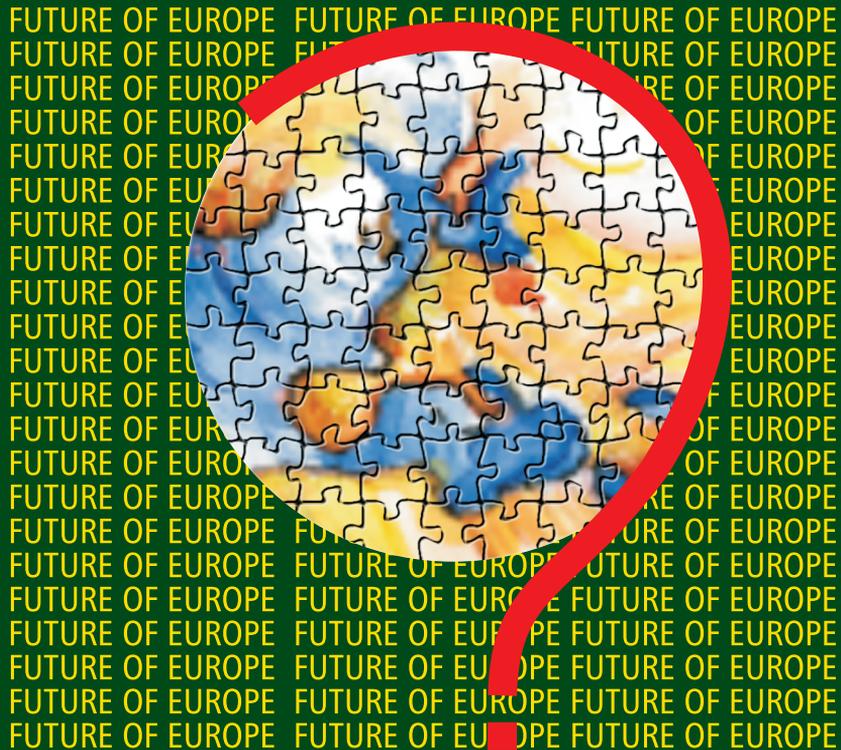


**Recifer Eurofutures Publication Series
REUPUS**

The Atlantic Community The Titanic of the XXI Century?



Editors
Antoni Kukliński
Krzysztof Pawłowski



WYŻSZA SZKOŁA BIZNESU
NATIONAL-LOUIS UNIVERSITY

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The Titanic of the XXI Century?**

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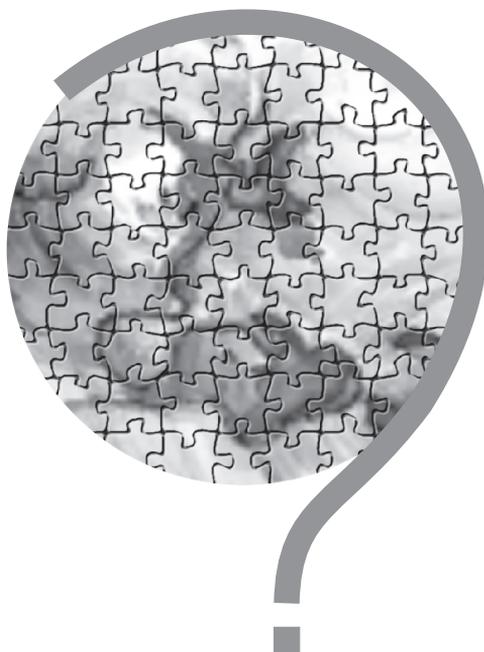
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Editors:
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EDITORIAL INTRODUCTION

The dramatic title of volume six is an innovation in the well established intellectual tradition of REUPUS.

In the interpretation of the great drama of the Atlantic Community facing the challenges of the XXI century we find an inspiration in the subtitle of the brilliant book of Timothy Garton Ash¹ “America, Europe and the surprising future of the West.”

T. G. Ash is outlining an optimistic interpretation of the future of the Atlantic Community. This interpretation is tested by the rich and comprehensive content of the volume “The Atlantic Community the Titanic of the XXI century?”

Let us call our special attention to the question mark in the title of the volume.

We hope that volume six will be seen as an consecutive contribution to the debates related to the future of the Atlantic Community and the global future in toto.

* * *

The editors of volume six of REUPUS are expressing the deep gratitude to all Authors who have prepared important contributions creating the challenging content of the volume “The Atlantic Community — the Titanic of the XXI century?”

Antoni Kukliński

Krzysztof Pawlowski

Nowy Sącz, February 20 2010

¹ Timothy Garton Ash, *Free World*, Random House, New York 2004

Part I:
**The Atlantic Community
and The Challenges of The Global Scene**

LOUIS EMMERIJ

GLOBAL CHALLENGES AHEAD OF THE ATLANTIC COMMUNITY

The rich countries of the Atlantic Community—basically the USA and the European Union—are on the defensive in the face of emerging countries that will be superpowers in their own right in the near future, leading to a multi-polar world that can be harmonious or full of tensions. The “uni-polar moment” has not been taken to create a basis for a harmonious era ahead of us. This article sets out some of the reasons why this is so.

The Present Situation

The world is in serious recession, the worst since the 1930s and engulfing all regions of the world. There are many longer term causes and consequences beyond the financial and economic crises of 2007–2010 and, notwithstanding the injection of billions into the banking system and gigantic levels of fiscal stimulus by governments, nobody knows when and how it will end.

In spite of the seriousness of this crisis and the clear evidence of its international dimensions, most of the initial search for remedial action has consisted of Atlantic Community political leaders conferring among themselves. Through most of 2008, the focus was on western action to tackle the western dimensions of the crisis. Nor was much attention given to the way poor people were being affected in poor countries. Apart from two meetings of the G-20, in December 2008 and April 2009, consultation with countries beyond the West has been limited, often bilateral and little reported in the media. International consultation within the Bretton Woods institutions let alone within the United Nations has mostly been on the sidelines of mainstream decision-making.

This approach demonstrates only too clearly the limited perspectives within the dominant powers of the economic and financial community today. And these dominant powers are still in the Atlantic Community, but this will be less and less the case in future. As the crisis has spread, it is becoming clear that these limited perspectives are inadequate to solving the global problems presented. Other countries need to be brought into the search for solutions and for support. And broader perspectives on change are required. It is already apparent that major reforms of international approaches and institutions are needed. Many commentators and political leaders around the world are beginning to make this point.

A truly global perspective is of the essence and key issues must be identified. These need to be made part of solutions to the current crisis and into reforms of existing international mechanisms and institutions to prevent a recurrence. These include some issues already on the conventional agenda:

- stronger international regulation of financial and economic operations
- mechanisms to avoid extremes of instability transmitted in the operations of the global financial and economic system,
- measures to help maintain short terms stability while moving towards long-run sustainability,
- reform of representation within international organizations, to give more weight to the emerging economies and to poorer and weaker countries.

But other issues have hardly been mentioned if at all such as measures for the accelerated advance by the poorest countries and for the living standards of poorest people.

In short, a new look at the mandates, operations, capacities and representativeness of global institutions is required. Global stability, long-run sustainability, much greater equity and serious attention to human rights need to be built into the mandates and operations of all international organizations. If this seems too visionary, one needs to remember and take courage from earlier experience. The proposals presented to the Bretton Woods conference in 1944 were bold and intellectually brilliant, drawing on the best minds of the times and going far beyond the conventional analysis and wisdom of the day. So also were the ideas and recommendations of the three major UN economic reports issued over 1949–51 directed towards full employment, economic development and international economic stability. All these were driven by the fears of repeating the 1930s and the confident hopes of building a new post-war world.

Today, the world is more complicated and so are the challenges. And urgency is added to the present challenge by both the depths of the recession and the growing realization that planetary survival requires finding ways to tackle a broader range of major challenges ahead, over the medium to longer run. The Atlantic Community must set the pace to face up to those challenges instead of defensively looking only after its own interests. The only way to get to a better and multi-polar world is for the strong countries of the day to show generosity to those that are coming up as well as to those that are just getting by.

The Future: Ten Global Challenges for the Next Decade—and Beyond

Future challenges are not easy to forecast, as one can see by looking just ten years back. In 1999, Russia was in the most difficult economic and political of situations. Ten years later it is back on its feet. In 1999, China and India were already doing reasonably well, but no comparison can be made with how they roared ahead subsequently. In 1999, although global warming was being discussed by experts, the threat was seen mainly as ambivalent and critical terms. A decade later there are very few doubters left, though there is still much debate what needs to be done. In 1999, the United States was at the end of the longest economic boom in history, but in the year before 2008 disaster struck and a worldwide financial and economic crisis ensued. In 1999, no one ever thought that the United States would come under attack on its own territory and would wage wars in Islamic countries, but ten years later the country is in its sixth year of war in Iraq and its eighth in Afghanistan after 9–11. What a difference a decade can make!

It is, therefore, difficult to forecast future challenges but it is rather obvious that the following ten among those where the Atlantic Community must take the lead. They are:

- global warming and climate change;
- global governance for a multi-polar world;
- support for fragile states;
- developing new ways to balance regionalism with globalization;

- moderating inequalities in global development;
- responding to population expansion and international migration;
- bridging international divides of culture and identities;
- rebalancing the security challenge from state sovereignty to the protection of individuals;
- strengthening concern for culture and human rights in development; and
- improving the quality of education worldwide.

Global warming and climate change. The Inter-Governmental Panel on Climate Change has done a remarkable job over a period of years, issuing four major reports to persuade politicians and the world at large that the present cycle of climate change is extremely serious, human-made and requires unprecedented action in all parts of the world. But real progress in the negotiations is slow in coming. The Atlantic Community (United States and Europe) must take the initiative and set clear examples here.

Rebalancing global governance for a multi-polar world. Incorporating new and upcoming economic and political giants into the international system is both a challenge and an opportunity. The days of the “uni-polar moment”¹ are coming to an end, less because the United States is declining but because other countries are mounting. This is obviously the case of China and India but also of Brazil, Indonesia, South Africa, and Nigeria further down the line.² A multi-polar world needs also to achieve better representation of Japan and Russia, as well as of the EU as a whole. A multi-polar world could become more balanced and stable than one in which a single country can determine policies for all. But it will take skilful action and political leadership. The results from balance-of-power competition in the nineteenth and twentieth centuries do not inspire confidence that a multi-polar world will necessarily be more peaceful and just. For a true multi-polar balance of power to emerge the Atlantic Community again must take initiatives and set examples.

Support for fragile states. This encompasses international responses to the thirty to fifty countries that are unable to guarantee stability and basic services to their populations. Many have central governments whose sole existence takes the form of UN membership and control of the capital or the main export industries. These difficult challenges require the international and regional legitimacy of a response by the UN with the Atlantic Community in the lead, building on the concepts of R2P (responsibility to protect), providing support for the rebuilding of democratic systems, and accelerating development. In states torn by civil war the UN may also need to be involved in peace-making and peace building. But once more, the UN is powerless if the Atlantic Community powers do not act.

Developing effective regulation of the global private sector and new ways to balance regionalism with globalization. Globalization over the last two decades has been driven by the private sector with few holds barred—and the recent crisis has made clear some of the costs. Held in check or at least slowed by national government policy for a period, the private sector has recently operated with almost unfettered autonomy at the global level. In contrast, regionalism is mainly a public sector driven phenomenon with the private sector playing an important role but controlled for many issues by the regional equivalent of the state, as illustrated by the European Union and its debate with, among many others, Microsoft. Globalization needs more global governance to counterbalance its effects—just as regionalism has—by acquiring more power to regulate what needs to be regulated. However, the major powers—members of the Atlantic Community—do not see it in their interest to push for more global governance, let alone for global government. There is no long term view.

¹ Charles Krauthammer, “The Unipolar Moment,” *Foreign Affairs* 70, no. 1 (1990/1991), 23–33; and “The Unipolar Moment Revisited,” *National Interest* 70 (Winter 2002/2003): 5–17.

² Fareed Zakharia, *The Post-American World* (New York: Norton, 2008).

Moderating inequalities in global development. The growing gaps and inequalities between and within countries are a direct cause of poverty and despair for millions of poor people as well as creating a dangerous cocktail of social unrest. It is among those that terrorism is often viewed with sympathy. It is not necessarily the poor who become terrorists, but they will look upon those who are with a smile. Reducing inequalities between and within countries as part of development, therefore, is not only morally compelling but also one of the elements in sensible strategies to address the root causes of terrorism and international migration. Its remedy would help solve two problems simultaneously.

Responding to population expansion and international migration. World population is projected to increase by a further 2 to 3 billion over the next fifty years. This will put new and enormous pressures on the Earth's ecosystems. Most of the additional billions of people will be living in developing countries. Moreover, the world's fast growing middle class is eager to approach the consumption patterns of developed countries. As regards migration, the challenge reflects the "pull" of economic opportunity in better-off countries and the lack of economic opportunities in the sending countries, often compounded by the "push" of violent armed conflict. Urgent action is needed to develop a global response, channeling policies into more humane and economically attractive directions.

Bridging international divides of culture and identities. Cultural divides—perceived and real—between the global West and the Islamic world are currently the most visible but there are others, often involving clashes of competing radical ideologies. While many argue that the divides are a transitory phenomenon resulting from the fallout of the war on terrorism, it is urgent to get a better grasp of the underlying issues, lest the divides become anything except transitory.³

Human security—rebalancing the security challenge from state sovereignty to the protection of individuals. The responsibility to protect is an emerging norm that attracts more and more attention. A global protection force to protect endangered individuals within countries would be a step in the right direction. There is also the need to put approaches to disarmament again on the agenda, especially in the context of rapidly rising military expenditures in many countries. These issues are ever more pressing whether one's lenses are those of a more traditional specialist in international security or in human security.

Strengthening concern for culture and human rights in development. Culture has been largely absent in the development debate until recently. There is need to better understand the links—cultural and others—between human security, human rights, and development. Analytical and operational work at the country and regional level can do much to provide richer perspectives of national and regional problems and better understanding of ways forward. This is especially true for new issues such as national policy to respond to global warming and energy saving strategy, rights-based policies, and education for global understanding and tolerance.

Improving the quality of education worldwide. There is need for more attention to the quality of education at all levels. The full contribution of education—for mothers, for the development of the individual, for building tolerance and global understanding, and for progress in general—cannot be realized without paying more attention to education content and quality. Teachers are underpaid, buildings are collapsing, children are in the fields instead of classrooms. Education has been often been turned over to the private sector in places where most families do not possess the resources for books let alone tuition. What future is that for future generations?

³ See "Developmental and Cultural Nationalisms," special issue edited by Radhika Desai, *Third World Quarterly* 29, no. 3 (2008).

The Past: Opportunities Missed and Taken

Most of the time crucial and important decisions are taken only after a disaster has occurred or at best after a disaster has become clearly visible on the horizon. Examples are the creation of the League of Nations after World War I, the creation of the United Nations and the Marshall Plan after World War II, and the Delta Plan after the 1953 flooding that caused several thousands deaths in the Netherlands. But it is forgotten that the Marshall Plan—which was obviously an opportunity taken by the USA—came in place of a truly global Plan that was launched by the United Nations around 1950 and that was an important opportunity missed.

We mentioned the three UN reports in passing early in this article. The UN was far ahead of the curve around 1950 in conceiving a system of international economic relations that would serve well all countries of the world. It issued three major publications: *National and International Measures for Full Employment* (1949), *Measures for the Economic Development of Under-Developed Countries* (1951), and *Measures for International Economic Stability* (1951).⁴

This was sixty years ago. The reports display a bold confidence. They use logical economic analysis to show how to tackle the issues of economic instability, inequality, and growth in an international framework. At the time, this was indeed a pioneering perspective that contrasted sharply with the economic analysis of the 1930s. The reports also recognized how the so-called underdeveloped countries had an even greater stake in stability for their long-term development than industrial countries. Finally, they showed how action for the underdeveloped countries could and should be combined with global action to avoid instability and recession.

