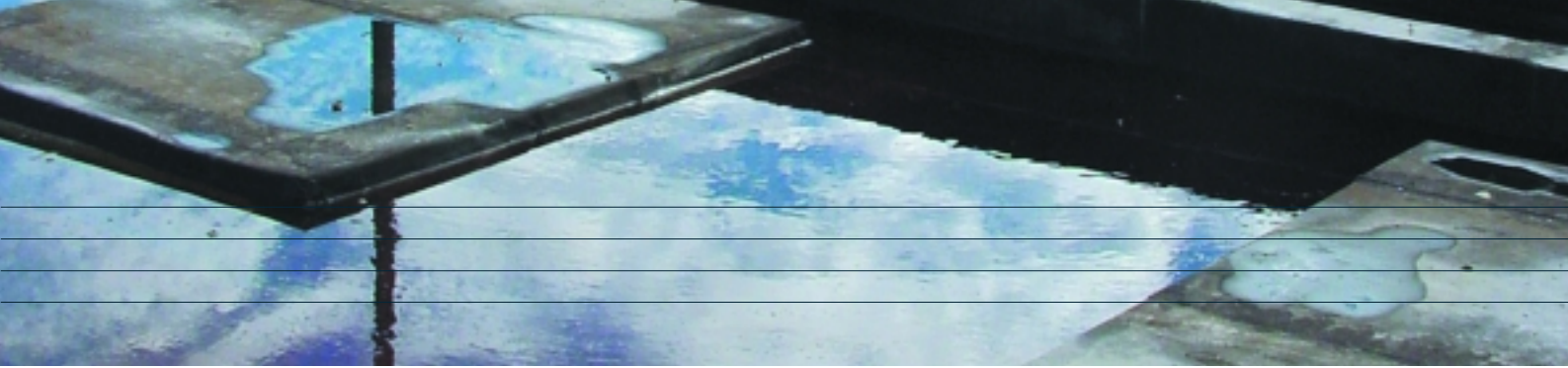


Moira Gunn and Lord Weidenfeld (r.)

Val Giddens (l.) speaks on the world's food needs







## II **Diminishing administrative control over technological progress**

The loss of decision-making and application monopolies over new technologies has led to a loss in the importance of the conventional political actors. In borderless market economies, it is hardly possible to administratively influence the direction of technological progress anymore. If, for example, a national parliament forbids the application of pre-implantation diagnostics - the controversial procreation of embryos in the test tube and their genetical analysis before implantation - another place will be found where this service is supplied and not forbidden. The Internet makes sure that offer and demand come together. It is increasingly difficult for the legislator to enforce adherence to the laws. Whereas here the physical crossing of national borders is necessary in order to "break" a law, this step becomes superfluous by creating totally virtual worlds. Child pornography or extremist political agitation reach the consumer directly.

|| The Internet is attacking  
national control ||

## II **Diminishing fiscal autonomy**

In addition, asymmetric globalization or the varying mobility of the production factors has contributed towards the fact that capital has increasingly been able to evade the financing of social tasks and other production factors, in particular labour, have been increasingly burdened by taxes and social insurance contributions. These processes are leading to diminishing fiscal autonomy - political room for manoeuvre is dwindling and is attacking the achievements of the social market economy. The danger of the reversal of the social solidarity process arises. As in the case of an increasingly faster turning spiral, societies can be polarized by the fight for work and prosperity; people with a job against the unemployed, recipients of social welfare benefits against those without these claims, the rich against the poor. In this way, the problems related to social peace and internal security are becoming more and more important but, in the face of strained budgets, governmental solutions are increasingly difficult to pay for.



Wolfgang Nowak, leader of the German Chancellor's planning staff

Thus, new technologies fundamentally change the political architecture. They result in diminishing room for political manoeuvre but create remarkable resources in other places at the same time. Where the problem-solving potential of the new technologies is not sufficient or dangers arise from their application, new political, economic, cultural or legal instruments must take effect. It will be necessary to decide from case to case whether this can be best achieved by voluntary regulations drawn up by industry (such as the eco-audit), by new legal regulations or by the mobilization of the public.

## **New resources for political action**

Technological innovations become resources for political action when they provide political actors with new instruments of political decision-making, when they help to optimize the activity of governmental or social bureaucracies and when they can contribute towards the solution of social problems. Information technology contributes here in many ways and biotechnology can also enable innovative political structuring.

|| The innovative potential  
of new technologies  
presents itself as a  
remarkable political resource ||

## **The democratization of information**



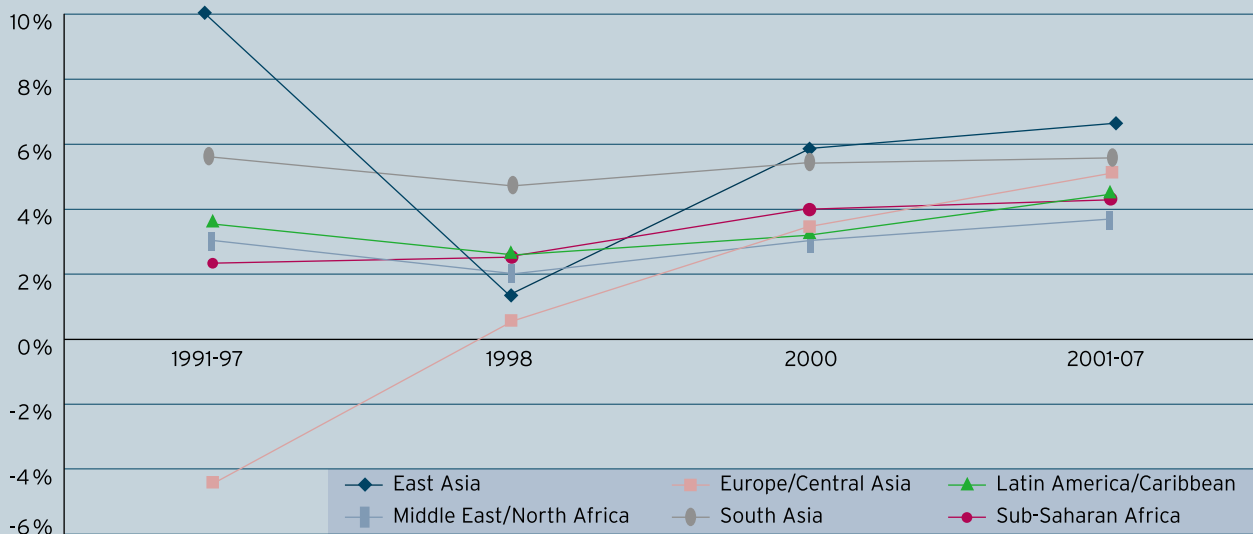
Angela Kane, United Nations

The digitization of information allows hundreds of millions of people all over the world to communicate with each other and to exchange knowledge, news, pictures, music and - above all - opinions to a degree which was never possible before. This new information platform, based on the Internet, the computer and the mobile telephone, also changes the degree, the form and the intensity of political communication. Improved possibilities of articulation mean, as a result, changed or new kinds of possibilities of action from those political actors who, up until now, have played a secondary role. Now, however, they are able to use forms of communication technology which are becoming increasingly cheaper and user-friendly in order to become politically active. In this context, the NGOs are particularly affected. The protest against the WTO conference in Seattle, which was organized via the Internet, has shown how this medium can be used for political purposes in an efficient manner: Oppositional material could be quickly formulated and distributed, places for demonstrations fixed, forms of action agreed upon and special addressees selected who share the same opinions. Even if one does not agree with these protests, the new information technology not only means that there is a new constellation of power - it also means a democratization of information.

## **Strengthening the backbone of regional economies**

The national economies are constantly changing their appearance. Information and knowledge are developing into a very important production factor. In order to remain competitive, continuous innovations in science, research, education, production, services and management are essential. Small and medium-sized enterprises play a particular role in the process of national and local real net output because these enterprises make the biggest contribution towards the gross domestic product in many areas of the world and contribute considerably towards the creation of new jobs. Globalization and general access to new technologies have changed the innovation and investment behaviour of companies. Independent of state sureties and cautious investment banks, it will be easier to acquire capital for new enterprises in the future. This is a new basis for competitive, industrial and political instruments providing the roots which can make a region prosperous and competitive. Once upon a time the national and international credit and insurance markets were controlled by large banks, insurance firms and investment companies. These institutions often preferred to grant credit to companies with a solid management of financial affairs and evidently high creditworthiness. In this respect, the banking sector was often neither particularly democratic nor impartial. The banks interpreted the term "creditworthy" in a very

Regional Economic Growth



World Bank



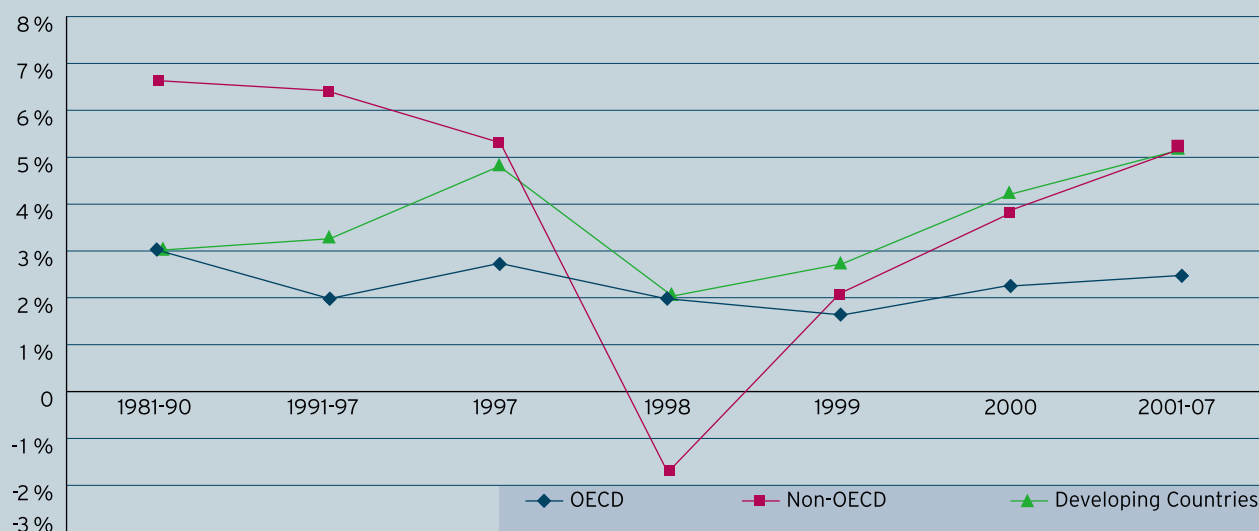
limited sense and the question whether new enterprises received credit or not often depended on relationships and good contacts. The granting of credit was often geographically closely limited to national or regional areas on account of the lack of information. Globalization and information technologies have led world-wide to a pluralization of the financial world at the expense of the monopoly of the banks. Capital could be more easily created on account of the emergence of a commercial paper market and new kinds of financing instruments and, in the course of the last 20 years, there was a multiplication of the capital-formation sources, the utilization of which broke through the encrusted and arbitrary procedures of credit granting. Here, too, the Internet provides an increasingly easy access to investment and venture capital. Capital markets are becoming more and more transparent, on account of electronic competition more attractive and on account of the Internet more global. Countries are greatly interested in economically vital areas. Whereas multinational enterprises have the possibility of independently deciding where they create job opportunities and pay taxes, small and medium-sized companies are often limited geographically. If they safeguard jobs and make a profit, they relieve the welfare state and become an important fiscal factor. If they are innovative and competitive they serve the interests of politics because their certain profits are the resource of their political action.

#### Realization of long-term ecological processes

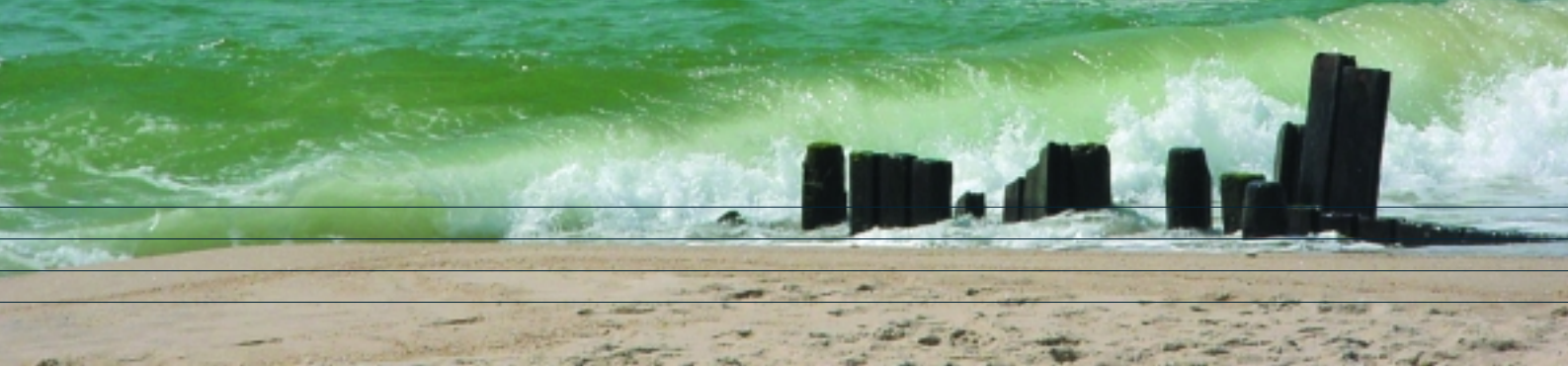
New technologies represent in many respects remarkable resources for the realization of long-term developments. A decentral networked information society can lower transport costs and reduce the flow of traffic. The optimization of electronic control systems in production processes cuts energy consumption and the emission of pollutants resulting from industrial production. Digitalization will thus become a support of long-term ecological processes. This prospect is a bright spot on the horizon and a signal to operative politics because it can selectively take advantage of the potential of the new technologies in order to solve problems. Tax relief, the promotion of research, standards and norms are important direct

|| The selective promotion  
of technologies ||

Annual Economic Growth (percentage of GDP)



World  
Bank



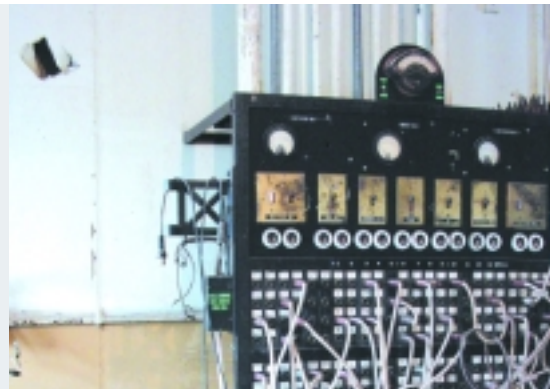
control instruments of politics. In addition, politics can make itself appear friendlier towards technology and the middle class. If these control instruments are specifically applied to the promotion of regenerative energy sources, pollution-reducing technologies, high-yield seeds, health-promoting medicines or traffic control systems, they create incentives towards their development. This is not only socially necessary but also ecologically sensible because the paradigms of the industrial world will lose their meaning in the future.