However, the pioneering dimensions of the analysis and proposals largely fell on deaf ears. The proposals were dismissed as “extreme Keynesianism,” especially by American critics. There was little follow-up action to the recommendations of these reports. In the absence of global action to foster commodity price stability and balanced economic growth in developed and developing countries alike, the global failures of the 1970s and 1980s were predictable. Fluctuations in the international economy returned with a vengeance, following the breakdown of the Bretton Woods system in 1971 and the oil shocks of 1973–1974 and 1979 (themselves in part a reaction to a long and steady decline in real oil prices). More than twenty years after the publication of the three UN reports, the UN Conference on Trade and Development (UNCTAD) called for a common fund to support a range of commodity agreements, much as the reports had recommended, as had John Maynard Keynes in the 1940s when he recommended such a strategy as the third leg of the Bretton Woods system. Thus, the instabilities and higher oil prices of the 1970s severely disrupted the world economy, even more so for the weaker and least developed countries, setting up the debt overhang and debt crises of the 1980s and the structural adjustment policies that followed for most of Africa and Latin America. The situation of the world economy and of developing countries could have been much better if the international (global) framework advocated by the UN in 1950 had been taken more seriously at the time, or rediscovered and implemented two decades later.

After 9–11, there was another example of a missed opportunity. Instead of the Atlantic Community stepping up global development efforts with an integrated effort of international trade, foreign direct investments and aid—as was the original intention of the Doha Round of trade negotiations—war took over and the negotiations became less about development and more about how developing countries can open their borders for the greater benefit of the rich countries.

⁴ United Nations, *National and International Measures for Full Employment* (New York: UN, 1949). *Measures for the Economic Development of Under-developed Countries* (New York: UN, 1951). and *Measures for International Economic Stability* (New York: UN, 1951).

After November 1989, Central and Eastern Europe as well as the former Soviet Union were treated without generosity by the Atlantic Community. Instead of helping these countries get back on their feet as soon as possible, the European Union took its time and the US looked the other way for too long. What a difference with the Marshall Plan days, even if these missed the larger opportunity, as just explained.

A final example is the composition of the Security Council that stems from the world situation in 1945. Now, 65 years later, new powers have come to the fore like China, India, Japan, Brazil, and others. But the vested interests are not willing to move and make place for the newcomers on the world scene.

Conclusion

In the midst of the current global recession, it follows that that the Atlantic Community, the UN and other international organizations have a most important piece of work ahead of them. The world entered the twenty-first century with a rapidly globalizing economy, fueled by the private sector and given major imbalances by ever larger borrowings by the United States. After the Asian crisis of 1997–1999, Asian countries built up financial reserves under their own control. All this engendered a highly skewed pattern of economic development in which a number of countries, including China and India, are doing very well but many others, especially poorer and weaker countries in Africa and Latin America, falling behind.

The world is currently deep in recession—in spite of billions of dollars made available to rescue the international banking system and in spite of various neo-Keynesian policies of economic stimulus undertaken in major industrialized countries. It has been recognized that the policies and action of the G-8 alone are insufficient for recovery, which has led to the convening of meetings of the G-20, a forum that includes twelve of the world's next largest economies. The recovery plans generated at these exclusive meetings, however, have largely left out some 170 countries, almost all of which are also being set back by recession, some even more seriously than the larger countries.

The responsibility of the Atlantic Community is enormous, both toward its own people and toward the entire world. It must show vision and a sense of detail. Vision—by identifying the major challenges ahead. Sense of detail—by acting with generosity and realism. The strong will only survive by combining these two characteristics—generosity is the most pertinent characteristic of realism. Let me finish by quoting Barbara Ward:

*In the last four of five hundred years, the Western world has been the aggressive, outgoing, and indeed, disturbing force for all other civilizations and ways of life... So if we are to find ways and means of living peacefully, East and West, in our narrow world together, it is essential for us to have an idea of how we, the Westerners, have been behaving recently, how our history looks to others, and the kind of contacts with other people we have enjoyed or imposed or suffered in the past.*⁵

June 2009

⁵ Barbara Ward, *The Interplay of East and West—Points of Conflict and Cooperation* (New York, Norton, , 1962), 11–13.

JAN WORONIECKI

KEY GLOBAL CHALLENGES OF XXI CENTURY: OECD PERSPECTIVE AND RESPONSE

*«Pour survivre dans le monde qui vient,
la première des priorités consiste à tenter
d'en identifier les tendances, d'y repérer
les obstacles et de les contourner..
Seuls survivrons qui ... pour réussir;
devront d'abord analyser et comprendre
ce qui précède, puis recourir à
des stratégies très particulières»¹*

Over recent years OECD has been facing declining share of its member-states in the global GDP and the corresponding shift in the balance of economic power worldwide—in favour of the emerging economies becoming global players. Also, it had to confront increasing “competition”, not to say rivalry, from other intergovernmental organisations, or IGOs (Bretton Woods institutions awakened by the crisis, WTO, partly EU and APEC), besides private think tanks. Then, in the summer of 2008 first the financial, then economic and social (jobs), crisis of unprecedented scale has erupted calling for equally unprecedented steps to radically improve, or reshuffle, global and domestic governance. In OECD, both member governments and the Secretariat started to look for adequate response to maintain the Organisation relevant and useful as their adviser and forum for the exchange of views on action to be taken and for elaboration of recommendations on best policies and practices to adopt, also by non-member states. In reaction to the current problems and—especially in medium and long term—structural reforms and governance challenge. G8 and eventually G20 approached OECD to back their efforts to cope with the crisis.

From the Secretary-General's report on Strategic Orientations for the OECD² and his many public statements a clear-cut aspiration for OECD to evolve into a global organisation, global from the point of view of programme coverage and impact, or relevance, while remaining far from universal in terms of membership, transpires. Outreach to non-members, especially engaging five major emerging economies decided upon in mid-2007, has clearly demonstrated that meeting such an ambitious challenge is also what OECD member governments, as its masters, want. For their benefit—and of non-members whose economic and political clout is indisputably on the rise. And

¹ ATTALI, Jacques. *Survivre aux crises*. (Paris), Fayard, 2009, p. 30 and 137.

² OECD document “Strategic Orientations for the OECD: Report by the Secretary-General”. C(2009)71, June 3, 2009, *passim* (so far unclassified).

of the Organisation as such: for the sake of maintaining (at least) its relevance in conditions of fierce competition from other IGOs.

To achieve this goal and to succeed, though, OECD's effort definitely must: (a) be member-driven; (b) take account of a rather overwhelming desire among the membership not to depart from OECD common values and highly treasured heritage, or the *acquis*, with the Paris Convention II in the forefront; and (c) rest on a balance between rights and obligations of new members and countries engaged. Its limited membership—right now 30 (soon enough 34) like-minded member states—permits to ensure rather efficient decision-making and consensus as compared with the organisations of the UN system (IFIs included). The Organisation's mission to convey its crucial message on market and open economy and good governance is called for today more than ever; to bring as a result a stronger, cleaner, fairer economy. Thus helping to restore the public's trust in the open market economy and revive business confidence—essential for restoring socially and ecologically sustainable growth.

Still in early 2008 OECD boasted to be a hub of globalisation—and its devoted advocate. Without being global in terms of the geographical coverage (membership), it strived in its analyses to embrace the world economy as a whole and expand its ties with the key emerging economies through either accession (Russian candidacy pending) or a scheme of Enhanced Engagement (EE) of Brazil, China, India, Indonesia and South Africa. Since the moment the crisis has erupted, *hélas*, without advance warning from either OECD or other relevant IGOs³, IFIs in particular, OECD has abandoned its overt admiration for globalisation—in view of the blame for the outbreak of crisis attributed (rather wrongly) to the phenomenon. “The financial crisis—Jacek Rostowski, Polish Minister for Finance, wrote—was not a crisis of capitalism or globalisation”⁴. Instead, a “hub for dialogue on global challenges” has become a substitute of the former term defining OECD (“hub of globalisation”). “As people peered ahead into 2009, no forecast looked too dire. *The end of globalisation* was a common refrain”⁵. “The only area in which economists could reliably declare expansion was in the supply of competing narratives about the economy”, and we entered the period of what might be called the Great Ambiguity⁶... In the circumstances, the Organisation had to limit itself to the continued promotion of the open market economy, in accordance, incidentally, with the Paris Convention II which established (transformed from OEEC) the Organisation in 1961.

Now, when fragile and timid green shoots of recovery have already started to emerge, when growth resumes (albeit from a much lower base and, most often than not, jobless and confronted with such challenges as response to the climate change threat), the term “globalisation” is referred to by far less frequently—if at all. As if the phenomenon could become an all-explaining and justifying scapegoat for anomalies, mistakes and wrong-doings which have permitted the bubble

³ Yet it is untrue that nobody had foreseen the outbreak of the recent financial crisis and the explosion of the mortgage bubble: Alvin and Heidi Tofflers did, in their excellent (published in 2006!) *Revolutionary Wealth. How It Will Be Created and How It Will Change Our Lives*. New York, Doubleday, 2006; pp. 210–219, 260 and 276, Joseph E. Stiglitz in his *Making Globalization Work*. New York/London, W.W.Norton, 2006; p. 215–220 and 245 or—less directly—Robert B. Reich in his excellent “*Supercapitalism. The Transformation of Business, Democracy, and Everyday Life*. New York, Alfred A. Knopf, 2007: pp. 86–87, 131, 166–167, 207–209 and 224–225: technologies and deregulation which have brought about what we mean by globalisation have also contributed to the shift from (relatively) democratic capitalism to a turbo, or super, capitalism where competition stimulated by us as consumers and investors undermines our aspirations as citizens—and thereby democracy so far going in tandem with capitalism, with few exceptions.

⁴ ROSTOWSKI, Jacek. “Intolerance of small crises led to this big one”. *FT*, January 14, 2010.

⁵ “Counting their blessings”. *The Economist*, January 2, 2010, p. 24.

⁶ GOODMAN, Peter S. “Divergent Views on Signs of Life in the Economy”. *NYT*, January 4, 2010.

to grow and blow up at our faces: of those responsible—and those innocent (taxpayers)⁷. True, opening and resulting interdependence, the core of globalisation, served a transmission channel of the effects of mismanagement and abuse (and irresponsibility in the domestic financial sector with lax supervision) between countries. Opening of their economies helped the problems to propagate. Would it however be wise to backtrack and hide behind re-erected protective barriers ? It should be borne in mind that “*L'échange crée de l'interdépendance. Quand l'Asie s'enrichit, ce n'est pas l'Occident qui s'appauvrit: nous progressons, ou non, ensemble*”⁸. It's not, and doesn't have to be, a zero sum game.

“Globalisation was supposed to bring unprecedented benefits to all. Yet, curiously, it has come to be vilified (even before the crisis—J.W.) both in the developed and the developing world ... (While) there is much merit in these criticisms—but they are criticisms of globalisation as it has been managed (or mismanaged, or insufficiently managed—J.W.); ... How we can remake globalisation, to make it more nearly live up to its promise?”⁹ As we can hardly stop, nor should we, this process. Joseph Stiglitz rightly rejects—as a policy stance of the advanced countries—both (a) ignoring the problem and accepting growing inequality, and (b) resisting fair, i.e. favourable to the developed world only (in short term), globalisation. The only rational approach he sees is coping with globalisation and reshaping it in a fair manner¹⁰. “Globalization will yield better results if it is managed”—seems to echo him Jagdish Bhagwati¹¹. To be sure, globalisation will stay with us—but what globalisation ? Same as before the crisis ? The future may as well prove that it will evolve: it'll be either more organised and managed (desirable given the looming threats), with the increased role of the state, IGOs, or even quasi-supranational entities, or un-co-ordinated (*désordonnée*), with the role of these actors diminished even more in favour of TNCs, megacities, regions, sectoral associations, etc.¹²

“*L'avenir de mondialisation est obscurci par la permanence d'un déséquilibre insoutenable de la balance de paiements*”¹³; another threat being temptations to recur to protectionism in trade and investment. Confronting the democratic deficit appears also crucial in this juncture, as it constitutes perhaps a key—but less visible—factor underlying the financial meltdown and vagaries of competition¹⁴. (Self)entrusting by the refurbished and reorganised for that purpose G20, which incorporates *inter alia* G5, of a bulk of burning economic and financial issues to resolve (in co-operation with IGOs including OECD) seems to confirm that a need to adopt such an approach was eventually understood—or forced by the events. For better governance, domestic and international, is the chief remedy not merely for overcoming the crisis but also averting it from coming back anytime soon in such a drastic form. Understanding of this need has already, fortunately for the world economy, been paving lately its way in the minds of influential politicians¹⁵—not just few intellectuals.

⁷ I have extensively argued 9 years ago that globalisation cannot be considered as a tool in anyone's hands for whatever purpose nor completely independent from human action but, rather, a cumulative effect of (un-co-ordinated) human actions including the impact of new technologies and “grand opening” of borders to flows of goods, services and capital. Still, it can and should be influenced (steered). WORONIECKI, Jan. “The Visions of globalisation”, in: *Globalization. Experiences and Prospects*, ed. H.Buenz, A.Kuklinski, Warsaw, Rewasz, 2001 ; pp. 15–18.

⁸ SORMAN, Guy. “Le siècle de l'Asie ? Ce n'est pas si simple”. *Le Figaro*, January 18, 2010.

⁹ STIGLITZ. “Making Globalization Work”, p. 269.

¹⁰ *Ibidem*, p. 273–275.

¹¹ BHAGWATI, Jagdish. *In Defense of Globalization*. New York, Oxford University Press, 2004; p.221.

¹² ATTALI, p. 125–126.

¹³ *Ramsey 2010. Rapport annuel mondial sur le système économique et les stratégies*. Paris, Dunod pour IFRI, 2009; p. 55. See also “Tomorrow's burden”. *The Economist*. October 24, 2009; pp. 72–73.

¹⁴ STIGLITZ. “Making Globalization Work”, p. 280–285 REICH. “Supercapitalism”, p. 131.

¹⁵ Tomorrow's walls will be overcome only if states are willing to “give up powers to multilateral organisations, whatever it costs”—said Angela Merkel in the Bundestag on November 10, 2009 (“A new game of dominoes”). *The*

As it happens, crises carry also opportunities—and seeds of future crises.... This one may, hopefully, bring a new international economic order including addressing an acute problem of multi-faceted imbalances, or, at least, revisiting the role of the state(s) domestically and externally, and of their (i.e. intergovernmental) organisations in the economy; even successful markets cannot substitute for what the state authorities are supposed to be responsible for—and deliver¹⁶. Otherwise, a sour view of Jacques Attali that “*la nation n’est qu’un jouet dans la globalisation des marchés*” (and banks—J.W.) risks to be confirmed, as well as his warnings that, owing to the weakness and selfishness of the today’s elites, their subjects “*réaliseront que leur future est entre les mains de gens qui ... se vantent de ne rien pouvoir dire de l’avenir; ... que le marché ne conduit pas à un équilibre optimal mais à des inégalités et à des situations de monopole... (car) ... grand cannibale, notre monde a sans cesse besoin de dévorer ceux qui le constituent*”¹⁷.

The carefully crafted title of the OECD 2009 Ministerial Council Session (24–25 June) has been telling: “The Crisis and Beyond: For a stronger, cleaner, fairer economy”. It implied three weaknesses of the global economy which call for international search for remedies—and a sort of the OECD trilateral paradigm for the post-crisis era¹⁸. That search has started shortly after that session was held—within G20 in co-operation with selected IGOs including (formally since its 3rd—Pittsburgh—meeting as a result of the invitation by the U.S. President) OECD. The Chair of the OECD Ministerial, South Korean Prime Minister Han Seung-soo stressed at the opening of the 10th OECD Forum preceding the session he chaired: “It is an incontrovertible fact that the principal global challenges we now face are twofold: the global financial crisis and climate change”¹⁹. While these are indeed two imminent challenges to confront, global issues (or problems) to be faced in the nearest and more distant future are of course manifold. The point is not just to consolidate recovery worldwide but to make growth sustainable once achieved, moreover make it green (or eco-friendly not only *vis à vis* the endangered climate) and more egalitarian (“with human face”). And perceived as such by people in the first place.

The crisis provided new impetus to international co-operation and fading multilateralism. IGOs were called to the fore to look for solutions. Also, new (or refurbished) international governance frameworks emerged. The number of “Gs” multiplied. OECD hallmarks—multidisciplinary and “whole-of-the-government” approach make the Organisation, in this context, well-prepared to occupy a rightful place in this grand endeavour. OECD, i.e. the member-states and Secretariat, has engaged in the struggle against the financial crisis, and resulting/intertwined economic and social crises, from the very beginning although key economic players focused their attention on the multilateral informal groupings (G7/8 and shortly thereafter revived and upgraded G20, with some role left to G13/14, G5 and “G2”—in fact, the United States and China in a somewhat shaky tandem) and IFIs, especially IMF, due to the nature of the “original” crisis.

OECD expertise and working methods in its well established sectoral committees (e.g. peer reviews as an instrument of comparative analysis and generation of policy recommendations) were not appreciated enough—at least expressly—in the first months of international efforts designed

Economist, November 14, 2009; p. 38). She has convened already twice heads of several IGOs including OECD, in Berlin to discuss her Global Charter and the (Italian) Legal Standard concepts, now referred to as the Lecee Framework (see www.oecd.org/globalstandard).

¹⁶ *Globalizacja a stosunki międzynarodowe* (Globalisation and international relations), ed. E.Haliżak, R.Kuźniar, J.Symonides. Bydgoszcz/Warszawa, O.W.Branta, 2004; pp. 149–152. This role cannot be taken up by NGOs or TNCs, for that matter. According to Jagdish Bhagwati, “globalisation constraints the exercise of sovereignty, and hence the sense and scope of democratic control” (p. 92–93).

¹⁷ ATTALI, p. 132–133 and 136.

¹⁸ “Synthesis Report on the Strategic Response”. OECD document C/MIN(2009)9 of June 5, 2009, p. 2–3.

¹⁹ *The Crisis and Beyond*. For a stronger, cleaner, fairer economy. Highlights. OECD Forum 2009, Meeting of the OECD Council at Ministerial Level. Paris, OECD, 2009; p.4.

to improve global governance over the world economy in trouble. Yet with every meeting of G20, for instance, a comprehensive scope of international action required was realised, in finance, on a macro- and microeconomic scale (e.g. corporate governance). OECD potential (sectoral and horizontal, i.e. interdisciplinary strengths) has been more fully utilised despite presumable reluctance of other (competing) IGOs taken on board from the very beginning. Another reason for the delay might have been the opposition of some of the emerging economies making G20 since they are not—as it is the case of UN agencies—members.

OECD launched before the end of 2008 a programme called “**Response to the Financial and Economic Crisis**” approved at its Ministerial as a tool to “provide policy analysis and recommendations on macroeconomic and structural issues that will help us achieve a sustainable, healthy recovery”²⁰. In view of most, if not all, member states OECD has finally obtained a rightful place among IGOs in this endeavour. Yet, (a) its comparative advantages and capacity to bring added value should remain criteria for the choice of where to engage, (b) its ambitions should not be limited to fulfilling the requests by G20 (now less by G8): the Organisation should also initiate its own actions deemed useful. Moreover, non-G20 OECD member states have gained an indirect access to that informal grouping activities and to shaping OECD contributions to G20 efforts. In the OECD 2009 Ministerial Meeting Conclusions, adopted on June 25, the action the Organisation has taken to work more closely with emerging and developing economies, (other) international organisations and the other international fora was unanimously welcome²¹.

It is hard to select, let alone ascribe a hierarchy to, the *key global challenges of the century underway*. Also because they happen to be so intertwined, and dependent on each other. As their solutions unavoidably will prove to be. Those discussed below have been (rightly or wrongly) chosen exclusively from the OECD perspective, i.e. what its members deem appropriate to deal with, taking into account OECD potential and requests from such groupings like G7/8 and G20 encouraged by the dynamic PR and information campaign conducted by the tireless Secretary-General. With focus on medium to long term issues—and not short term remedies to crisis, as OECD strength lies chiefly in coping with long term dimension of the response to crisis, with the elaboration of an outline of, or suggestions for, exit strategies from the extraordinary measures taken and, then, with the recommendations not only how to avert future crises (at least of such magnitude) but, foremost, how to ensure sustainable growth once recovery is achieved—and consolidates.

Looking from this angle, what seems a key global challenge—and threat—are, domestic and international, **imbalances** and disequilibria that constitute a dangerous hangover looming over the future of recovery and sustainability of the forthcoming restored growth. I share entirely Jacques Attali’s assessment to the effect that (a) “*l’incapacité de l’Occident à maintenir son niveau de vie sans s’endetter ... est la cause la plus profonde de cette crise*” and (b) “*parmi ces multiples crises, celle de l’économie ... peut en déclencher plusieurs autres ; elle pourrait aussi être aggravée par d’autres déséquilibres surgissant indépendamment et entrant en résonance avec elle*”²². With social inequalities widened under (not necessarily because of) globalisation domestically and among

²⁰ *Ibidem*, p. 39 and OECD document C/MIN(2009)9. See also a booklet *OECD Strategic Response to the Financial and Economic Crisis*. Contributions to the global effort. (Paris, OECD, 2009, *passim*).

²¹ “The Crisis and Beyond: For a stronger...”, p. 41.

²² ATTALI, p. 17 and 27–28, respectively. See also pages 35–41, 65–72 and 88–89 on the origins of the crisis underway. This remarkable book, reviewed by Erik Orsenna (“La crise n’est pas une mais multiple”, *Le Figaro*, December 28, 2009) focuses on dangers of the next decade (p. 19).

countries²³, failure to confront and start to alleviate these imbalances does not augur well to the success of efforts to improve governance of the world economy. Its locomotive until recently, the United States, “has become the consumer (and borrower—J.W.) of last resort. It is able and, especially since 2000, willing to run huge deficits ... It is easy to run fiscal deficits, to spend more than one has ... (Still, while the U.S. can make up the inadequacy of aggregate demand), it is living beyond its means ... In this respect, it is doing the world a service ... (but) ... how long can America continue to provide this service; that is, can it continue its spending spree ?”²⁴. Borrowing \$2 billion a day from poorer countries...²⁵

The answer came in 2008. Yet the crisis did necessitate getting deeper into the deficit, almost world-wide ! “As America’s financial crisis recedes, the rumblings of its next crisis can be heard. The federal government ... borrowed hundreds of billions of dollars to stimulate the enfeebled economy, while tax revenues crumble. ... the cost of retirees’ benefits will explode²⁶”. Although American publicly held debt has jumped to 56 % from 37 % just two years ago, and is forecast to reach up to 77 % if not to 100 % in just 10 years from now, the demand for greenback will not necessarily fade much, lenders’ strike, a crash in the dollar or staggering inflation don’t have to be triggered; the damage of a chronic, slow-motion crisis seems *en revanche* quite real in coming²⁷. Although not everywhere an ailing dollar is equally threatening (its slide complicates life for countries with floating exchange rates), there is a palpable concern that its decline might get out of hand which would undermine investors’ and financial markets’ confidence²⁸. And “even as we take steps to address the recession and threats to financial stability, maintaining the confidence of the financial markets requires that we, as a nation, begin planning now for the restoration of fiscal balance”—says Ben Bernanke²⁹.

A “hard core” of the imbalance rests though with the interrelationship of the U.S. and China. First, one should dismiss a wishful thinking about “G-2 alliance” as the Chinese Prime Minister Wen Jiabao did at the farewell meeting with President Barack Obama stressing that it ran counter to China’s policy of not aligning with any nation and that China, a developing nation with huge problems, was not advanced enough to assume a key role (and commensurate responsibility) in global affairs. He nevertheless admitted that a deeper relationship with U.S. “can play unique role in advancing the establishment of the new international economic order, as well as promoting world peace”³⁰. And the U.S. Treasury Secretary Timothy Geithner told Mr. Wen in June: “How successful we are in Washington and Beijing will be critically important to the economic fortunes of the rest of the world”³¹. Indeed: China is the largest holder of U.S. debt and experts say that if Beijing slows its purchases of U.S. Treasury bills, the move could deepen and prolong global recession. According to professor Yu Yongding, Washington needs to win Beijing’s confidence by protecting China’s investments in American debt and carrying the reform of the global financial system³², bring closer climate change global package, etc.

²³ *Growing unequal? Income Distribution and Poverty in OECD Countries*. Paris, OECD, 2008; *passim*. Since the 1980s, inequalities increased in 3 out of 4 OECD countries.

²⁴ STIGLITZ, “Making Globalization Work”, p. 251-252.

²⁵ *Ibidem*, p. 245.

²⁶ “Tomorrow’s burden”. *The Economist*, October 24, 2009; p. 72.

²⁷ *Ibidem*, p. 73. The dollar’s share of global foreign exchange reserves fell to 63% in mid-2009 from 72% in 2001 because of the decline in its value, not reduced demand. Should what the states owe be added, debt ratio in GDP may hit 100% in 2010 instead of 77% in 2019, according to Moody’s Investors Service (p. 72).

²⁸ “Denial or acceptance”. *The Economist*, October 24, 2009; p. 75-76.

²⁹ SCHWARTZ, Nelson D. “Stimulus creates threat to recovery”. *IHT*, June 4, 2009.

³⁰ WINES, Michael. “Mixed message for Obama from Chinese: Cooperation but no alliance”. *IHT*, November 19, 2009. See also DYER, Geoff. “Shadow cast over hopes for “G2”. *FT*, January 15, 2010.

³¹ BARBOZA, David. “Geithner claims gains at Beijing talks”. *IHT*, June 3, 2009.

³² *Ibidem*.

Obviously, a shift from the export-driven growth (and subsidizing exports through undervalued renminbi) towards relying more on domestic consumption in China as well as limiting over-consumption and saving more in U.S. would be essential. However lower Chinese exports might imply lower income and lower lending needs from U.S... and, generally, Chinese economic weakness (*inter alia* from the excess capacity—which keeps soaring—and malinvestment) would be a bigger problem than was Chinese economic strength³³. Not just for U.S.: for all of us. Is though such “rebalancing” advocated by U.S. (in the commercial exchanges and domestic consumption) realistic to expect in view of decreasing personal consumption (as a share of GDP) and soaring productive capacity in China? Both societies can and do produce more than they can buy as consumers, both are thus threatened by the disconnect between production and consumption³⁴. And both are “condemned” to fight for export markets, in particular each other’s.

Naturally, these remarks by far do not cover multi-faceted imbalances plaguing the global economy. Their purpose was rather to indicate their importance for the OECD work on “the crisis and beyond”, mainly “beyond”. As one of OECD strengths is precisely the **long term analytic capability**, and struggling with the imbalances requires such an approach³⁵. Work on this crucial subject-matter has been envisaged by OECD mainly in the context of aligning measures designed to stimulate aggregate demand and lending to investors and businesses (and unwinding those measures) with long term growth (OECD was one of the first to talk about exit strategies from temporary extraordinary anti-crisis measures). Related macroeconomic and structural policies should, according to OECD, be consistent with three broad objectives: support high potential growth, avoid unsustainable payment imbalances, and ensure fiscal sustainability³⁶. Otherwise, spiralling debt and related borrowing costs (in view of the prospect of higher interest rates) can choke off an incipient recovery³⁷.

OECD has capacity to help in devising such policies. In June 2009 a set of documents on the OECD strategic response to the crisis was presented to its Ministerial including an annex on the strategies for aligning stimulus measures with long term growth³⁸, with well-taken policy recommendations precisely related to the government indebtedness, setting the base for future consolidation (fiscal credibility, tax revenues and avoiding revenue leakages); guidelines for long term growth policies (tax, labour, social and education, investment), ensuring green recovery, R&D and innovation. OECD laboriously compounded stimulus packages of its member states and committed itself to continue to monitor their policies. It may be expected that EE countries will be covered as well by the OECD research—and benefit from policy guidelines to be worked out. G20 Finance Ministers and Central Bank Governors meeting at St Andrews on November 7, 2009 launched the Group’s Framework for Strong, Sustainable and Balanced Growth, with inbuilt evaluation mechanism in this endeavour. A number of IGOs including OECD have been invited to assist; besides support for recovery strategies, ways of managing withdrawal from extraordinary macroeconomic and financial measures are going to be developed³⁹.

³³ COWEN, Tyler. “Weak China poses the bigger threat”. *IHT*, November 28–29, 2009.

³⁴ REICH, Robert. “Wishful thinking about American jobs” *IHT*, November 25, 2009. 10 years ago consumption in China amounted to 50 per cent of its GDP and capital investment to 35 per cent, in 2008 respective figures were 35 and 44.

³⁵ WORONIECKI, Jan. “Future-Oriented Studies on Globalization: OECD Untapped Potential”, in: *The Future of European Regions*, ed. P.Jakubowska, A.Kukliński, P.Żuber. Warsaw, Ministry of Regional Development, 2007; s. 27–35.

³⁶ “Synthesis report”, p. 5–6 and *Strategies for aligning stimulus measures with long term growth*. Paris, OECD, 2009; *passim*.

³⁷ SCHWARTZ.

³⁸ Annex to the “Synthesis report” (OECD document C/MIN(2009)9/ANN2 dated June 17, 2009), *passim*.

³⁹ See Communiqué from the G20 St Andrews meeting at www.g20.org

Analytical capacity of OECD embraces very special instrument, notably a unit called *InterFutures Programme, or IFP*, collaborating not only with government partners but also TNCs and academia in various countries. IFP reports directly to the Secretary-General. While its activities are—by necessity—of horizontal nature, its research and brain-storming discussions are not sufficiently linked to the other (sectoral) directorates, and the Unit itself seems understaffed. At the same time now more than ever OECD **forecasting of the global issues** and analyses of possible scenarios for the global economy appear vital. Especially since other IGOs and many governments, in OECD or non-OECD countries alike, more often than not do not have—and do not appreciate—this capability, even now, when the outbreak of crisis forced governments to take on their shoulders many responsibilities foregone long time ago. Political systems (elections and terms of top state officials) do not encourage long term approach while “*l’autorespect de la nation ne se conçoit pas que si la collectivité est capable de se penser sur long terme*”⁴⁰.

In fact, in 2007 warnings were flowing from Davos over loopholes in the global governance, disparities within and between countries generated by the invisible hand of the market threatening social cohesion⁴¹. Next year was to confirm these fears—and correctness of even earlier Jagdish Bhagwati’s reasoning to the effect that appropriate governance on all levels constitutes a responsible answer to globalisation concerns⁴². That governance was missing. And on all levels, as is nowadays hardly disputable, governments have a leading role to play, with the role of their corporate partners (private sector especially TNCs) still to be determined. Besides the domestic and bilateral levels, multilateral approach to cope with the challenges gains strength, both through informal yet powerful intergovernmental gatherings of self-selected states (Gs) and a couple of reinvigorated IGOs. Understandably, short term and medium term perspective had to dominate the scene. Yet after just few months from the outbreak of the crisis a long term dimension and global issues which cannot be resolved quickly were noticed and taken up—at least in heated international discussions. Like climate change and appeals for a “green growth”. Also, a global interdependence has acquired another, deeper meaning—as a two way street... Both G7/8 and a number of IGOs, with OECD at the forefront, started courting the key emerging economies...