On account of the prospect of increasing population and economic growth, a migration-environment dilemma is coming into existence world-wide which is already forcing political reactions today. It is to be feared that the poor masses in the underdeveloped regions will set off, driven onwards by hunger and poverty, in the direction of the bulwarks of the affluent society. If, however, the newly-industrializing countries and the third-world countries manage to achieve moderate prosperity and to avoid mass emigration, there is a threat that the biosphere will collapse.

The growth philosophies of the industrialized world are responsible for these perspectives. As a result, economic growth there has been declared as being the one and only aim without taking the environment as a production factor into consideration. The less-developed countries of the world have followed this conviction and added cars and other technological achievements of the western world in their catalogue of wishes. The "Green Revolution", the provision of high-performance plant sorts and the utilization of fresh water resources within the framework of gigantic reservoir projects have also built up false hopes of limitless growth in the developing countries.

New technologies open up room for manoeuvre in order that the pursuit of growth and the claim of many societies to a high standard of living can be realized on a long-term basis without bringing about the collapse of the environment. In the car manufacturing sector the fuel cell, for example, symbolizes in an outstanding way the possibility of long-term mobility. Modern biotechnology can contribute towards increasing the yield of cultivated fields and preventing the necessity of large-scale land clearing and, in this way, the destruction of biotopes. The gene technological development of microbes which decontaminate the ground may have the effect that humans do not distance themselves even further from nature but instead rectify defects resulting from progress in the past by means of the employment of natural resources.

|| The potential of technological  
solutions must be backed  
up by social learning ||



Relics in the meeting place:  
antique communications technology

#### || Education: the key to a lasting world

The application of new technologies alone will not, however, be sufficient as a political resource. Technological innovations on their own do not bring about social stability. It will also be necessary to create a general political framework in order to bring about a change of structures and people's awareness. The aim of long-term developments requires social learning world-wide. Education, too, is a key factor for a world which is organized on a long-term basis.



## IV. Price of the lack of cooperation: Necessity of global governance

|| The time is short for long-term  
future-oriented action ||

|| The price of the lack  
of cooperation  
cannot only be measured  
in terms of money ||

Japanese government adviser:  
Yoshihide Soeya (L.)



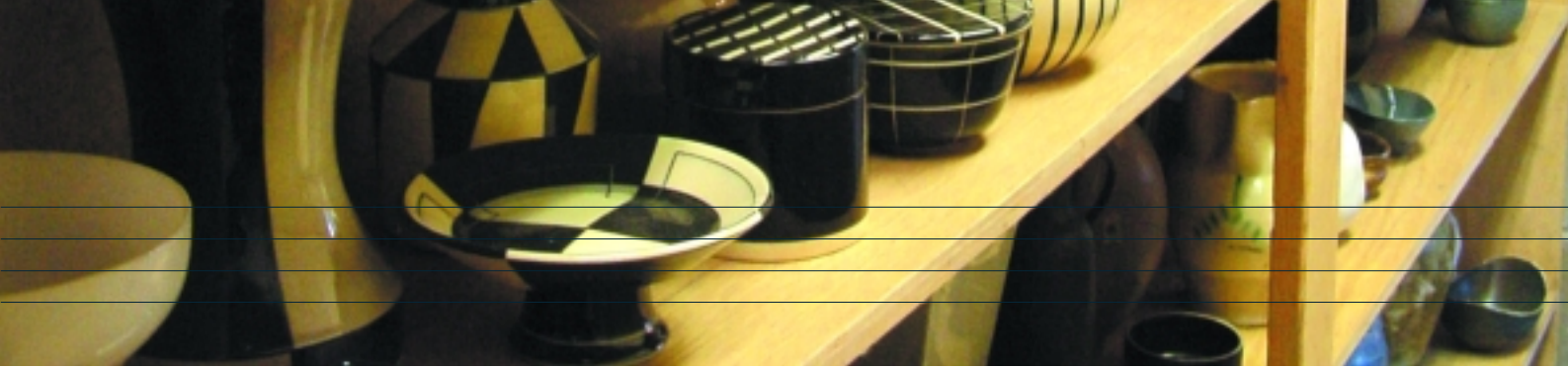
Multi-level politics, positive integration, the renunciation of sovereignty and the reform of international institutions make up the concert of global governance. The characteristic of a perspective which reaches over and beyond the own national borders is a new awareness of the reciprocal actions and the load limits of the global system. National interests and the national economy still dominate the thoughts and actions of a large number of political decision-makers but this increasingly does not meet up to the actual requirements. On the contrary, it is just this way of looking at things which causes even more problems because particular national interests still determine the outcome of global cooperation.

The pressure of the problems requiring international cooperation is growing and the time to solve them is short. The question arises how much the lack of cooperation will cost. These costs cannot only be measured in terms of money and expressed as concrete prices. We must ask ourselves the question to what extent missing cooperation reduces the development chances of the generations to come, encourages discord and violence within and between societies or irretrievably destroys natural resources. Cross-border economic migration and the flight from poverty, ethnic-national violence and the attack on the world's gene pool symbolize such costs in a vivid manner.

It is in the nature of things that the costs first become evident when concrete damage has been caused. Nevertheless, there are approaches with which foreseeable undesirable developments at global level can be evaluated today. This is made vivid by the example of global warming and the natural catastrophes linked to it. The American World Watch Institute together with the Münchner Rück, a German insurance company, calculated an economic damage of 92 billion US dollars resulting from hurricanes, floods and typhoons in 1998. On top of this there are the costs arising from people losing their homes or their jobs on account of such events. The calculations were based on the assumption that, in this context, approximately 300 million people were driven out of their homes in 1998.

The protection of the atmosphere can only be organized with global cooperation. The traditional national economic model knows no natural barriers. The concept of competition does not take the biosphere as a cost factor into consideration. The economic system does not produce an individual or collective behaviour which forces us to treat the natural biosphere carefully. Analogous to the governmental legislation, the community of states must come to a global regulation of competition which defines long-term ecological preservation as being a global public good and which ensures that this regulation is the basis of economic decisions for all actors participating in competition. In order to avoid overtaxing countries which are economically weak or less developed, differentiations are appropriate: Minimum standards and guidelines instead of uniform regulations, floating deadlines which are adapted to the respective situation instead of immediate and general obligations, support in the creation of capacities instead of overtaxing on account of unrealistic stipulations.

Other sectors also show the need for global governance. For a functioning world economy, a radical reform of the international economic institutions is necessary in order to avoid the costs of the lack of cooperation. The balance of multilateral cooperation shows here a conflicting picture which demonstrates the heavy dominance of nation state power. An example of successful cooperation was provided by the Group of 7 (G7) in 1987 when the international financial system threatened to collapse. The agreements of the G7 countries prevented the collapse because it



was in their common interest. In contrast to this, many other examples, such as the unsuccessful multilateral management of the dollar crisis in 1995, demonstrate the limits of cooperation. A concerted interest measure failed on account of the opposition of the USA. It was not in the interest of the United States to reduce the exportability of American products and services by means of an revaluation of the dollar. In this case, multilateral cooperation failed as a result of American opposition which was fed by the premises of American trade policy and the pressure resulting from the budget deficit. The losers were the German Federal Republic and Japan who were confronted by unnatural exchange rate relations and strong price competition.