That’s where OECD comes—and should be coming—into play. Among IGOs, it is this Organisation which disposes of rather unique capability in this regard though calling for considerable strengthening as soon as possible. Not merely IFP itself, but a long term study potential in a number of relevant committees and directorates. Without excluding an option to bring in (not just for the annual Forum) academia and big business. In other words, *strategic thinking and advice capacity of OECD needs be strengthened*. An ivory tower of the Council would also benefit by learning from, and interchanging with, non-governmental circles. Research on Future Global Shocks and resulting risk management study to be undertaken soon by OECD in crucial domains like infrastructure, IT, energy, water, finance, social unrest, dollar’s fall, is a step in the right direction ... but just one step. *The receding crisis offers a welcome opportunity to make out of OECD an institution to initiate and co-ordinate global long-range strategic foresight*⁴³ on economic and social matters of urgency. Response and responsibility do have a common core.

As governments are transforming their way of working together, IGOs should do likewise: (a) adapt to new structures for global governance and (b) respond properly to their requests for inputs and follow up as appropriate. Besides immediate measures (like assistance to the banks)

⁴⁰ ATTALI, p. 253.

⁴¹ WORONIECKI. “Future-Oriented Studies”, p. 28.

⁴² BHAGWATI, Jagdish. “In Defense of Globalization”. New York, Oxford University Press, 2004, p. 11.

⁴³ GLENN, Jerome C., GORDON, Theodore J. *The State of the Future*. Washington, D.C., American Council for the UNU, 2005, p. 20-21. It’s time to implement what IFP director, Michael Osborne, proposed in March 2009 to the OECD Council: use horizon scanning to frame strategic discussions.

guidelines for governments how to manage their stimulus packages and exit them at the right moment and manner would be necessary, but IGOs should focus more on improvement on the global governance to avert crises from happening again, thus pondering on the imbalances, climate change and resisting protectionism in trade and investment⁴⁴. Thierry de Montbrial commends the G8 and G20 stand to preserve open world as an absolute necessity. Globalisation should not be put in question despite current problems and will resist the crisis underway, with multipolarity and heterogeneity of the new international order in shaping, he maintains⁴⁵.

Much of this has been traditionally in the OECD purview, formerly in co-operation with G7/8⁴⁶. In the joint press-release from the meeting with heads of 5 IGOs held in Berlin at the invitation of Chancellor Angela Merkel we read: “In the future, it will be important to foster greater co-operation and networking among national governments, international organisations and other stakeholders, and to further develop these capacities institutionally”⁴⁷. Similar notions transpired through the G8 l’Aquila meeting in summer of 2009, especially in the declaration on promoting the global agenda: “We commit to work together on global challenges and to improve international governance. Our purpose is to foster a genuine partnership, in the context of the strengthened multilateralism”⁴⁸.

The Group invited OECD to enhance its co-operation and improve coherence with other IGOs: ILO, IFIs, and WTO in elaborating common principles and standards that would govern the post-crisis economy (the Italian—or a joint—initiative, so-called “Lecce Framework”: Common Principles on Integrity, Transparency and Propriety in Economic and Financial Activities, taken up in co-ordination with the work the German one to build a “Global Charter” on sustainable growth)⁴⁹. OECD made an interesting proposal to create an Observatory for Policy Coherence as a joint effort of relevant IGOs (IFIs, OECD, FSB, ILO, and WTO)⁵⁰. It seems that those IGOs (perhaps also with UNCTAD) could also usefully establish a sort of an Early Warning Mechanism to signal emerging crises.

Moreover, OECD excels in pioneering work and taking up new challenges. Strengthening its foresight capacity would enable to identify them sooner; look for adequate response and advice. And the multi-faceted crisis of 2008–2009 (far from being over) calls precisely for new solutions, strategies of survival for states, corporations, individuals⁵¹. OECD is well equipped to help the two first categories of actors and thereby the target of development—peoples, in search for such solutions and strategies. Incidentally, work on two of them—green growth strategy and innovation strategy has already started while effort in the field of employment has been undertaken together with ILO. And the OECD recurrent study “Going for Growth” is in the course of being reshaped to support G20 work to help it to identify policies likely to have positive effects on growth⁵².

⁴⁴ While WTO remains a principal free trade watcher, OECD deals with investment liberalization, e.g. through its project “Freedom of Investment” operational since 2006 and its Declaration on International Investment and Multinational Enterprises to which 41 states have acceded.

⁴⁵ “Ramses 2010”, p. 15.

⁴⁶ Appeal by Angel Gurría, OECD Secretary-General, in his statement, at the meeting convened by the Chancellor Angela Merkel in Berlin on February 5, 2009.

⁴⁷ Press-release < www.oecd.org/document/32/0,3343,en_2649_34487_42124384_1_1_1_1,00.html.>

⁴⁸ Joint Declaration. Promoting the Global Agenda”. From La Maddalena to l’Aquila. G8 2009 Summit, p. 1.

⁴⁹ See OECD booklet “The Crisis and Beyond: Building a Stronger, Cleaner and Fairer World Economy”. Paris, OECD, 24–25 June 2009, p. 13 and footnote 11. G8 agreed at that meeting to create a comprehensive “Lecce Framework”.

⁵⁰ OECD document “Framework for strong, sustainable and balanced growth—implementing G20 Pittsburgh commitments”. (Paris), November 2, 2009, p. 4.

⁵¹ ATTALI, p. 18–21.

⁵² “Framework for strong...”, p. 3–4.

The OECD 2009 Ministerial adopted the Declaration on **Green Growth** and invited the Organisation to develop a cross-cutting Green Growth Strategy (GGS)—amid calls for low carbon growth and avoiding crisis-induced setbacks in environmental protection. Signatories to the Declaration announced that the “OECD can, through policy analysis and identification of best practices, assist countries in their efforts to respond to the growing policy demands to foster green growth and work with countries to develop further measures to build sustainable economies”⁵³. In following up this initiative, the Secretariat has submitted for discussion by member governments a proposal for developing GGS and its possible framework⁵⁴. The first stage of discussions has revealed that the bone of contention over its thrust may well consist in its scope: should it cover, as “former” sustainable development concept apparently does, social dimension (e.g. jobs), or be limited to environmental impact of growth only (*en revanche*, there was no doubt that GGS should, at any rate, go beyond the aspect of climate change). The OECD Secretariat presented a rational view that Green Growth definitions “converge around the idea that job creation, environmental sustainability and low carbon energy (hence a welcome wish to include International Energy Agency, or IEA, to the effort) should be amongst the key objectives”⁵⁵.

Desired “greening of the economy,” as it recovers from the current crisis and afterwards, was qualified as the strategic priority for countries worldwide, and—with some exaggeration—a new paradigm that would enable economic growth and development, prevent environmental degradation and enhance quality of life⁵⁶. To assist the preparatory process to the COP-15 Conference, OECD published a remarkable study on the economic effects of climate change mitigation while IEA contributed with the analyses on the energy sector⁵⁷.

All this was happening shortly before the Copenhagen Conference. As its final accord, judged grossly inadequate by some, a big step forward by others including Ban Ki-moon⁵⁸, set no precise goal for a binding international treaty, efforts by IGOs like OECD remain welcome before next stages of negotiations follow. The outcome of Copenhagen (“not the disaster that it at first appears”⁵⁹)—a framework agreement, or a political declaration of (good) intentions, or “aspirational goals”, supplemented by what had seemed unachievable—the funding pledge, has paved the way to a comprehensive agreement advocated. At the same time the accord reached has convincingly shown that arriving at an unanimous decision among 193 countries presents almost insurmountable obstacles. Rather, as some experts claim, future climate co-operation should be driven by whatever coalitions best suited to the task and without letting marginal or conflicted actors to stand on the way of an emerging consensus

In the circumstances, establishing in the accord the concrete and highly demanding goal, acknowledgement by major emitters of their responsibilities to reduce emissions, (hopefully binding) offer of financial support to poorer countries to adapt, acceptance of a key set of building blocks of a future agreement—justifies the view that *Copenhagen was indeed a major step forward*. And the right step in the direction of reaching the 450 Scenario of the world

⁵³ OECD documents C/MIN(2009)3 “Green Growth: Overcoming the Crisis and Beyond”. (Paris), June 23, 2009, *passim* and C/MIN(2009)5/ADD1/FINAL “Declaration on Green Growth” of June 25, 2009, p. 2. Four (out of five) candidate countries also endorsed the Declaration: Chile, Estonia, Israel and Slovenia.

⁵⁴ OECD documents C(2009)147/REV1 “A proposal for developing a GGS” of November 2 and C(2009)168 “Framework for the GGS” of November 20, 2009.

⁵⁵ OECD document C(2009)168, p. 5.

⁵⁶ *Ibidem*, p. 3.

⁵⁷ *The Economics of Climate Change Mitigation*. Policies and options for global action beyond 2012. (Paris), OECD, 2009.

⁵⁸ REVKIN, Andrew C., BRODER, John M. “Final accord on climate gets a sour reception”, KANTER, James. “Copenhagen sets money on the move”. *IHT*, December 21, 2009 and ZELLER, Tom Jr. “Fault lines remain after talks”. *IHT*, January 4, 2010.

⁵⁹ “Planet B”. *The Economist*, January 2, 2010, p. 9.

abatement emissions. Perhaps those experts (as French Minister for Ecology, for instance), or *The Economist*, are right in suggesting that progress is hardly achievable within almost 200 parties having so divergent interests, and that, consequently, action must primarily happen elsewhere (G20, OECD?—J.W.), outside the recent process, and then be submitted to a larger UN-wide body for approval, be it COP-16 in Mexico City, or later ?⁶⁰ Although the matter is in the center of attention of G8 (including Major Economies Forum on Energy and Climate launched in April 2009 and assembled on leaders' level at La Maddalena in July 2009, following the statement on climate change in the Toyako Summit declaration) and—more recently—G20, at Pittsburgh⁶¹, but ... it happens to be OECD which renders to the two substantive support in this domain.

After Copenhagen the discussions on the role to be played by OECD have resumed, specifically on the framework and founding principles of the future GGS as a horizontal project cutting across most of the committees and corresponding directorates—to bring their efforts and findings together. It is being realised that policy recommendations to be developed by OECD for member and non-member states, both those focused on short-to medium term aspects (especially structural adjustment related to transition to the green economy) and those devoted to long term ones (e.g. dealing with income and the environment interaction *à la longue*), cannot follow the principle “one size fits all” which, albeit correct, means considerable complication and higher cost of the endeavour. As the energy sector plays a significant role in the level of GHG emissions, IEA will continue as well to participate, jointly with OECD or on its own, in the implementation of the Copenhagen recommendations and preparatory work to bring about a new treaty. Together, both organisations seem very well placed to deal with economics and institution-building related to climate change⁶².

As a supposed new paradigm for economic development, Green Growth is expected to holistically address the economic, environmental as well as social and distributional aspects involved in the transition towards a greener world economy⁶³. Yet such a broad scope of action undertaken within OECD and, by the same token, an “all-inclusive” coverage of the future GGS as an economic model, may result in overstretching the capacity at hand and proliferation of objectives, some of them loosely related to the main topic. Doubts therefore persist that an overambitious approach, lack of focus and dissipation of effort—without sufficient funding—may after all inadvertently undermine the exercise. On the other hand, many discussants oppose leaving social concerns aside—as equally important as ecological preoccupations from the point of view of sustainable and balanced growth. Be as it may, the Strategy is expected to become the OECD contribution to supporting countries' transition to green growth (and green economy), provide advice on reallocation of their resources at both national and international level and a toolkit of green growth policies to pursue this goal⁶⁴. All these issues as well as the pace of action and format of collaboration (e.g. a dialogue held under OECD auspices with other institutions) will now, i.e. in 2010, take shape in OECD bodies busy with the draft framework of GGS. It is hoped that the Strategy will see the daylight in mid-2011 when its draft is going to be submitted to the OECD Ministerial for approval.

⁶⁰ LOY, Frank E., LEVI, Michael A. “The road from Copenhagen”. *IHT*, December 24–25, 2009 and “Jean-Louis Borloo: C'est une première étape”. *Le Figaro*, December 21, 2009. “Copenhagen's failure may have encouraged the development of political structures better suited to the challenge ... The Copenhagen accord edges towards allowing negotiations to take place in new forums. Smaller groups, dealing with more manageable-sized chunks, have a better chance...” —see “Planet B”, p. 9.

⁶¹ www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714_en.html on Toyako Summit outcome, www.majoreconomiesforum.org/past-meetings/ and www.pittsburghsummit.gov/mediacenter/129639.htm.

⁶² *Tackling Climate Change and Growing the Economy*. Key messages and recommendations from the recent OECD work. (Paris), OECD, 20

⁶³ OECD document C(2009)168, p. 3–17.

⁶⁴ *Ibidem*, p. 16–17.

Another vital strategy to be elaborated by OECD will address crucial (even more as one of the key factors assisting to emerge from the downturn) growth driver—**innovation**. The decision to start work on the strategy was taken by the OECD Ministerial in mid-2007, i.e. before the recent crisis has erupted. The concept to follow was to: (a) adopt a whole-of-the-government approach in view of the horizontal nature of the endeavour of promoting innovation and (b) benefit from the experience in the preparation of the OECD Jobs Strategy: to arrive at a set of recommendations on innovation policies taking account of the national differences (in early 2010 “reality checks” will be carried out in selected capitals of OECD member-states). The goal of the strategy has been designed from the outset as strengthening the contribution of innovation to key economic and social objectives in view of its central role for economic performance and social progress on one hand, and links between innovation and growth—on the other⁶⁵.

While many governments have (later) incorporated related measures to strengthen innovation (also that supporting Green Growth) into their stimulus packages, action to improve their long-term potential in that regard and help sustain the recovery has become even more important. Especially in view of usual slowdown in business R&D expenditures during downturns, chiefly “longer term, high risk innovation projects are being cut first. The decline in business R&D risks affecting the stock of knowledge as highly trained researchers and innovators lose their jobs” although at the same time some “research-intensive firms seize the opportunity to reinforce market leadership through increased spending on innovation and R&D”; fading support under crisis of the banking sector for the new entrants becomes an acute obstacle⁶⁶. Therefore public support for research and innovation, public-private partnerships, investment in research infrastructure, funding socially oriented innovation—all this, in terms of policy recommendations and workable schemes, is going to be proposed in the future OECD Innovation Strategy. It should foster policy reforms needed to promote innovation, and, thereby, bring steady productivity increases and a strengthened response to environmental and social challenges⁶⁷. Since the project was launched in 2007, two progress reports were submitted to subsequent Ministerials, a scoping document and draft policy principles were discussed in the fall of 2008 and 2009, respectively⁶⁸. Now, it is intended to adopt the Strategy at the OECD 2010 Ministerial.

As it is the case with most global challenges, innovation is the one to be used to address many—if not all—others, especially social and environmental. Stronger innovation and new forms of international technical co-operation, exchange of know how, are of decisive importance in confronting climate change, health, food and energy security, poverty etc. OECD expects that its new cross-cutting strategy will provide a useful tool for the “development of policies that make innovation work for people and help meet the major challenges of the 21st century” while also assisting to develop OECD GGS and the Project on Measuring the Progress of Societies (see below) as well as its Policy Framework for Investment⁶⁹.

While the financial turmoil has drawn most of the world attention, OECD from the outset stressed the importance of sound *employment and social policies* as an essential component of a successful growth strategy, to prevent the crisis from generating a full-blown social crisis, especially in view of the surge of unemployment and erosion of pensions badly hit by the events

⁶⁵ OECD document SG/INNOV(2009)4 “The OECD Innovation Strategy: Draft policy principles”, September 30, 2009, p. 3.

⁶⁶ OECD document C/MIN(2009)9/ANN3 “Report on the Strategic Response: Fostering Innovation for Sustainable Growth”, June 8, 2009, p. 2-3.

⁶⁷ *Ibidem*, p. 2 and “Synthesis Report”, p. 8-9.

⁶⁸ OECD documents SG/INNOV(2008)2 “OECD Innovation Strategy. Scoping document”, October 1, 2008 and SG/INNOV(2009)4, *op.cit.*

⁶⁹ *Ibidem*, p. 17-19 on applying innovation to address global challenges and p. 23 on the way forward.

on the financial markets. So far, the financial and economic crisis quickly turned into a jobs crisis, short-term jobs outlook remains grim, the cyclical jump in unemployment risks becoming long-lasting, with negative effects on the labour market and potential output. High and persistent unemployment tends to become structural and bring in train major social and economic costs⁷⁰.

The Organisation has a solid base to build upon: subsequent editions of its Jobs Strategy, review on jobs for youth, studies on pension reforms, international and return migration, on sickness and disability to work. Its Reassessed Jobs Strategy (RSJ) “provides especially promising framework for assessing policy responses to support those most affected by the economic downturn while preserving the longer-term objectives of promoting greater participation in the labour market and equal job opportunities for all”⁷¹. In particular, work on implementing RSJ should support the development of green jobs and the skills needed for them; green growth measures are to be co-ordinated with labour market and human capital formation policies⁷².

The OECD Labour and Employment Ministers meeting in Paris on September 28–29, 2009⁷³ expressed a deep concern over the perspective of a “major jobs crisis with serious social consequences”, and “agreed that, in the light of the severity of the recession, comprehensive and innovative employment and social policies are essential to tackle the jobs crisis and promote a return to sound economic growth, and called on the OECD to assess the implications for its RSJ”. They asked OECD to provide new insights on how to promote a fairer, more inclusive and thereby stronger economy, and reaffirmed their wish to promote dialogue with governments of emerging and developing countries; they saw a need for OECD to work in concert with other IGOs especially ILO in this respect⁷⁴. What has emanated from these findings was—as the OECD Secretary-General put it—that “sustainable growth goes beyond caring for the environment, and any transition to a low carbon economy will also need to take into account issues related to social impact and sustainability”⁷⁵. Although OECD has only one adjective (i.e. economic) in its name, social issues have rightly occupied a large place in its programme of work. Therefore, and in view of the severity of the crisis for people, social challenge should be addressed there with equal concern and devotion as others. When the OECD 2010 Ministerial takes up social matters, this should be borne in mind.

Among those issues another global challenge can be singled out, that of **social perception of well-being**, and a difficult task of measuring it. The crisis has undoubtedly exposed not just dissatisfaction but an intricate issue of how people assess (subjectively) their situation. Such assessment evades simple (or simplistic) logic especially insofar as GDP per capita (level and dynamics) is concerned. To be sure, inequality does not explain everything: individual reactions which *en masse* acquire not merely social but also high political impact differ from what is usually expected. Various motivations, primarily non-economic ones, are responsible for such behaviour. Gains in material standards of living are somehow not always accompanied by concomitant gains in perceived happiness, or well-being (material losses cause more predictable reactions...

⁷⁰ OECD *Employment Outlook*. Tackling the Jobs Crisis. (Paris), OECD, 2009, p.12. See also *Tackling the Jobs Crisis*. The Labour Market and Social Policy Response. (Paris), OECD, 28–29 September, 2009, p. 5 and 15–18.

⁷¹ OECD *Annual Report 2009*. (Paris), OECD, 2009, p. 43–44.

⁷² OECD document C/MIN(2009)5/ADD1/FINAL, p. 3.

⁷³ One of the series among the G8/G14 Social Summit in Rome; the G20 London Summit; the ILO Conference “Recovering from the Crisis: A Global Jobs Pact”. G20 will hold another conference of those Ministers early on 2010.

⁷⁴ Final communiqué—Tackling the jobs crisis: the labour market and social policy response”, p. 1–2. http://www.oecd.org/documentprint/0,3455,en_2649_34487_43790301_1_1_1_1,00.html

⁷⁵ “Beyond the crisis: what is the jobs potential of shifting towards a low-carbon economy ?” Opening remarks by Angel Gurría at the Meeting on September 29, 2009. Certain policies—he continued—can pay a “double-dividend” by contributing both to tackling the jobs crisis and to achieving green growth. http://www.oecd.org/documentprint/0,3455,en_2649_33927_43794943_1_1_1_1,00.html

). Traditional key indicator is plainly out of sync with perception by those concerned. “What is progress—ponders the eminent British economist Richard Layard—the OECD has been asking this question for some time and the current crisis makes it imperative to find an answer”⁷⁶. Surely, there’s a long way from measuring the progress to right policies and effective action. Yet even the longest way has to have its beginning on which to embark...

At the same time, “avec la crise, il faut encore plus de solidarité et de maintien de la cohésion sociale”⁷⁷. How though to ensure it without understanding and addressing people’s preoccupations ? And without proper measuring of quality of life ? While recent findings of the Commission on the Measurement of Economic Performance and Social Progress designated by the French President were much publicized, it was OECD which had noticed this vital discrepancy and launched in 2007 the global project on “Measuring the Progress of Societies” to provide a setting for networking and advocacy, undertaking research, and delivering innovative tools to share information and draw conclusions⁷⁸. OECD experts noticed that even in the relatively prosperous 2000s the gap between macroeconomic evidence and people’s perception of their living conditions (including the dynamics in both) was widening, to widen even more as a result of the crisis. The phenomenon was deemed to have a negative impact on the very functioning of the democratic process and possibly led to biased analysis and wrong policy targets. In the Istanbul Declaration which paved way to this project signatories committed to address the “need to undertake the measurement of societal progress in every country, going beyond conventional measures such as GDP per capita”; to enhance “a culture of evidence-based decision making to increase the welfare of society”; to “strengthen citizen’s capacity to influence the goals of the societies they live in”; and to “increase the accountability of public policies”.The global project hosted by OECD is to fulfill these goals⁷⁹.

Next “stage” (September 2009) was the report by the Stiglitz-Sen-Fitoussi Commission which reviewed criticisms of GDP as a measure of well-being, or “quality of life”. Some of its members believed that the financial crisis and the recession have made a broadening of official statistics even more urgent—which I share. Thus, the report justifies wider measures of well-being though the authors realise potential traps and risks of the exercise (e.g. weights to be assigned to various non-economic, hence hard to measure, factors); it urges statisticians (including OECD) to capture what people do live by which is by far not GDP alone⁸⁰.

No doubt, the report has given renewed impetus and concrete direction to the process initiated by the OECD. Next month the 3rd OECD World Forum on Statistics, Knowledge and Policies was held in Busan, South Korea; its main theme being “*Charting Progress, Building Visions, Improving Life*” (India is supposed to host the 4th—within events to celebrate OECD 50th anniversary). The Busan Forum gave a strong boost to the OECD global project. The participants (from all walks of life) were of the opinion that it reached now a critical moment and that OECD should spare no effort to respond to the omnipresent high demand for this sort of activity.

⁷⁶ OECD document C(2009)192 “Global Project on “Measuring the Progress of Societies”, December 3, 2009 (Annex—a progress report), p.3.

⁷⁷ STIGLITZ, Joseph. “Nous revenons à une récession normale”. *Challenges*, August 27, 2009, p. 15.

⁷⁸ OECD document C(2009)192 (Annex), p. 18–28.

⁷⁹ *Ibidem* (main document), p. 3–4. The OECD World Forum on “Statistics, Knowledge and Policies” (Istanbul, 2007, preceded by the first one in Palermo in 2004) produced the *Istanbul Declaration on Measuring and Fostering the Progress of Societies*, jointly agreed by OECD, EC, UNDP the World Bank and the Organisation of the Islamic Conference, endorsed later by many IGOs and NGOs.

⁸⁰ “Measuring what matters”. *The Economist*, September 19, 2009, p. 79. For the report itself, see www.stiglitz-sen-fitoussi.fr Federal Chancellor Angela Merkel expressed interest in better reflecting sustainable growth factors in national accounting and in collaborating with France in this regard; EC issued a communication “GDP and Beyond”; G20 in Pittsburgh called for encouraging work on measurement methods to better take account of social and environmental dimensions of economic development (OECD document C(2009)192, p. 5).

The Organisation intends to continue supporting the global project while, moreover, advancing the substantive agenda on measuring progress and well-being through the preparation of a (still another one—J.W.) strategy and the launch of a horizontal project⁸¹. Although recommendations emanating from both the Commission and the Busan Conference are wide and their implementation is going to be complicated, OECD Secretary-General confirmed that we need nevertheless “*aller au-delà de chiffres de production pour fonder un système centré sur le bien-être et les progrès des sociétés*”⁸².

Last but not least **development**, or—rather—support of developing countries, many of them severely hit by the crisis, comes as a global challenge. More often than not it is considered to be their business, whereas the advanced countries (including some emerging economies) have a moral duty to help their poorer partners. The current crisis has proved such an approach to be outdated—and wrong. Economic (and other) fates of both groups of countries are closely intertwined and global economic and political stability depends on how their interdependence will be consummated. One should tackle development as a global challenge for all. Development support—not as a gesture or courtesy of richer countries, but an endeavour in their own longer term interest in the first place⁸³; “... global development architecture is essential to promote global stability, foster sustainable development and lift the lives of the poorest”⁸⁴.

This reasoning seems to transpire to the Organisation still called by some not before long a “rich men club”. OECD joined international appeals to maintain aid during and after the crisis in view of the danger that, together with the economic slowdown, aid budgets may be slashed. Its Secretary-General with the OECD Development Assistance Committee (DAC) Chair, called on the world’s major donor countries to stand by their ODA pledges in order to prevent the “financial crisis from generating an aid crisis”, or, worse, “turn into a development catastrophe, with consequences lasting for decades long after the crisis is over”⁸⁵. The OECD 2009 Ministerial Conclusions stressed how important it is for global prosperity and stability to make the world economy stronger and more equitable in opportunity so that developing economies become more resilient and less vulnerable to economic downturns, and reaffirmed pledges and commitments on aid volume and effectiveness, policy coherence for development and development financing. The Ministerial encouraged OECD to continue its work with developing economies⁸⁶.

Now, in the aftermath of the crisis which has undermined development aid and the implementation of MDGs, novel approach to, and action in favour of, development are more necessary than ever—for the benefit of the global economy. OECD experience from its research on policy coherence for development and principles of development co-operation, under the auspices of its DAC offer a good departing point for further discussions and conclusions. OECD contemplates to start work on *Strategic Development Goals, or SDGs*, of its own—and for itself: designed to steer OECD’s activities in selected areas of work to enhance their development dimension; sort of an “in-house policy coherence for development exercise”. These goals would be fed into a broad strategy to guide OECD work on development, strengthen the whole-of-OECD approach and more fully use its experience and comparative advantage. As a result—also help OECD itself to better interact with developing countries. A special declaration for adoption by the 2010 Ministerial is planned. Still, the concept of SDGs may prove confusing when made public in

⁸¹ *Ibidem*, p. 5-7.

⁸² FALLETTI, Sébastien. “Le rapport Stiglitz a passé un premier test mondial”. *Le Figaro*, October 29, 2009.

⁸³ WORONIECKI, Jan. “The development gap and its new dimension, a digital gap, a global challenge of XXI century”, in: *Development Economics*, ed. R Piasecki. Warsaw, State Economic Publishers, 2007; p. 256-272.

⁸⁴ www.pittsburghsummit.gov/mediacenter/129639.htm , paragraph 17.

⁸⁵ “OECD Annual Report 2009”, p. 81.

⁸⁶ “The Crisis and Beyond: For a Stronger ...”, p. 40.

view of the proximity with MDGs although the purpose and the addressees of both are different. Moreover, DAC itself is going to transform its profile and position in the new global architecture, according to its Chair, Eckhard Deutscher. It will probably focus on the impact of the financial and economic crisis on developing countries and donor responses (ODA and other flows), aid delivery and its effectiveness as well as the post-Copenhagen follow-up (from the poorer countries' vantage point). 2010 is expected to bring a "new (or reinvigorated—J.W.) DAC"⁸⁷. The overriding objective of all these steps is to ponder how the OECD as a whole could most effectively contribute to development, both acting alone and in collaboration with other IGOs, and—why not—the key regional players, think tanks and private sector (including TNCs).

OECD rightly considers quality of aid to be critical, alongside its volume. Therefore, aid effectiveness was the subject of the Accra 3rd High Level Forum and of the Accra Agenda for Action it adopted; in 2011 next forum is planned in Seoul to address such issues as country ownership over development, building more effective and inclusive partnerships, delivering and accounting for development results. Removing barriers that hinder rapid aid disbursement, increasing predictability of aid and eliminating its excessive fragmentation, are also concerns to be tackled. The Working Party on Aid Effectiveness, an international partnership hosted by the OECD (a coalition of more than 70 international development actors including 30 developing countries and non-state representatives), plays a central role in the preparations to the Seoul Forum. Its activities embrace monitoring aid flows and improving aid transparency and predictability bearing also in mind the mandate from Pittsburgh relating to the implementation of the Paris Declaration on Aid Effectiveness and the Accra Agenda. Finally, OECD is going to publish in 2010—for the first time—the Global Development Outlook which will explore the fallout of the global credit crisis onto the developing world⁸⁸.

* * *

The purpose of this article was obviously not to perform any comprehensive review of the OECD past and planned (including crisis-born or adapted to crisis) rich activities. That is why, for instance, heavily publicised OECD action (indeed a dynamic and effective !) devoted to tax fraud and evasion⁸⁹ was not covered as constituting, it seems, rather a current problem to be resolved, hardly deserving the name of a long term global challenge. Also, such challenges where OECD has no potential to acquire a leading role or at least make a substantial difference in the international effort undertaken were left out from scrutiny. Energy supplies and security, an unquestionable global challenge taken up by IEA, member of the "OECD family", has been also consciously omitted as deserving a separate analysis; as food security or supplies of key commodities have since OECD is not a chief or important player in this regard.

The crisis gave rise to endless discussions on how the world economy should be governed after recovery gets hold—to avert crises (and dangerous bubbles) in the future, at least of comparable magnitude. Calls for new international economic order (incidentally, the term used for the half-forgotten initiative of G77 in the UN in mid-70s), or some sort of a global governance multiplied. Hardly anyone—verbally—disagreed with the notion that when we make sure the crisis is over there's no way back to business as usual. OECD was of course no exception or other IGOs, acting either on their own initiative (of their member states and Secretariat) and/or on request from G8 or G20. Main difference as compared with previous crises' follow-up was the

⁸⁷ OECD document DAC/CHAIR(2009)5 "2010 SLM/HLM planning: Context, issues and timing", November 26, 2009, p. 1.

⁸⁸ "OECD Strategic Response", p. 14, 19 and 23.

⁸⁹ Notwithstanding unquestionable OECD achievements in fighting these phenomena (tax havens, recent establishment of the Global Forum on Transparency and Exchange of Information for Tax Purposes).

degree of involvement and role of the emerging economies (BRICS). In OECD, as mentioned, it took place even before the outbreak of the crisis, and reaffirmed through the scheme of Enhanced Engagement in 2007. As of 2009, a concept of “OECD plus” is being contemplated as a substitute of membership of the five countries involved (they don’t fulfill the requirements posed nor are interested to join the Organisation anytime soon).

While these calls and ideas of any new order, or governance, on a global scale, and of reassembled principles of behaviour (like the Lecce Framework), left alone the question of how to ensure binding character of any eventual international agreement, may be still pretty vague, multi-directional and controversial, these discussions will surely go on and intensify in different settings—intergovernmental (formal and informal) and among NGOs. As they should. *OECD* as it has evolved and continued to evolve *seems one of the best (and non-committal) platforms for such a dialogue on global challenges* as well as contributor to the dialogue held elsewhere in particular G20. The main purpose of such a dialogue should consist not so much in averting future economic slowdowns, or small- and mid-size crises but in *bringing about, in early tens, better institutional structure and policy stance for more smooth functioning of the world economy* and making it, using the OECD recent language, stronger, cleaner (and greener) and fairer for all.

NICOLAS TENZER

THE NEW ROOTS OF WORLD LEADERSHIP AND INFLUENCE A CONCRETE AGENDA

The purposes of this paper are multiple, but they all aim at showing that the transformation of the factors of leadership and influence commit the main government to a radical shift of their international agenda. I will thus describe the complete change of the anatomy of the power and of the influence on the international stage. This new reality stays beyond the classical diplomatic issues, the traditional alliances and the commercial strategies. One of the priority tasks for the policy makers, the private companies and the academic world as well is then to draw the new world-map of influence and power, which was probably never done.