In the long term, the excessive emphasis on national state interests and premises results in costs for all actors which take part in world trade. As a result of the Uruguay round, the liberalization of the markets of numerous developing countries exceeded by far that which the USA, Japan and the EU were prepared to do. In particular with regard to free trade with agricultural and textile products - i.e. in those markets in which the developing countries are competitive - comprehensive protective clauses were pushed through by these countries. In this way growth and prosperity chances were thrown away and conflicts provoked between the industrialized and less-developed countries. As the Asian crisis showed us, the regimes of the WTO and other institutions such as the IWF cause a fall in the readiness of those countries who are at a disadvantage to cooperate globally. At the same time, the stress between the negotiating parties increases and the feeling is reinforced that it is better to withdraw to more regional economic blocs. A world which increasingly falls into smaller blocs is not good for peace and can stir up political conflicts. In such a scenario, nationalist and protectionist mentality threatens to gain ground. In this way, military force also becomes a cost factor of the lack of cooperation. Nothing else expresses global refusal to co-operate better than this and nothing makes the need for global governance clearer.

From the starting point of the asymmetries of social development and global complexity, there is no alternative to the creation of a political room for global decisions about values and forms of cooperation. These must also result in a global community law whose binding force is guaranteed by common institutions. The arena of global politics is not only a place where purely national governmental activity takes place: It also has to integrate other social elite groups in order to improve the legitimation of political decisions. The creation of problem-orientated networks contributes towards the improvement of the efficiency of the employed resources, the increase of the transparency of measures and ensures the participation of the social groups involved. The world is moving together more and more closely and a retreat into isolation is no longer possible. Long-term global cooperation needs as much competition as possible and as much teamwork as necessary. Even if local, national or regional identities remain important reference points, humans beings will increasingly have to consider themselves as being world citizens. If there is not a certain sense of belonging and a degree of mutual responsibility, the target vision of long-term social development will remain a beautiful illusion.

|| New kinds of conflicts  
and violence necessitate  
global governance ||

## Future Paths to Developing a Sustainable Society

### A Report on the Aventis Triangle Forum, July 19-21

by Sascha Meinert



Benjamin Barber, Frank Douglas and  
Sascha Meinert (l. to r.)

Which paths into the future are we choosing today? Approximately forty politicians, economic leaders, and scientists from North America, Europe and Asia gathered together from July 19 to 21 in the "Watermill Center", Robert Wilson's art and theatre center, to discuss which guiding principles should lead the way into the globally networked society of the twenty-first century. The conference was a further building block of the project "How We Want To Live Tomorrow", carried out by Munich's Center for Applied Policy Research (C•A•P) together with the Aventis Foundation. The aim was to bring together the experiences and viewpoints, away from daily political interests, of the three regions in which globalisation is furthest along, and to devise policy recommendations for the common challenges. Along with the basic question of requirements for a legitimate and functioning global community, another main focus of the debate at the Watermill Center was how to deal with new technologies; in particular, bioengineering and information technology.

Actors, dancers, and stage designers from five continents gather at the Watermill Center every summer under the direction of American theatre director and designer Robert Wilson to experiment with new ideas that will then be performed on the stages of Paris, London, Berlin or Santiago de Compostela. Wilson founded this center of creativity in 1992 in a building on Long Island that had once been used in the 1940s for experiments by Western Union that led to the invention of the fax machine. "An ideal place for this conference" praised C•A•P director Prof. Werner Weidenfeld, who had invited the distinguished group to the second Aventis Triangle Forum. The Watermill Center and the future network "How We Want To Live Tomorrow" were fused together for three days in an intense exchange of cultures and various visions of the future.

The artistic contributions offered by Robert Wilson and the other artists present at the Watermill Center offered diversion from the intense debates taking place in the plenum. They enriched the forum with other perspectives, sparking different ways of thinking and experiencing in the participants. Photography, dramaturgy, fine arts, sculpture and performance are all blended together in the Watermill Center, creating a marvellous experience. The arts acted as a catalyst for the dialogue bridging the various cultures. The performance "Barcelona Point" made it evident that art as a universal language can inform socio-political goal setting. It is important to note that a worldwide audience was able to follow the forum live on the Internet. The presentations and the initiating paper that structured the conference can still be accessed at the project's web page, <http://www.aventis-forum.uni-muenchen.de>.

#### Globalization Requires Trust

The first panel of the conference dealt with the question of the requirements for political legitimacy beyond the national state. Division of labour is advancing with globalization, becoming more and more divergent, and is a substantial driving force behind growth and prosperity. But it also creates new forms of independence and demands trust, trust that products produced and processed on the other side of the globe are safe, do not pose health risks and were neither produced under exploitative conditions nor to the cost of the environment. However, the interpretation of what is safe for one's health or what is environmentally/socially acceptable varies. Europeans refuse to eat American meat treated with hormones; Asia sees itself at times as a test area for risky technological advances of the industrial nations; and North America suspects that many other countries abuse





human rights. All the controversy surrounding so-called “environmentally friendly” genetic engineering is a symptom of varying mentalities and opinions when it comes to global togetherness and dealing with the prospects and risks of new technologies. This is where it becomes especially evident that, sooner or later, the global market must also reach agreements on common values and standards.

Growing international co-operation since the end of the Cold War is an expression of this mutual responsibility. Since the beginning of the nineties, agreements and institutions on an international level have multiplied. In the last decade, the United Nations alone passed as many resolutions as in the forty years prior. The founding of the World Trade Organization (WTO) in 1995 intended open markets and fairer competition. But the problem of international politics often lies in putting things into practice, be it the agreement on climate protection or labor standards settled upon under the supervision of the International Labor Organization (ILO). Ultimately, the majority of international conventions still succumb to national provisos when it comes to putting things into practice. A further problem is the unequal amount of influence that certain states have on decision-making processes.

Global co-operation is still all too often affected by mutual mistrust and frequently leads to reproach. This ranges from protectionism on the abuse of human rights, to economic imperialism and inconsiderate dominance of the industrial nations in international institutions. There is, as yet, no global governance in sight suitable for such leadership responsibilities and capable of functioning in everyday life. However, without continual trust-building exchanges, mutual understanding of the other's point of view and mandatory global agreement, the human race will not be capable of mastering the challenges of the 21st century.

### **New Forms of Co-operation**

In the course of globalization, a living space has been created in which mutual fundamental challenges and interdependencies force one to relate to issues, i.e. new technologies, globalized markets, population developments, migration, ethnic conflicts and the increasing strain on the environment, with an intensity that did not previously exist. The ever-faster change of an increasingly connected world requires intensive exchange and new forms of co-operation that transcend both national borders and those between fields of knowledge. Common rules and a system that allows them to be put in place are needed. Briefly, global governance is difficult to achieve for many reasons, even though no alternative exists. For one thing, global governance requires countries to partially give up their sovereignty and therefore their power. It is hardly to see that national governments are willing to do this, although in the meantime there are very promising examples. Furthermore, it is still unclear how the respective world institutions can legitimize themselves in order to obtain acceptance from the people and communities for whom they are setting rules for. So far, democracy appears to be overburdened as a capable political model of order for a global community. And finally the question: how can a community of nations come into existence, in which the power and arbitrariness of large, individual nations does not call the tune, but where the relationships are rather based on common rights?