In order to address these new challenges, we must understand that this power and this influence do not rest only on public authorities, but also on business circles and academic sphere. It means a new policy-making process that shall gather all the stakeholders. Especially, we shall implement new tools and rules of the game and the European Union as well as peculiar partnerships between some European States (and civil societies) have a role to play in this matter.

The Three Major Components which Draw the New Framework of Power and Influence

The three major components that shape the new design of power and influence are first of all the international tenders on a huge variety of issues. They are very demanding of high level and innovative expertise. The second component consists on the guidelines, the norms and the laws created by the various committees within the international organizations and the international forums and networks. Last but not least, we will mention the role assumed by the so-called “global players”, who are sometimes regional players, like the think-tanks, the media and what we may call the “jet-advisers”, probably more powerful nowadays than the old-fashioned jet-setters! The challenges derived from this new architecture are related to the four major fields of the *global* foreign policy—the only one relevant nowadays—which are the security issues (at home and abroad), the development policies, the trade and economic policies and the so-called global issues (fight against global warming, social matters, knowledge society, etc.) and the human rights issues.

The International Tenders

In order to understand the importance of this new reality, we shall be aware of the matter, often unknown even by many international policy-makers and diplomats.

First, who launch these tenders? Six categories could be mentioned. The more important one (probably if we consider the global amount, but more decisively regarding the consequential influence) concerns the international organizations, such as the European Commission, the United Nations Development Program (UNDP), the World Health Organization (WHO), the UN Industrial Development organization (UNIDO), the UN organization against VIH-AIDS (UNAIDS), the UN environment program (UNEP), the UN International Children and Infant Fund (UNICEF), the Atomic Energy International Agency (AEIA), the World Bank, the African Development Bank, the Asian Development Bank and the other development banks, etc.

In a second rank, we must give a peculiar importance of the tenders created by some States, especially in emerging countries and middle-income countries. Of course, we mention the tenders as a generic category, but this denomination gathers some proposals without that sort of open competition. Third, some major local authorities, like States, regions and big cities, are also more demanding of expertise in order to manage and to organize their territories and to address the peculiar challenges they are in charge of.

Fourth, the aid agencies and the national development banks (let's mention the Swedish International Development Agency (SIDA), the UK Department for International Development (DFID), the Agence française de développement (AFD), US-AID, etc.) are also launching tenders for their own program. These tenders are more often untied, which means that the private companies or public bodies from other countries are allowed to submit with an equal chance of success.

Even if less numerous, some major NGOs and charities, such as the Bill and Melinda Gates Foundation, the Clinton Foundation, Care and OXFAM, are also more asking for expertise and they employ consultancy from various countries. Last but not least, considering the future, some sovereign wealth funds (Gulf, Norway, China, etc.) will play a major, sometimes ambiguous role, in development matters.

To form an appreciation of the role of these tenders, we must be aware of their global amount. For the five next coming years, a current estimation gives an amount of 500 billion Euros for the expertise only. If we consider further more an amount including the consequences on forthcoming tenders for works, services and materials, it could reach 25 000 billion Euros or even more. Notable enough is the fact that we should not expect a decreasing of the amounts because of the economic crisis, since the economic activity, especially through major investment programs, is supported by the international organizations and the States (see the rescue programs that many of them have decided in 2008–2009). Some sectors are peculiarly concerned, like health (about 60 billion Euros), governance (40 billion Euros or more) and regional development (transport, infrastructures, water and sanitation) for more than 100 billion Euros.

Which fields are concerned by these tenders? A common answer says: all the fields! Let's give some examples. One of the main sensitive regards the so-called "Governance" issues. It includes the modernization of the State, the State-building after a civil war or in a transition process to democracy and free markets, the creation of new institutions (including police, justice, finance and tax administration, etc.) and the design of a new system of law. The weak and failed States are obviously concerned, but the largest amounts regard the transitional States (like former communist countries) and the emerging States which must adapt quickly their economic and the legal and management processes (fight against corruption, code of investment, regulation of the public expenditures, modern tax system, organization of the Central Bank, supervision of

credit, statistics, etc.). It's pertaining also for the local authorities which meet new challenges (mega-cities, but also middle-size cities (around 100 000 inhabitants) that will increase the most dramatically within the next 15 years).

Agricultural and veterinary issues, although classical, remain determinant, because of the new challenges regarding nutrition and demographic commitments, with some special implications on sustainable development, environmental and food safety and fight against quick developing epizooties.

The regional development is one major concern of many tenders and need to join several skills and professionals of various fields: transport and infrastructures in general, telecoms, management of regional funds, design and competences of local administrations, etc. It obviously brings crucial consequences on many sectors of private business, especially utilities.

The police matters, like homeland security, organization of the forces, legal requirements, civil security, training of security services, are increasing not in only state-building programs concerning failed States, but also in former totalitarian or authoritarian nations or developed and middle-income countries which are facing major security problems. This matter is often mixed with human rights and sometimes more specifically children and women rights issues, and are sometimes parts of more global programs of governance.

The sector of health is probably one of the major concerns for the donors if we consider the amount of the tenders. It comprehends a large variety of tasks: the training of physicians, nurses and health managers, the improvement of the administration of the health services (at State and local levels and at hospital level), the vaccination and the prevention—VIH-AIDS, tuberculosis, malaria, etc.—the social security programs, the regulation of the sector of medicines, logistic issues, etc.

The industrial issues, the water and sanitation problems, the fight against global warming, the sustainable development and the environment, the credit access and the development of small enterprises, the housing issues are as important as the previous ones, and we shall not forget education, research, employment market, the social regulations and rules and the protection of labor.

Even if less mentioned, the sport expertise (organization of major events, infrastructures, security, information system, etc.) could have fruitful impact on many sectors of the industry.

Last but not least, we shall not slur over legal issues in various fields and defense and security matters, which have consequences on diplomacy as well as on industry: training of military forces, doctrine, organization, peace-keeping preparation, etc.

Let's now examine a concrete question: who answers these tenders? In fact, we meet on the field a huge variety of organizations. One key-factor for success is even the ability for a country to mix appropriately the diverse skills and competences in order to take into account the requirements of the donors and of the States. If we consider the markets as a whole, the private companies (consultancy and law firms, engineering societies, security enterprises, etc.) are the major players. Nonetheless, some public bodies (aid agencies, sometimes State administrations, dedicated structures) play a crucial role, especially in some countries (developing countries, former communist European States) or for some categories of tenders (for example, the twinning projects launched by the European Commission). Very often also, sometime without any open competition, States or international organizations call private consultants competent in the different fields since they are in the rosters used by them. Some NGO's may also apply for peculiar missions. One often forgotten category consists on the universities and the research centers, or more often dedicated offices or societies dependent from these bodies. They prove their ability of managing projects while they offer innovative perspectives. Of course, we see often a mix of these categories

gathered in a consortium (with private consultants, civil servants, in activity or recently retired, academics, sometimes from various countries).

In the field, we see the same categories working in concrete programs: private and public (civil or military) experts for short, middle or long term missions, enterprises, NGO's, employees of public (or sometimes previously public) agencies. All these people are in domestic or international rosters built and permanently updated by public agencies or private firms, with sometimes some strong links with the State or the local administrations—see for instance CANADEM, Crown Agents (UK) or GTZ-IS (Germany).

The Guidelines, the Norms and the Law

To understand the links between a program and the creation of standards, we shall point out five preliminary facts, which are not theoretical, but practical, and as such well known by the actors in the field. First preliminary statement: One success story on a given field in a program, or more even two or three, is a form of “advertisement” for a contractor and could be an incentive to duplicate the program elsewhere. The experts involved in this program are sometimes clever enough to “sell” the main recommendations to a multilateral organization and to write an informal recommendation paper that fit with the peculiar expertise of one given contractor.

Second preliminary consideration: The standards used in a program have political implications and are directly related to an ideology or to a doctrine. They often create or express norms, both technical and legal. They fit with the mindset of a peculiar contractor, of a country or of a group of countries and create a disadvantage for other contractors and nations.

Third preliminary remark: There is a dump struggle between different areas of the world regarding these standards and these norms.

Fourth general assessment: While the international organizations, the NGO's, the aid agencies and the international forums are the major pieces of this game, since the influence operates through them, the States and the local groups of interests are mainly the real players who act to promote their ideas and protect their economy.

Fifth preliminary observation, directly related to the common practices, even if sometimes not recognized as completely fair and transparent: Many contractors try to intervene upstream for defining the terms of reference of a given project in order to increase the chances to be chosen as contractors. This influence is enhanced if a State has sent advisers to assist a given body (the presence of German engineers to assist the Ministry of Transport in China is directly related to the success of Siemens in the high-speed railways programs in this country).

How the international organizations act in this matter? We must first of all recall that quite all the multilateral organizations (UNDP, WHO, World Bank, European Commission, etc.) elaborate guidelines in order to fix the “good practices”—they sometimes call them “the best”—in the various fields of expertise (water, environment, governance, fight against poverty, Human rights issues, etc.) and the very management of programs in the field. They become the common sense that one shall follow when implementing a program (see for instance the Paris Declaration of 2005).

We shall add that some international bodies organize regular meetings on relevant issues in their field of competences, in which scholars, public organizations, private consultants, etc. discuss policy papers and recommendations. If some States do not attend these meetings, they lose the capacity of influence.

More specifically, some of these organizations have dedicated councils of experts panels in which concrete options for the coming years are discussed (WHO, UNAIDS, UNEP, World Bank,

regional development banks, etc.). It's crucial for a given State—and for the companies through lobbying firms—to send and sometimes appoint experts in these structures.

As an example, we could mention that one (generally unknown) organization is even based on the discussion between mainly private experts of the issues relevant for it: the UN Commission for international commercial law (electronic trade, international transport regulations, etc.) whose headquarters are in Vienna. In this organization, the US main law firms' representatives (for example, the City Bar of New York and the American Bar Association) define the new soft law. It's the same in some technical committees within the EU or other organizations for the technical norms (the industry organizations of some countries are less present than others). We shall also mention the role of influence played by the pharmaceutical companies within the WHO experts committees.

The Role of the “Global Players”

Well-known is the enormous network of think-tanks all around the world. Since a couple of years, some newspapers or consultancy firms try even to assess them and give them a score. Notable enough is the fact that these think tanks develop not only in the US, in Germany or UK or “old” European countries, but also in Eastern Europe, Asia, Latin America and Gulf countries. They organize international or regional meetings and send their fellows in those organized by others. Even if uneasy to follow in decision-making process, there is a common agreement on their major role and their influence.

This network is not exclusive of bilateral strong partnerships. For instance, we shall insist on the major role of US universities and think tanks before and principally after the fall of the Berlin Wall in Eastern Europe. Let's consider also the role of the National Endowment for Democracy (NED) in the not democratic State. The same role is played by the German political foundations, government foundations (die Stiftung für Wirtschaft und Politik (SWP) and die Deutsche Gesellschaft für auswärtige Politik (DGAP)) and universities (with partnerships in the long run with other think tanks or academic centers in these countries).

The role of the global media is astonishingly rarely assessed. If, before the collapse of communism, the role of *Radio Free Europe* and *Voice of America* is often quoted, there is no comprehensive study on the doctrine or the ideology instilled today by the global media and on their concrete influence on government, business or academic circles—excepted “plot theories”, irrelevant and single-minded coming from far-left or right-wing organizations. This could be interesting for the worldly red media like the *Financial Times*, the *New York Times* or the *Wall Street Journal*. An analysis of the influence of the newspapers syndicates could be also interesting as would be an assessment of the general messages developed by more specialized journals in their field of competences.

The creation of a group (or sometimes of a cast) of international advisers is also rarely mentioned. In fact, we witness a double trend: In the one hand, the variety of consultants of counselors has never been so great; in the other hand, in some countries or fields, there is a concentration of listened advisors on a few heads, whose assessments are received as the truth or the unquestionable prophecy. On the top, we shall mention a few high level consultants and advisers, like some economics Nobel Prize winners, international gurus in development or environment issues (sometimes Peace Nobel Prize laureates), some senior scientists and physicians and former high-rank politicians and heads of international organizations. Less prominent but not always less influential are obviously the main big consultancy and audit firms—the so-called “Big Four” and others. They have the financial capacity to be present worldwide and can devote a large amount of money not only to lobbying, but also to the doctrinal elaboration, sometimes

through not-for-profit organizations or universities, and commercial canvassing. In some peculiar sectors, there are also some major players, like security firms, leaders in sanitation programs or infrastructures, some industrial architect offices, etc., unknown by the general public and often inconspicuous.

The main lesson remains: To be a global payer requests a capacity of domination, major financial means, an overview of the world markets and a faculty to elaborate a doctrine and to sell it as beyond dispute to the other players.

The Four Main Challenges

As mentioned, there are four main challenges (security issues and foreign policy in its common acceptance, development policy, trade and economic policies, global and human rights issues) to address in the field of international policy. All of them are linked to the ability to fulfill the three requirements mentioned above: To be a major player in the expertise markets, having built a large network through which one can settle influence policies and to have the financial means to achieve their tasks. Of course, these four challenges are related. There is no singularity of diplomatic issues compared to others. We shall consider also the importance of reputational issues which embody the different ways of acting in the world stage.

Let's propose three hypotheses regarding the new geopolitics of power and influence:

First hypothesis: The international policy as a whole will need more resources (financial and intellectual) than before. The nations unable to fulfill the requirements will be over-passed and will stay at the margins.

Second hypothesis: The power goes to power. This proposal has a concrete implication: In all the areas, the most confident actor will be this who is expected to have more power in the future. Our world is a world of anticipation: like the firms in the stock markets, wrongly or not, a nation is rated through its performance and related expectations. One shall introduce the concept of global competitiveness of a State.

Third hypothesis: A nation on the international stage isn't only the State, but all its components must be mobilized and act in the same direction to promote its national interest. This does implicate neither a common view in everything nor a renunciation to freedom in expressing one's own statement and evaluation (especially for the academics and scholars), but a solidarity in the general purposes.

The first issues related to these new tools and means are paradoxically the most classical ones, these are the security issues and the foreign policy matters. Obvious enough is the fact that more and more think-tanks and academic centers around the world are devoted to international affairs and security issues. They influence the strategic choices and the decision-making process and upstream forge the main statements. The diplomacy is more and more public in the one hand, more and more based on ideas coming from various and discreet circles in the other hand. It means that what often appears to the general public or even to the global media to be the common sense shall be analyzed as the product of peculiar groups. Thus, to invest such places through partnerships and debates contributes to the creation of a common language, but brings also confidence and trust, sometimes gratitude. Let's remind the role of the US during the Cold War in helping dissent movements in Eastern Europe: It explains also the position of these countries regarding the war in Iraq, even if politically opposed to George W. Bush.

Moreover, there is less separation between the classical diplomacy, the intellectual partnerships and the economic links through, for instance, development programs. A diplomacy cannot anymore be only based on discussions between the chanceries and symbolic. It shall be enrooted on cultural

and intellectual exchanges. Illusory is the idea that the diplomatic *savoir-faire* could neglect the competition in the realm of ideas and concept, even in economic and technical matters.

Let's add that some programs developed by the international organizations, or requested by the States themselves, directly or indirectly, have this component. There are also implications of some programs on geopolitical matters—development programs in sectors like energy, raw materials, military training, reform of the central bank or credit, etc. Last but not least, the networks of experts from all origins are part of an intelligence strategy, in political as well as in economic and technological fields.

The development policy is the second sector which is in the core of the new influence and power policy. Let's insist on the fact that, since the last five years, we must consider development policy as a whole. There is no complete discrepancy between developing countries and emerging countries, even if the programs are obviously different. We shall take into account the importance worldwide of the so-called “public goods”. Trade considerations, diplomatic commitments, development policy and environment issues interfere more than twenty years ago. Furthermore, when conceiving and promoting programs in these countries, we must have a comprehensive understanding of two requirements. First of all, we shall promote “good practices” (human rights, sustainable development—water, air, biodiversity, etc., promotion of democracy, etc.). The grassroots expertise as well as the recommendations within high-level working groups shall promote these tasks. Secondly, we shall not be naïve: We have competitors, who sometimes don't offer the same guarantees regarding the development targets.

Finally, the development policies are not only driven through State to State relationships, but also through networks involving civil societies, NGO's, academics, scholars, trade-unions, etc. In this respect, it's crucial for a strategist or a policy-maker to play in these various levels and with relevant tools.

Trade and economic policies are the third challenge that many States shall address. The trade issues, not only within World Trade Organization (WTO), are major commitments for all developed countries. As shown above, an enterprise or a State agency which meets successfully with expertise markets has strongest opportunities for developing its business downstream. The main world-rank companies are fully aware of the importance of technical norms which pace by pace are understood as the relevant standards in many fields of activity (electronic trade, water and sanitation, railways, telecoms, audit standards, air and water cleaning, environment regulations, etc.). Just to mention that in China, the Japanese International Cooperation Agency (JICA), in accordance with Japanese societies, is promoting its own standard for energy efficiency matters.

The importance of law in the international markets is also of highest relevance. Many law firms and consequently major companies are fighting to obtain the inscription of their country's law in the agreement as reference to solve the disputes (see the document edited by the Law Society of England and Wales *The Jurisdiction of Choice*, with a foreword of UK Minister of Justice). Germany also issued such a document. In China, German and Japanese law experts are assisting Chinese Government to elaborate, the first the intellectual property and the later the commercial law.

The global and human rights issues are the four component of this new foreign policy. Global issues are part of the three other challenges described above. They stay in the political agenda as key points in the negotiations. They are commitments in development policies and have huge economic consequences. The promotion of human rights is a key issue in development policies, a major point in the diplomatic agenda and has indirect implications on the economic cooperation (embargo with some not democracy friendly States or limitation of investment, trade regulations which promote social responsiveness). Human rights and democracy promotion

issues are a major dimension of international expertise, always sensitive, and often require the intervention of unofficial actors, especially in non democratic States. The relationships with even weak and threatened academic circles are an element of hope we can bring to these endangered civil societies. These issues are also linked to security commitments (cooperation on the efficiency of the services fighting against terrorism, money-laundering, counterfeiting, crime and corruption in general), which have heavy consequences at home. There shall be also watch-dogs, transparency and fair competition. Some countries aren't reluctant to promoting their own standards and companies in recovery programs for post-conflict situations under the umbrella of multilateral organizations.

The public agenda

The time is come now to examine how we can bring all these elements together in a public agenda. As we will see, it's mainly a nation-based agenda, even if it has international consequences and if some elements could be common to a group of nations or a multilateral body. Sixth requirements could be set up to express the main tasks inherent to such an agenda. First, each State who ambitions to play a role in the world stage must build a strategy in the relationships with the main countries and the international organizations, these relations having been detailed in each relevant field of expertise. In fact, even if they present them as their own doctrine, the main recommendations coming from the international organizations are born in national circles and discreetly suggested to them.

The second commitment lays in the creation of sources of information on the main tenders. Of course, this information is quite always open and some firms are dedicated on the diffusion of the relevant information. Nevertheless, the most important is to be able to act upstream and to know about a tender before it has been published.

The third component of the agenda consists on the reinforcement and on the management of a network of informal relations with the main places which have an influence in the major issues. The main task isn't limited to the attendance of the meetings, but is based on the analysis of the obtained information and on the advocacy for the main relevant ideas.

The fourth component of the agenda is directly related to the later: It's a necessity nowadays to gather all the stakeholders who act in the international fields. Let's recall again that the efficiency of a foreign policy is directly related to the number of actors who feel concerned by the global purpose of a nation.

Of course, it's also a necessity the fifth one—to have a roster of competences, based itself on organized networks in the various fields of activity. Even if the strategy requires being for a part informal, there is a minimal requisite of a global organization.

Not less important is the promotion and the encouragement of the international dimension of academic research, not only in the matters clearly involving an international dimension. This guidance should facilitate the creation of links between academic centers, Government agencies and the private sector.

To Build a Strategy

This commitment to define a strategy towards the main States and the international organizations, related to the main fields of competences, means to define targets in the long run and a scenario of evolution of our cooperation process year by year mixing diplomatic, development and economic considerations. It requires also to precise the means and the tools. This strategy

is necessarily global and shall include not only the diplomatic services, but the industry, the academics and often the civil society organizations as well. Regarding the competences at stake, we shall frame a hierarchy in accordance with our strengths and weaknesses and tie together our action in the field and the promotion of guidelines in the global scene.

Let's recall also that a strategy is neither only bilateral nor solely multilateral. We shall simultaneously reinforce our bilateral cooperation (technical assistance, partnerships, etc.) and select the main results we can achieve through a heaviest involvement in programs granted by international organizations. Let's see peculiarly the voluntary contributions to international organizations or the trust-funds managed by them: They offer the opportunity to orient and earmark the programs in the field.

To Create Sources of Information

When a tender has been published, it's often too late. One of the key of success consists on collecting the relevant information upstream (regarding the nature of the program and the people in charge of, the main expectations). It requires building a network of information in major countries (as do the main consultancy and engineering companies). Another key is the reactivity when experts are asked for assessing a project or managing a program (see CANADEM). The third key is certainly the pro-activity, which means the capacity of submitting relevant proposals. It could be directly proposed to an administration, to a local authority or to the representatives of a given international organization in the field, which quite often doesn't have its own human resources to do it. This target cannot be addressed if one given State doesn't have a solid network of informants, mainly unofficial.

To Reinforce and to Manage a Network of Relations with the Main Places of Influence

This task requires to follow the main international and regional meetings, even if informal and academic, and to send an expert to attend them and present a paper: Of course, he or she wouldn't deliver an official speech and necessarily express the governmental views (or even the purposes of the industry). The influence relies also in this diversity, even if a special place shall be given to the advocacy related to more official concerns. In this perspective, it's an urgent commitment to send experts in the main experts' panels or working groups within the international organizations.

This task shall be enhanced by the capacity to set in place a development program of partnerships with the main academic centers and universities and the think tanks in the main countries, in accordance with the good practices of Germany and United States. Another interesting way of proceeding could be based on the creation of academic links with exchanges of scholars and senior fellows.

Of course, this challenge would be difficult to address without the reinforcement at home of our capacities of research in the international issues, technical and geopolitical.

To Gather all the Stakeholders

To make understandable the general idea behind this title, it could be useful to recall a proposal made in a 2002 official report to the French Government¹. This proposal aims at creating a Council for International and European Affairs with two circles. It was inspired even

¹ Lanxade Jacques (Admiral), Tenzer Nicolas, *Organiser la politique européenne et internationale de la France*, Paris, La Documentation française, 2002.

if different on many issues by the US National Security Council. The first circle was a discussion forum on a precise agenda with all the relevant peoples (officials, private business and academics) to elaborate a strategy. The second one was a high-level circle of policy-makers to decide the strategy of the country.

One other idea would be to organize regular meetings in the various fields of expertise with the administrations in charge of (national and local), the private sector, the academic centers and the civil society organizations. Last but not least, it's a clear necessity today to involve all the stakeholders in the definition, the implementation and the monitoring of country strategies.

To Have a Roster of Competences

Who wants to implicate all the components of a society in international issues requires knowing the competences of its various sectors. Thank to this roster, we shall be able to mobilize these experts, often with a short notice, in development programs or peace-keeping operations, which have as many know an important non-military dimension and major consequences on the contracts downstream.

Meanwhile, a general roster is probably a wrong idea, since too bureaucratic. But this roster can be based on sector rosters created by the professionals of different skills (physicians, specialists of governance, security experts, architects, environmental experts, water and sanitation specialists, etc.).

To Promote and Encourage International Dimension of Academic Research

Sometimes, the research sector seems reluctant to elaborate on the concrete implications of its main findings. It should be aware of the necessity of drafting some policy-papers with concrete and operational recommendations. Too often also, the international dimension of the research activities in various sectors isn't enough taken into account.

The promotion of an "international school" in these various topics is a necessity for a country which has international ambitions. It could only be based on regular exchanges with the other equivalent centers in the world.

The new partnerships and the role of the EU

The role of the EU seems often ambiguous. In the one hand, there is a competition between the nations of Europe in Europe and abroad. In the other hand, Europe can and shall be a force by itself in promoting standards and guidelines sometimes different of those of other parts of the world.

We must be aware that, for instance in development issues, the European Commission is often considered as weak in comparison to the World Bank or even UNDP. It could be a major task for the European States or for some of them to promote a singular European thought based on common interests. This commitment requires a strongest involvement of the States and probably the creation of an European think-tank dedicated on the most relevant matters. It would be nonetheless irrelevant to expect from Europe that she creates such a doctrine by herself. Taking into account the discrepancies inside Europe, the concrete rivalries in external markets and the various focuses regarding the priority areas of influence, the creation of an European doctrine in many sectors and zones will come from the States and express the variety of interest and their still alive contradictions. This would be thus also a bargaining process.

If we consider the external markets, the largest opportunity is offered to partnerships between some States (not the 27 altogether) in order to set up common programs and common rosters of experts, especially between some “founding fathers” and some new countries. Europe is already too large to be really common in these issues. It would be probably a competitor between the first major “fathers” to bring along the new States in their own project and philosophy.

Considering the major tasks of the new world, no single country could address them. If Europe stays at the margins, it would jeopardize our economies and our societies and probably bring a vicious temptation of closing our minds.

KRZYSZTOF RYBIŃSKI

A NEW WORLD ORDER¹

1. On June 22, 1897, about four hundred million people around the world, one-fourth of humanity got the day off². It was the sixtieth anniversary of Queen Victoria ascension to the British throne. The Diamond Jubilee stretched over five days on land and sea, but its high point was the parade and thanksgiving service on June 22. The eleven premier's of Britain's self-governing colonies were in attendance, along with princes, dukes, ambassadors and envoys from the rest of the world. A military procession of fifty thousand soldiers included hussars from Canada, cavalymen from New South Wales, carabineers from Naples, camel troops from Bikaner, Gurkhas from Nepal, and many, many others. [...] The jubilee was marked with great fanfare in every corner of the empire. In Hyderabad every tenth convict was sent free. There was a grand ball at Rangoon, a dinner at Sultan's palace in Zanzibar, a salute of gunboats in Table Bay, a monster Sunday-school treat at Freetown, a performance of the Hallelujah Chorus in Happy Valley at Hong Kong. Bangalore erected a statue of the queen [...]. In Singapore a statue of Sir Stamford Raffles was placed in the middle of Padang and a fountain was built in the middle of the public gardens in Shanghai (not even a British colony). Ten thousand schoolchildren marched through streets of Ottawa waving British flags.
2. In today's world it is difficult to imagine the magnitude of the British Empire. At its height, it covered about a quarter of the earth's land surface and included a quarter of its population. London's network of colonies, territories, bases, and ports spanned the entire globe, and the empire was protected by the Royal Navy, the greatest seafaring force in history. One has to remember, however, that Britannia ruled the seas but never the land. The British army was sufficiently small that the German chancellor Otto von Bismarck once quipped that were the British ever to invade Germany, he would simply have the local police arrest them [...]. Over the preceding quarter century the empire had been linked by 170,000 nautical miles of ocean cables and 662,000 miles of aerial and buried cables, and British ships has facilitated the development of the first global communication network via the telegraph. Railways and canals (the Suez Canal, most importantly) deepened the connectivity of the system. Through all of this, the British empire created the first truly global market. Moreover, 2 percent of the world population produced more than 30 percent of the global GDP, its energy consumption was five times that of United States and Prussia, it accounted for two-fifths of the world manufacturing trade.
3. Then there was a Boer War, which cost Britain 45,000 killed soldiers and half a billion pounds. The war that was fought against the world opinion; France, Germany and United States

¹ Speech delivered at the British Embassy in Warsaw, November 26th, 2008.

² First two paragraphs of this speech were adopted from the excellent book by Fareed Zakaria "The Post-American World", WWNorton and Company, New York, 2008

opposed London's actions. The beginning of an end of 19th century superpower has been set. The British statesman Leo Amery saw this decline already in 1905 and asked "How can these little islands hold their own in the long run against such great and rich empires as the United States and Germany are rapidly becoming? How can we with forty millions of people compete with states nearly double our size?". These questions are more valid than ever today, but refer to the end of US dominated world and the rise of China or Chindia. Will a country of 300 million stand the competition of a charging dragon and racing elephant with 2.5 billion inhabitants, will this relatively small country be able to remain the global superpower? There is no better place to ask these questions than the British embassy.

4. My answer to this question is simple. While United States is very likely to retain big part of its political influence over the next decades, its economic and financial influence will rapidly diminish. United States continued political influence will be related to its massive defense budget, that dwarfs all other countries defense budgets put together. But in economic terms we are likely to restore the world order that prevailed until the early 19th century³. In 1820 Chindia accounted for 50 percent of the world GDP, but both countries missed the industrial revolution and Chindia share of the world GDP dropped to less than 10 percent in mid-20th century. Since then it recovered to 20 percent and according to IMF estimates China had the highest contribution to the world GDP growth last year and it accounted for 25 percent of global growth on Purchasing Power Parity basis in 2007. BRIC countries accounted for almost half of the global growth⁴.
5. In early 20th century United States replaced Britain as the world only superpower. With the US economic and financial power fading in relative, and recently also in absolute terms, we face two options:
 - a. Design the new world order; the new vision;
 - b. Let market and non-coordinated political processes determine the new world order.
6. Second option may be very costly. Let me illustrate this claim with few examples:
 - a. Oil prices have topped 140 dollars per barrel in 2008, then receded to 50 dollars amid cyclical factors but according to International Energy Agency forecast⁵ published this month price of oil will soon top 100 dollars again. Emerging markets' appetite for energy—and China's in particular—will continue to rise at a very fast rate, much faster than the pace of innovation allowing to reduce energy consumption and to use the new, non-fossil fuels based sources of energy. IEA predicts that in 2030 energy demand will be higher by 45% than in 2007, with Chindia responsible for 51% of that increase. Without globally coordinated massive policy intervention fossil fuels will retain its dominant share in energy generation accounting for 80 percent of world energy production. With high risk of energy excess demand one cannot rule out massive and frequent blackouts around the globe in the future. Current recession may make matters worse, because credit crunch reduces investments in the energy sector. Energy may become a very powerful political weapon, helping to shift the global power from energy deficit countries to energy surplus countries. This is of particular importance in Europe, which heavily relies on gas imports from Russia.
 - b. Climate disasters have become much more frequent in the past two decades, jeopardizing life and wellbeing of millions of people on all continents. And yet despite strong evidence that human industrial activity is contributing to this trend, the world's biggest countries

³ European Commission (2006) "Globalisation: Trends, Issues and Macro Implications for the EU", Economic Papers, July 2006

⁴ IMF (2008) "World Economic Outlook", April 2008

⁵ IEA (200) "World Energy Outlook", November 2008

- cannot agree on the set of measures that will prevent humanity to destroy itself. Europe's lonely fight against climate change is meaningless without US and China coming on board. Even if the European Union cuts emissions as planned by 20 percent by 2020, the cumulative reduction over fifteen years will be smaller than single year green house gasses emissions by China in 2020.
- c. China has amassed almost two trillion dollars of foreign exchange reserves. An estimated 1.5 trillion dollars has been invested by the Chinese in the US assets, mostly US government debt or US government guaranteed debt. Nowadays Chinese leaders can crash the dollar and send the US economy into a tailspin recession with just one comment, namely that China stops buying dollars. And at the same time the 20th century economic powers refuse to recognize the key role that China plays in the world of politics, economics and finance. The best example of that is the fact that Belgium and Netherlands together have more votes on the boards of the IMF and the World Bank than China.
 - d. The global push to a switch from fossil-based fuels to biofuels has contributed to a global rise of food prices—the so called agflation. In 2007 the food import bill of the poorest countries has risen by 75 percent, which combined with rising climate-related disasters may bring famine to many developing countries, killing millions. There is no coordinated action to face this problem, and countries respond by prohibiting food exports, which only makes the global food situation even worse. The FAO summit in Rome in June this year was a formidable event. While zipping *Brunello di Montalcino* and chewing *Bistecca Fiorentina* participants agreed to chip in some money and pretended the problem is over.
 - e. If you Google “world vision” or “global vision”, 2.4 million and 1.1 million found entries respectively will be returned . It means that this phrase is very popular and used frequently. One could argue that the United Nations' Millennium Development Goals (MDGs) constitute such a world vision. The world has agreed to improve the living conditions in poor countries between 1990 and 2015, and the United Nations set a series of indicators to measure this progress. Details of MDGs are presented in the table 1.
 - f. The table 1 reveals a very telling pattern. With very few exceptions (poorest people in Western Asia, tuberculosis in Africa) steady progress could be observed. However, there was a very little progress in sub-Saharan Africa, where huge developed world aid is deployed, while there was a massive improvement in East Asia, mostly China, as a result of an almost 10 percent annual GDP growth on average in the past two decades. It is evident that the most powerful weapon in fighting poverty is economic growth. However, fast growth has its price. East Asia doubled the amount of CO2 emissions and China topped the US on the list of biggest polluters. This shows enormous policy inconsistency on the global level: achieving progress in one dimension (moving away from poverty) leads to a massive deterioration in another dimension (environmental sustainability).
 - g. The vast majority of world innovations are created in developed countries. But in the last few years the world has learned in a very painful way that developing countries can master innovation as well. Al-Qaida terrorist attacks on the World Trade Centre towers in New York and on trains in Madrid were examples of organizational innovation that bypassed all security measures and reached beyond the imagination of secret services in developed countries.
 - h. Or think about the present financial crisis driven by financial innovation, greed and policy failure that has jeopardized the existence of many largest world financial institutions that were forced to seek capital injections by investors based in Asia and in oil exporting countries, and then were bail out by governments. How was it possible, that in the country whose universities occupy 54 percent to 68 percent of the top 100 universities

Table 1.