Robert Wilson explains the arrangement of sculpture in the park at Watermill Center





Jacques Verdier und Wolfgang Nowak (l. to r.)



Yoshihide Soeya

## The Role Of International Institutions

Even though many people see international institutions such as the WTO, the International Monetary Fund and in part even the UN as causing the increasing inequity as well as the exploitation of the environment, Michael Zürn, director for intercultural and international studies at Bremen University, is convinced they are not the problem, but rather an important part of the solution to the challenges that globalization places on politics. The answer is not to do away with these organizations, as many opponents of globalization would like, but rather to improve their capacity to act, as well as their political legitimacy. In his statement, Zürn illustrated the deficiencies in present international politics and pointed out approaches to solutions for these problems. International organizations such as the WTO or IMF are trademarked by a deficiency in democratic elements, i.e. those concerned are unable to exert their influence. Even though the principle of unanimity holds true to the concept of national self-determination and eases the acceptance of decisions, at the same time it impedes the capacity to act for international organizations and often results in non-decisions.

According to Zürn, without the possibility of having binding majority-rule votes in international politics, global governance is difficult to obtain. To date, we have made do with letting a small circle of nations lead the negotiations and then present the result to be voted on. This is usually done at a time when the option is "all or nothing", pushing for consent. This was probably the only way of bringing the Uruguay meeting on the further development of GATT to a close. The problem was that the interests of the economically less-developed nations were taken too little into consideration, resulting in them blocking further steps to a free market regime.

A model that appears promising is the one that led to the closing of the Biosafety Protocol at the beginning of 2000, which will regulate the import and export of genetically modified products. Five coalitions of countries, irrespective of geographical origin, emerged with mutual interests and their representatives were then finally able to reach an agreement. If these representatives from over 130 countries had all been sitting at one table, a result would hardly have been possible. In addition to tightening up the negotiating process, Zürn speaks in favor of a greater inclusion of social groups and forming of a "third point of reference" in the shape of independent agents who would link global politics with national governments, and advance the organized forms of civil society. The Bremen political scientist is convinced that once the people realize their governments are no longer in the position to solve these problems, acceptance and support of a global community will increase.

## Models of Political Control

In a world of mutual dependency, a new understanding of national sovereignty is necessary. When it comes to excessive environmental consumption, violent ethnic conflicts or grave human rights violations, conventional concepts of national self-determination become increasingly shaky. The intervention in Kosovo, the arrest of Chile's ex-dictator Pinochet and the growing number of international agreements concerning the environment are the first expression of this development. Yoshihide Soeya, professor for international relations at Keio University and advisor to the Japanese government, emphasized that many Asian nations do not even have the beginnings of a democratic community. And because the national states will become the most important building blocks of world order in the foreseeable future, a fundamental problem exists for democratically legitimate global governance. Soeya sees economic development as a central necessity for democracy and rule of law in the developing nations.

The conference clearly indicated that the conflict between efficiency and equal participation has yet to be solved. Angela Kane, from the United Nations, sees a suitable framework within the UN to be able to put into practice a functioning system of global governance that represents a community of nations. Models that want to include each nation equally, however, often lead to inefficiency and to the realization of merely "reaching the slightest agreement", according to William Wechsler, Special Assistant to the US Secretary of the Treasury. Experience shows that smaller groups work more efficiently and therefore are able to reach more

legitimate solutions. Wolfgang Nowak, general director in the Germans Chancellor's Office, feels making institutions such as the United Nations center for harmonizing national negotiations, and therefore equipping them with more authority, would be the wrong direction to take. Nowak, German organizer for the conference in Berlin in June 2000 "Governance in the 21st Century", at which fourteen left-of-center governments developed a "network of reform oriented governments", prefers models such as this Berlin approach, where flexible reform networks develop common strategies in order to then apply them according to national responsibility and the respective starting conditions. In his eyes, the national community co-operation within the UN has proven to be too clumsy. On no account does Kane want her organization to be mistaken for a world government. "The UN is an institution in which nations can co-ordinate their actions with one another, and is a framework for common rules and actions. Global governance must not be confused with a world government and standardization. Much more the point is to uphold the diversity of the cultures. However, the shared responsibility that has developed for global community goods, as well as the mutual dependency, call for binding rules, a strong sense of collaboration as well as for more tolerance and freedom for individual paths of development. Nowak feels a development that divides the world into teacher and student societies, i.e. sender and receiver, would be disastrous.

But exactly this division is what many Asian nations feel to be their daily reality, regardless of whether it is the world-wide established music channel MTV, the contents of the Internet, the Western economic and business model that dominates the global economy, or the participation in international organizations. Even the security architecture in the Pacific region is still being influenced by the Japanese-American alliance.

The industrial nations have merely one sixth of the world's population but conduct four fifths of all world trade. Up until now, they have called the tune in international politics and determined the trends of globalization. This is the impression of Stephen Loeng, from the Institute for International and Strategic Studies in Malaysia. In many sectors, his country has very little leeway left to make own decisions, i.e. with the use of bioengineering or monetary policy. Even in financial politics, the IMF declared the rules of the game after the Asian crisis of 1997/98. The demand, which was also supported by other conference participants, was clear: the developing and emerging Asian countries want to participate equally in the further development of a global community. The model of international institutions in which an exclusive club of OECD nations dominates the decisions and sets the tempo, reaches its limits when international regime increasingly imposes obligations on developing nations. This, too, is a lesson from the WTO Council of Ministers meeting in Seattle. Its failure was largely due to the balking of the developing nations. In the same way, the UN Security Council model gets under pressure. So far, five nations have been making the decisions on possible military intervention in an organization that comprises 186 countries.

To date, however, the representation of a common ground among the Asian nations has failed, due mostly to a lack of agreement on cultural values and political and economical interests. In contrast to the European integration process, and contrary to the rhetoric on Asian values, no project Asia is yet in sight. At this time, Asia is not much more than a geographical term. The differences in interests and mentalities are too severe between countries like Taiwan, the third largest manufacturer of info-electronics world-wide; Hong Kong, a city-nation in transition, with 90% of its lifeline being trade; and Indonesia, an agriculturally influenced developing nation. So far, the religious, cultural and economic diversity of Asia has stood in the way of more in-depth integration projects in the region. In addition, there is an ever-increasing Western influenced media landscape and economic culture. Kriengsak Chareonwongsak, top advisor to the Thai government, illustrated the dual identity of many Asians, primarily among the youth, when he said "my youngest son is a FC Bayern fan, cheers for the German team in Thailand-Germany matches and his Email address is bmunichboy".



Angela Kane (r.)



Stephen Leong (foreground)



## The “China Factor” Will Shape the 21st Century

The conference participants were in agreement on one thing: the “China Factor” will decisively shape the 21st century. That is to say, China’s path will have a say in the future geopolitical world order. The development of the United States’ relationship to China will be of central importance, according to Yoshihide Soeya. A further problem arises from the continual growth of a world economy and the limitations being set by nature. Solving this problem is a prerequisite for the human race’s capability in the future. It does not require a lot of imagination when one transfers the West’s pattern of consumption onto a country with more than one billion inhabitants, to see that it would result in a collapse of the earth’s ecosystem. This is becoming evident already today in the oil consumption and growing demand for meat in the heavily populated Asian and South American countries—trademarks of economical development. Today, the 265 million Americans use as much oil as 3 billion Asians. It is exactly this ascent of the so-called emerging nations that illustrates the limitations of the industrial nations and forces even the economically developed countries to reform their thinking. Only if it is possible to reduce the use of energy and raw materials by at least the same amount as the world’s gross national product increases, can the withdrawal of their own resources be avoided.

### Overcoming Asymmetry

Ricardo Petrella, president of the Lisbon group and advisor to the EU Commission, complains that the present dynamic of globalization does not lead to globalness. Instead of encouraging the national community and improving opportunity for all, it is leading to increasing exclusion. The political scientists from the C•A•P also came to the finding in their conference discussion paper that the growth in asymmetry is among the greatest challenges in politics, along with increasing speed of the economic and technological developments. The unequal access to capital and know-how, the increasing segmentation of the labor market, the polarization of income and infrastructure (although 360 million people use the Internet regularly, half of the world’s population has never had a telephone conversation), are not compatible in the long run with the model of an open society. The consequence: separation and conflict. At the same time, one often overlooks the fact that reducing inequity is also of interest to the economically developed countries. And even the developing nations have the potential to prevent progress in the international agreements and institutions. The protection of natural resources in poverty-stricken countries is under exceptional pressure to justify itself, and often falls victim to a temporary improvement of the living conditions. Exploitation of the environment has long term effects on all of humanity. In the present system, many economies are only competitive if they do exploit the environment. Sooner or later, the social and economic difference will lead to cleavage in the world society.



Lively exchange

### Europe As A Model?

In considering global politics, Petrella points out the experiences during the course of European integration that could be used as a model for global community. On the basis of communal agreements, legislation and decisions on European affairs take place within the framework of common institutions, supported by supranational authorities such as the European Commission or the European Parliament. In the case of disagreement on interpreting certain norms, the decision is up to an independent court, namely the European Court of Justice. According to Petrella, the success of the European project does not lie in the creation of a common market, rather much more in the ability to co-operate in order to solve the problems that result from it, be it consumer protection or defining environmental standards. However, in the course of European integration, the difficulties of such an approach are becoming evident. A common identity still does not exist, and no “demos” that can democratically legitimize European politics. Parties, as well as media, still identify themselves within their national scope of communication. National interests still dominate the decision process and it would be



unrealistic to think that is likely to change soon. In addition to that, the global community of nations is much more heterogeneous than the EC countries. Even on a global level, Petrella does not see any alternatives of putting such a process, at the beginning of which is a global partnership agreement, into motion.

### **New Players in the Political Arena**

New players have established footing in the arena of political decisions and will be building. According to Katherine Fulton from Global Business Network, even though the so-called non-governmental organizations (NGO) of the eighties, such as environmental and consumer groups, were still largely seen as “long hairs” and “house wives with running shoes” by the public and in particular political elites, they have since won a strong place in the political arena. The last-minute prevention of the OECD multilateral investment agreement (MAI), the Brent Spar oil rig conflict, and the WTO disaster in Seattle where 50,000 demonstrators gained media attention with the slogan “WTO - Shrink or Sink” to protest against the free trade system all verify this fact in an impressive way.

It seems to be sensible to include the NGOs in decentralized networks that are formed for specific problem areas. However, such networks can only support national activity and not replace it, according to networking specialist and World Bank economist Wolfgang Reinicke. In his presentation, Reinicke pointed out that governments and their administrative apparatus are too awkward for complex and rapidly changing challenges. Back in the days of Baring's Bank, all safety standards for risky investments had been fulfilled. But in the meantime new financial instruments were set up, for which, however, the standards proved to be inadequate when a Barings employee drove them into financial ruin with failed speculations on derivatives. For a UN research project, Reinicke examined numerous transnational networks of state jobs, international organizations, representatives of civil society and businesses. He came to the conclusion that networks such as those for developing and monitoring environmental standards, often present more effective and reasonable solutions to the problems and react more flexibly than the clumsy apparatus of international organizations and national officials.

Very different views on the role of NGOs in multi-layered policies were prevalent at the conference. Ulrike Guerot from the Foreign Politics Society emphasized that the attempt to include everyone can make complex issues all the more complex. Petrella warned not to put the state on equal footing with businesses and NGOs. The responsibility of setting politically legitimate rules for the polity would get watered down. There was unanimity on the fact that NGOs have meanwhile become an important factor in international politics and that their potential, be it as a resource for information, a trust mediator or a watchdog for political and economical powers, must be used.



Lord George Weidenfeld (l.)



Sculptures at Watermill Center

### The Growing Responsibility of Multinational Enterprises

On the other hand, business' responsibility is growing. By today, the trade among multinational companies makes up approximately two thirds of the entire world trade. Enterprises such as General Motors, oil giant Exxon or Mitsubishi make turnovers greater than the gross national product of middle-sized economies. Companies such as China's Sinopec or the merchant giant Wal Mart have more than one million employees. Without a doubt, these global players will have to take on even more leadership responsibilities in the 21st century than is already the case. They have in their hands an enormous potential of solving - but also of worsening - the present global problems.

The Brent Spar incident finally made many companies recognize the importance of a good image, and according to Fritz Vahrenholtz, Shell supervisory board member and former environment senator in Hamburg, "environment dumping is out". Companies themselves have long been looking for innovative paths. Shell has been dealing with harmful emissions internally to reduce energy consumption and environmental strain. Vahrenholtz believes that companies will only take on this role if alert NGOs, i.e. environmental and human rights groups, play the part of a watchdog and effective and democratic nations lay down clear rules. The fact that the fight for the consumer no longer has to do with merely the price of the product, but rather increasingly more with its "greenness", fair trade, trustworthy quality, service and image opens new dimensions for companies. Alas, the courage to take new routes and invest in lasting corporate strategy is often lacking. To a large extent, the present global economy only produces for the needs of a third of the world's population. Innovative ways are needed to uncover the enormous potential in unmet needs. Herein lies a central challenge for the global players of the 21st century.

### New Technologies: Resource or Erosion Vehicle for Sustainable Development

Also discussed at the Watermill Center was what contributions new technologies, such as bioengineering or information electronics, can make in dealing with the demographic transformation and environmental problems. It is in the nature of new technologies such as genetic engineering to at first be lacking both in noticeable advantages as well as disadvantages. The result: hope and fear are boundless. In a convincing statement, Petrella emphasized that new forms of technology are not simply the perpetuation of the developments in the last 300 years, rather they represent a fundamental qualitative revolution. Genetic engineering places us in front of the fundamental questions of our self-awareness. Its application affects all of humanity. It is becoming more and more apparent that access to the digital information world is also the ticket to education, jobs and income. With this in mind, according to Petrella, technology policies will inevitably become social politics. And this is exactly where the national state needs to act.



In conversation with Jürgen Dormann

Val Giddings from the Biotechnology Industry Organization in the US warns against only concentrating on the risks when dealing with new technologies. In view of a growing world population and limited agricultural space, it is irresponsible to leave the new technologies available to us untouched. In his eyes, the risks of genetic engineering are being completely distorted in the public debates, particularly in Europe. At the same time, politics should not be responsible for creating an economic monopoly. A fundamental difference between the US and Europe is the greater trust the public has in supervisory agencies. "We have not had any



cases of mad cow disease scandals or dioxins in our food in recent years.” With his provocative presentation Giddings sparked a controversial debate, making the various facets of this question apparent. The American political scientist Benjamin Barber emphasized that the willingness to take risks is directly linked to the expected gain. If people do not see any use in a particular form of technology, they are therefore not willing to take any risks. For this reason, the focus should not solely be on possible dangers, rather the uses of the particular form of technology must be tested and conveyed. Only when societies can personally relate to the applications, can they also consent to the potential risks. This explains consumers’ unmistakable “no thanks” to genetically modified foods, whereas applying genetic engineering in medicine is predominantly supported. In future, modern bioengineering will penetrate the sensitive and very necessary areas of health, nutrition and environment. And that is exactly what predestines it to becoming the crystallization point for social conflict, making a wide-ranging public dialogue an absolute necessity.

The fact that the cause and effect of human activities are often far removed from one another in terms of space and time, and are difficult to coordinate, makes it very difficult to assess the risks. According to the C•A•P’s discussion paper analysis, a requirement for lasting development is a more foresighted political approach. So far, protecting the environment and bio-diversity has, to a large extent, occurred reactively. After-the-fact environmental protection has achieved considerable results, i.e. water quality in rivers and lakes, but has reached its limits. This means a shift from “repair” thinking over to a more foresighted approach. In order to ensure a more responsible and need-oriented approach to new forms of technology, Boris Steipe, a Munich genetics researcher, encourages more mutual “check-ups” within the research community.

In her presentation, Fumiko Fukuoka, from the environmental organization Conservation International, made clear the possibilities of carrying out effective measures, and using information technology as an aid, to maintain the environment and its diversity. Only with the help of modern technology is it now possible to be able to install effective early warning systems, and to evaluate developments on a global level. However, information technology is only an instrument, according to Fukuoka, and not the solution.

By 2025 over half of humanity will live in large cities and be connected by a dense communication and transportation network. According to United Nations’ estimates, the earth’s population in 2050 will be 8.9 billion. If approximately half the present world population is under 25 years of age, this aging society phenomena that is already evident in the industrial countries will spread to other regions. Providing for a growing and increasingly city-oriented population, as well as a balanced relationship between gainfully employed and not employed, are challenges to be overcome. On this basis, utilizing all accessible technical know-how becomes a requirement of a sustainable development. Therefore, it is not about “if”, rather much more about “how”. The answer can not lie in binary conclusions that only allow for a “yes” or “no”, rather in approaches that ensure regions access to the use of modern bioengineering that they need the most.



Benjamin Barber (center)



A new look with Robert Wilson



An oasis of stillness at Watermill Center

### A New Map of Conflict

Conflicts often arise as a result of “language barriers” between different mentalities and societal sectors. Economic language differs from that of the layman’s; an economist’s rationality varies from that of a globalization opponent. The inability to communicate and learn from one another often leads to the two sides parting in silence and erecting hardened fronts. An open exchange about fears and motives beyond the usual stereotypes is particularly essential in societies with strongly developed labor division, in which inevitably only a select few decide on development issues that affect many. The technological development must be more notably accompanied by a broad social dialogue than it has been the case to date. A dialogue, which illustrates the increasing possibilities of human commerce and ensures the social adaptation to the technological revolution, but on the other hand also makes science and business aware of the expectations and taboos society links with the new technologies.

Knowledge and technology are increasingly replacing the use of energy and raw materials. In the knowledge-based economy, a large opportunity exists for both an ecological and an economical sustainable development. Knowledge and the ability to transfer it into products are taking on a larger role in the creation of wealth, and questions of intellectual properties are gaining a new dimension accordingly. Regardless if it is about looking up the title of a song in the Internet or patenting a bio-genetic discovery, the question of who has, and under what circumstances, access to immaterial property, is becoming a significant point of conflict.

Even if technological advance can contribute to reducing shortages, already existing shortages, as well as new ones arising in the future, will necessitate assessing priorities and can be the cause of conflicts; conflicts over room for cultural development, values, essential resources and rights of property. In view of the increasing complexity of the challenges and demands, national and conventional intergovernmental politics are often no longer capable of solving problems.

New models are required. New models, which link local circumstances with global necessary courses of action might be more transparent and allow for those affected to participate. This requires a willingness to seek new paths away from the familiar path of political decision making.

According to C•A•P director Weidenfeld, in order to effectively take on the global challenges, it is necessary to draw up a new “map of conflicts”. In a globalized world, conflict potentials do not arise primarily between nations, rather between and within societies. These new lines of conflicts run along diverging economical interests; between those who profit from the new freedom and those who either can not, or do not want to keep up with the speed of change. There have been five million victims of intra-state conflicts in the last ten years alone, and the trend is rising. In order to overtake this trend, Angela Kane from the United Nations believes “prevention is the best medicine”. If societies are prepared to remain in dialogue with one another, the arising conflicts can be channeled, enabling a peaceful balancing of interests. It can only be determined from instance to instance whether a network of private and public players, or the existing international organizations and their rules are best suited on a local, national, or global level.





The debates that took place at the Watermill Center made it evident that the search for functioning mechanisms in political decision making and power structures needs time. The atmosphere at the forum enabled the participants to promote their standpoints, solutions and visions in an open exchange. The debates also showed, however, how different the views and expectations are on this divided issue: the global living space in the 21st century.

## Conference location - Watermill Center



Southampton idyll

The Watermill Center: place of international meetings and creative exchange. Conceived as an interdisciplinary center for new work in art, it was founded by Robert Wilson in 1992. The New York Times labeled Robert Wilson a leading figure in the world of experimental theater. His ability to define space and time anew on stage and the ease with which he integrates other forms of art into his own work allow him to breach the conventions of theater. The result is an intensive blend of language, sound and images. Wilson's works include the pieces *Deathman Glance* (1971), *Einstein on the Beach*, *The Black Rider* (together with Philip Glass, 1991), *Poe-try* (2000) and the installation "14 Stations" (2000).

The Watermill Center is only opened during the summer months. Then, young artists from all over the world meet there in order to develop and rehearse plays, performances and installations, which in the next season are produced all over the world on the stages of New York, Paris and Hamburg, or the pilgrim city of Santiago de Compostela. Several major productions have been created in this fashion over the last eight years for the world's stages and museums, and a new generation of artists has been formed.

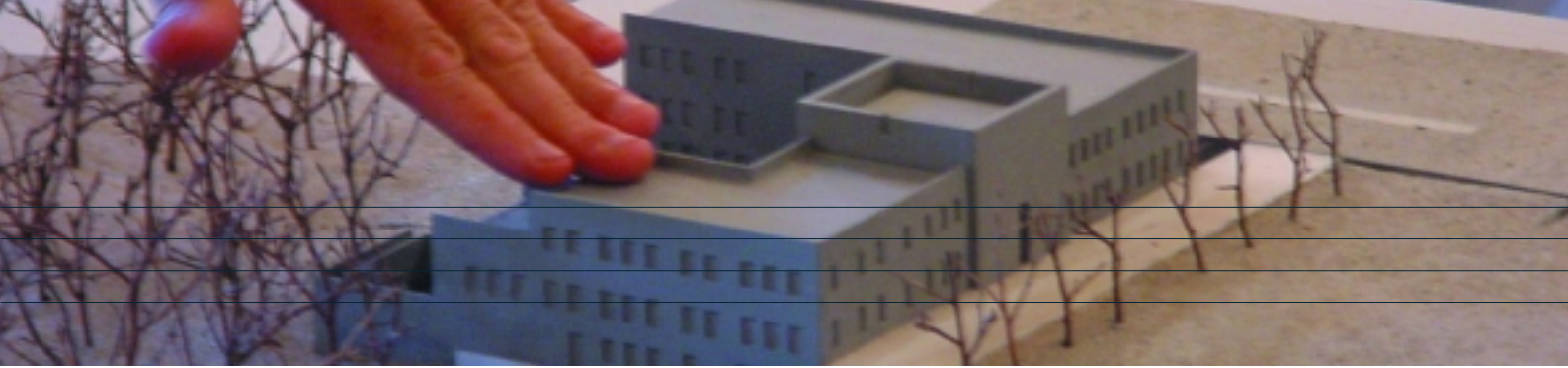
Moreover, the Watermill Center hosts the Robert Wilson archive, a collection of photographs, films and other works of art which document the activities of Robert Wilson and his fellows, and the Watermill collection, which comprises furniture and objects of world art, ranging from Indonesian Megaliths and antique Chinese



Robert Wilson explains the idea of Watermill



Indonesian megalith



art to photographs of Sarah Bernhardt, Berthold Brecht and Albert Einstein, as well as stage sceneries from Wilson's works. However, their placement is in no way set. Almost every day they are rearranged in new and provocative combinations. With financial support from the Byrd Hoffmann Foundation and the Aventis Foundation, the Watermill Center will be newly designed and enlarged by an international team of architects during the next decade. It is the nature of the Watermill Center to always be a project in becoming, to constantly change and develop its form.

The creative atmosphere of the Watermill Center and the exchange with its "inhabitants" offered a stimulating background for the dialogue staged by the Aventis Triangle Forum. A key element of Wilson's work is the recovery of the knowledge of former cultures and societies. However, according to Wilson, who participated in the forum's discussions, "it is not the knowledge of facts that drives us, but the questions for which we have not found answers yet."

An interview of Robert Wilson can be found on the web page of the Aventis Triangle Forum [http://www.aventis-triangle-forum.net/home/live/index\\_live.html](http://www.aventis-triangle-forum.net/home/live/index_live.html)



Excerpt from the dance performance,  
"Barcelona Point"

## Program

**19. July** 19:00 Welcoming Dinner

**20. July** 09:00 Welcoming and Introduction

Juergen Dormann  
Chairman of the Board of Management, Aventis S.A., Strasbourg

Werner Weidenfeld  
Director, Center for Applied Policy Research (C•A•P), Munich

09:45 Political Legitimacy in a Globalized World

Michael Zuern  
Institute for International and Intercultural Studies, Bremen

Kriengsak Chareonwongsak  
Executive Director, Institute of Future Studies for Development, Bangkok

Wolfgang Reinicke and Jan Martin Witte  
Director and Fellow, UN Global Public Policy Network Project,  
Washington, DC

11:15 Coffee Break

11:30 Legitimacy - Discussion Continued

13:00 Luncheon

14:30 Solving Problems of Demography and the Environment

Val Giddings  
Biotechnology Industry Organization, Washington, DC

Fumiko Fukuoka  
Japan Program, Conservation International, Tokyo





16:00	Coffee Break
16:15	Solving Problems - Discussion Continued
18:00	Break
18:30	Walking Elucidation of Watermill Center by Robert Wilson
	Dance Performance, "Barcelona Point"
20:00	Cocktails & Dinner

21. July

09:00 Trilateral Disharmony and Conflict Resolution

Yoshihide Soeya  
Keio University, Tokyo

Angela Kane  
Department of Political Affairs,  
United Nations, New York

Wolfgang Nowak  
Office of the Chancellor, Berlin



11:30	Coffee Break
11:45	Conclusion - Sustaining a Globalized World
12:30	Luncheon



## Participants

### **Benjamin Barber**

Director of the Walt Whitman Center for the Culture and Politics of Democracy, Rutgers University, author of "Jihad vs. McWorld", USA

### **Martin Breitenstein**

Editor, Neue Zürcher Zeitung, Switzerland

### **Kriengsak Chareonwongsak**

Executive Director, Institute of Future Studies for Development, Thailand

### **Reginald Dale**

Columnist, International Herald Tribune, USA

### **Ole Doering**

Research Fellow, Institute of Asian Affairs (Hamburg) and Department of Chinese Philosophy and History, Ruhr University Bochum, Germany

### **Horst Domdey**

Chairman, BioM AG, Germany

### **Juergen Dormann**

Chairman of the Board of Management, Aventis, S.A., France  
Chairman of the Board of Trustees, Aventis Foundation, Frankfurt/M.

### **Frank Douglas**

Member of the Executive Committee, Aventis Pharma AG, Germany

### **Katherine Fulton**

Principal, Global Business Network, USA

### **Fumiko Fukuoka**

Director, Japan Program, Conservation International, Japan

### **Gabriele Fischer**

Editor in Chief, Brandeins Magazine, Germany

### **Val Giddings**

Vice President for Food and Agriculture, Biotechnology Industry Organization, USA

### **Ulrike Guerot**

Director European Department  
German Society for Foreign Politics, Germany

### **Moirra Gunn**

Host of TechNation radio series, former NASA computer scientist, USA

### **Angela Kane**

Director of Americas and Europe Division - Department of Political Affairs, United Nations

### **Stephen Leong**

Assistant Director-General, Institute of Strategic and International Studies, Malaysia

### **Silke Mayerl**

Senior Research Fellow, Bertelsmann Research Group on Politics, Center for Applied Policy Research, Germany

### **Sascha Meinert**

Senior Research Fellow, Research Group on the Global Future, Center for Applied Policy Research, Germany

### **Douglas Merrill**

Senior Research Fellow, Research Group on the Global Future, Center for Applied Policy Research, Germany

### **Friedmar Nusch**

Chairman of the Board, Aventis Foundation, Germany

### **Wolfgang Nowak**

General Director of the Policy and Planning Unit, Office of the Chancellor, Germany

### **Riccardo Petrella**

President of the Lisbon Group, and Advisor to the European Commission, Belgium



**Eckard Polzer**

Former CEO, Dornier Medical  
Technology, Germany

**Werner Weidenfeld**

Director, Center for Applied Policy  
Research, Germany

**Wolfgang Reinicke**

Director, UN Global Public Policy  
Network Project, USA

**Robert Wilson**

Theater Director, USA

**Yoshihide Soeya**

Professor of International Relations,  
Keio University, Member of the Prime  
Minister's Commission on Japan's  
Goals in the 21st Century, Japan

**Jan Martin Witte**

Fellow, UN Global Public Policy  
Network Project, USA

**Boris Steipe**

Senior Research Fellow, Genetic  
Research Center, University of Munich,  
Germany

**Michael Zuern**

Director, Institute for International and  
Intercultural Studies, Germany

**Juergen Turek**

Director, Research Group on the Global  
Future, Center for Applied Policy  
Research, Germany

**Fritz Vahrenholt**

Member of the Supervisory Board,  
Shell AG, Germany

**Jacques Verdier**

President, Verdier Ventures, USA

**Joop de Vries**

Director Futures, Sociovision, France

**Arnd Wagner**

Executive Member of the Board,  
Aventis Foundation, Germany

**William Wechsler**

Special Adviser to the Secretary,  
Department of the Treasury, USA

**Lord George Weidenfeld of Chelsea**

Chairman, Orion Publishing Group, UK









## Credits

<b>Editorial</b>	Douglas Merrill Jürgen Turek
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Center for Applied  
Policy Research (C•A•P)  
Maria-Theresia-Strasse 21  
D-81675 München