Millennium development goals and selected numerical targets, and the progress achieved so far (Eastern Asia, Western Asia and Sub-Saharan Africa)

MDG Target (1990–2015)	Eastern Asia (1990/2005)	Western Asia (1990/2005)	Sub-Saharan Africa (1990/2005)
Halve the proportion of people living under 1\$ a day, %	33 / 9.9	1.6 / 3.8	46.8 / 41.1
Halve the proportion of people who suffer from hunger, %	19 / 7	11 / 7	53 / 46
Ensure universal primary school enrolment, %	99 / 95	81 / 86	54 / 70
Eliminate gender disparity, female employment, % of total	38 / 41	16 / 21	28 / 32
Reduce by two thirds child mortality, mortality rate per 1000 births	126 / 82	68 / 55	185 / 166
Reduce by three quarters the maternal mortality ratio, proportion of deliveries attended by skilled personnel, %	51 / 83	60 / 66	42 / 45
Combat HIV, malaria and other diseases, number of tuberculosis cases per 100,000	319 / 204	92 / 56	331 / 490
Ensure environmental sustainability, CO ₂ emissions, billions of metric tones	2.9 / 5.6	0.7 / 1.2	0.5 / 0.7
Develop a global partnership for development, number of internet users per 100 population (2002/2005)	7 / 12	6 / 11	1 / 3

Source: United Nations (2007c)

list (depending on the ranking), and whose citizens were awarded 270 Nobel prizes, was not able to act pre-emptively and reduce the amount of zombie finance that was building around the US real estate bubble and around the credit derivatives market, and this is a ten trillion dollars question. Bank of England estimated that until October 2008 governments' interventions around the globe to save financial institutions and secure deposits totaled seven trillion dollars (7,000 billion dollars), on top of that central banks expanded their balance sheet (or as we call it these days—balance shit!) by two trillion dollars, lending to banks against dodgy collateral. These estimates are not good in November, with US government bailout of Citibank totaling 330 billion dollars, with EU and President Elect Obama recovery package under way, with China 650 billion dollars equivalent fiscal stimulus.

- i. Ireland has launched a beggar-thy-neighbor action when they announced full deposit insurance and Irish banks started to market their services to British customers as safe as opposed to “risky” and not guaranteed financial services of British banks. This happened just few months after the crisis memorandum of understanding was signed by 27 EU finance ministers. Recently United Kingdom announced VAT cuts to 15 percent without discussing these matters with other EU members, which was commented by French President Nicolas “Che-Guevara” Sarkozy as ridiculous, he argued that it makes no sense to reduce prices further when we are already in deflation.

7. There are plenty of examples of unilateral actions by countries that produce negative global externalities. In other words the first option, a creation of the new world vision and the new world order is clearly a superior scenario, we should not leave it to uncoordinated political and market forces. Unfortunately, today there is no shared vision of the world, be it in 2020 or in 2050. There is no globally accepted strategy to deal with the issues that could cost millions if not billions of human lives in the coming decades. There is a widespread tendency to think about one's own yard, and forget about the bigger picture. Many international organizations engage in a range of activities that are often contradictory and lead to a tremendous waste of resources. Some global policies pursued in the last few decades proved to be the best example of "destructive creation", at least judging by their outcomes. The global governance is collapsing and there are no signs of a process which could lead to the creation of a new world order. The United Nations and the Bretton Woods institutions (the World Bank and the International Monetary Fund) have recently been helpless in solving the most pressing global problems. The existing groups of leading countries, G7, G8 or G20 patchwork are not representative and are rapidly losing any meaning and importance. The recent G20 meeting in Washington concluded that the IMF role should be expanded, but people tend to forget that the IMF policy advice track record is horrible. Even before the mission comes to a country X in crisis, you can easily guess what will be recommended: raise interest rates, reduce fiscal deficit and implement structural reforms. If you go out on a street in Jakarta and scream "I am from the IMF", you will be lynched. IMF is perceived in many countries as a partisan institution pursuing United States objectives, no wonder Saudi Arabia refused to extend a loan of 100 billion dollars to the Fund.
8. It is hard to understand why we have arrived at this juncture. We have more great scientists and great ideas than ever before, technological progress is advancing at an exponential rate, and for the first time ever, thanks to ICT deepening, the Internet has created a global information and knowledge pool. We live in a flat world indeed. Hence the global knowledge economy and society should be able to come up with a range of solutions to cope with the 21st century global problems. But somehow they fail and every passing year shows that we have done very little to deal with such issues as resources constraints, climate disasters, rapid aging of many societies, the rise of China or the hegemony of financial markets. Annual meetings held at the United Nations, the World Bank and the International Monetary Fund are not always as fruitful as desired. Often speeches by a given country delegations are attended by its own delegates, while the rest of the hall is empty. This raises serious concerns about the effectiveness of institutions that are supposed to act according to a global mandate. Politicians that try to think globally are in a deep minority.
9. No leadership, no shared global vision, no shared values, bad incentives which favor short-termism, red-tape, and corruption have impeded global strategic thinking in the last 20-30 years. To end this chaos I postulate that old Bretton Woods institutions and G7-G8 that existed under the *Pax Americana* should be replaced by the Global Strategic Council, formed by the new leaders⁶. Let me explain why?
 - a. We need a shared world vision for the 21st century. Vision is about the future, not about the past. Therefore it should be formed by future global leaders, not by yesterday leaders. Italy, Canada, and soon France and United Kingdom will fall into yesterday leaders category.
 - b. You cannot have 20, 30 or 40 countries to form the leadership. Think about a company board meeting that needs to reach consensus among the 30 board members. Either there

⁶ I discuss this proposal at length in Rybinski, Opala, Holda (2008) "Gordian knots of the 21st century", Ministry of Regional Development, Warsaw, June 2008

- will be a true single leader, or a strong group of few leaders that will be followed by the rest of the board. In absence of such leader(s) the decision making process at the board level becomes a nightmare. To avoid this risk one should form a new group of leading countries of a limited size, based on very simple rules. The recent process of changing the vote and quota at the IMF/WB, that is seen inside Bretton Woods institutions as a great success, in my view was an example of a long, inefficient, complicated and partisan process that did not respond at all to the challenges of the 21st century.
- c. Old powers of the 20th century should give up boxing above their weight, with French President Sarkozy as best example, especially as Sarkozy is pushing hard the French, not the European view of the world. Old parities should not apply anymore: “we get the Bank, you get the Fund” rule is ridiculous these days. Partisanship, parities, short-termism should be replaced by discussions about the new world vision. It is impossible under the old global governance rules amid very strong political path dependence. New structures and new rules should be created from scratch.
 - d. If we do not create new global institutions, the new regional ones will likely be created. As explained in my book⁷ (in Polish, 2007) “Three faces of globalisation: offshoring, global imbalances, monetary policy” recent initiatives in Asia may lead to creation of Asian Monetary Fund in charge of maintaining financial stability in the region. One can even envisage a creation of the Asian common currency for ASEAN+3 group of countries in 20–30 years, with a regional central bank that will be much more powerful than Federal Reserve or ECB are today.
10. The Global Strategic Council that I propose should be formed by leaders of 8–10 biggest countries. The metric used to rank countries should be very simple and intuitive, it should be country GDP according to purchasing power parity divided by global GDP and country population divided by global population, each with 50% weight. 8–10 countries with highest scores should form the new group of G8 or G10 and should establish the Global Strategic Council (see tables 2 and 3 below)⁸. Vision and strategy agreed by the Council should be shared and implemented by the biggest countries, while others will follow on a voluntary basis. There should be incentives to ensure that no country will chose to opt-out (possibly with rare exceptions of countries such as North Korea, Myanmar, Cuba or Belarus). An innovative proposal how such incentives should be designed, that adopts Strategic Asset Allocation methodology from the world of finance, is presented in the recent book Rybinski, Opala, Holda (2008) “Gordian knots of the 21st century”.
 11. Global Strategic Council would seem an outside-the-box idea to many politicians, especially those whose mindset was shaped by the 20th century and who failed to notice how fast the world has changed. I documented in this speech that the failed global governance and lack of global vision produced many global Gordian knots. Traditional methods will fail to untie them and we do need Alexandrian solutions.
 12. Every four years the National Intelligence Council—which oversees America’s baroque collection of intelligence agencies—releases a global trends report, which is given to the new president⁹. The latest report , published on 20th November stated that “the most dramatic

⁷ Rybinski K. (2007) “Globalizacja w trzech odsłonach: offshoring, globalne nierównowagi, polityka pieniężna”, Difin, Warszawa, 2007

⁸ The World of Islam would be represented by the most populous Islamic country in the world, Indonesia. However with the successful launch of the monetary union by the Gulf Cooperation Council its representative should also participate in the new Global Strategic Council. Nigeria will hopefully join the GSC within next decade assuming that good demography is supported by sound reforms that results in robust economic growth in Nigeria. The rule could say that if your score is above 2 to you join the GSC, if it drops below 2 you leave the Council.

⁹ As reported in Gideon Rachman Financial Times article “Is America’s Declinism for Real?”, Financial Times, 25 November 2008.

Table 2.

World ranking of countries, 20 largest by GDP-PPP and population. European Union as one area

Country	Rank
1. China	15.4
2. European Union	14.7
3. United States	12.8
4. India	10.8
5. Japan	4.3
6. Brazil	2.8
7. Russia	2.6
8. Indonesia	2.4
9. Mexico	1.9
10. Pakistan	1.6
11. Bangladesh	1.3
12. Korea, South	1.3
13. Nigeria	1.2
14. Canada	1.2
15. Iran	1.1
16. Turkey	1.0
17. Egypt	0.9
18. Philippines	0.9
19. Thailand	0.9
20. Vietnam	0.8

Source: CIA World Factbook, authors calculations based on weights: 50% GDP (PPP) and 50% population

Table 3.

World ranking of countries, 20 largest by GDP-PPP and population. European countries shares estimated separately

Country	Rank
1. China	15.4
2. United States	12.8
3. India	10.8
4. Japan	4.3
5. Brazil	2.8
6. Germany	2.8
7. Russia	2.6
8. Indonesia	2.4
9. United Kingdom	2.1
10. France	2.1
11. Mexico	1.9
12. Italy	1.8
13. Pakistan	1.6
14. Spain	1.3
15. Bangladesh	1.3
16. Korea, South	1.3
17. Nigeria	1.2
18. Canada	1.2
19. Iran	1.1
20. Turkey	1.0

Source: CIA World Factbook, authors calculations based on weights: 50% GDP (PPP) and 50% population

difference” between the new report and the one issued four years ago is that it now foresees a world in which the US plays a prominent role in global events, but the US is seen as one among many global actors.”. The report issued four years ago had projected “continuing US dominance”. The heart of US security establishment has acknowledged that global landscape had changed. It is high time indeed to reflect this change in the new global governance setup. The New World Order should be established.

WIESŁAW GUMUŁA

**UNIVERSALS AND PECULIARITIES
IN THE 21ST CENTURY
GLOBALISATION PROCESSES
(Some Reflections on the Changing World
—the Atlantic Community Perspective)**

Introduction

In the present study, I am going to analyse a social potential of changes inherent in the contemporary world. Each society has its own specific social resources which might be used to change the world or to prevent changes. There are mental resources (sometimes called social awareness); normative resources (sometimes identified as culture); social practices in form of an interactive structure; configurations of social distances which are based on the already existing interests. I do not focus, however, my attention on resources qualified as natural, technical or technological.

I would like to point out that in this text the word “potential” is used deliberately to describe social resources. I share the opinion of many authors that the potential inherent in social resources constitute only an offer—very diverse offer—of human activity. Only human beings decide on the course of their actions. They may enhance or waste opportunities inherent in the existing social resources.

In addition, it happens that the potential of social resources unlocks itself unexpectedly. It seems that typical social resources will become typical regularities in the future. Sometimes, however, they trigger the processes which are surprising for us due to their dissimilarity. Moreover, social structures are full of different enclaves of alternative orders—anomalies or peculiarities. They may become bridgeheads of spontaneous processes, if people decide to use them. Thus, despite the discussed social resources put limits on human behaviour, the range of possible choices they offer to individuals and groups is so wide that global social processes may spread in different directions.

In my opinion, analysis of some typical and peculiar resources, already existing in the first decade of the 21st century, may be promising from the cognitive point of view. In the coming decades, we may (but do not have to) hear about the potential inherent in those universals and anomalies. In many cases, people should take them into account while planning their actions.

These universals and peculiarities will trigger the processes which will surprise participants of the collective life.

Lets try to disclose a little the spontaneous potential of the future, which is inherent in the social structures of today, without judging how it will be used in individual or collective actions.

Social resources

Sociologists distinguish four types of social relations: social awareness, normative culture, social practices and social distances (Sztompka, 2002). They constitute social resources because they are taken into consideration and used by people in their activities. Ways by which individuals and groups enter into interdependencies constitute a criterion for distinguishing the above mentioned types of relations. There are the following components of awareness: diagnoses and representations regarding social life, shared by individuals and groups, knowledge, visions of new human order, ideas, thinking pattern and symbols. Values and standards are carriers of the normative culture. They result in procedures, social roles and institutions. They also contribute to different axio-normative sub-systems, i.e. law, ethics, customs and practices, aesthetic canons, religion and many others. Social practices are expressed in habitual or routine social interactions. In other words, they are structures of individual, mass and collective behaviour. Each participant of the collective life has to react to other people's behaviour which tends to be quite constant and repetitive. The interests—which differentiate people or make them alike depending on opportunities they have limited by access to different resources (such as ownership, power or status)—constitute social distances. They take a form of social class and social stratification.

There is a closed loop between social resources and social behaviour. On one hand, social resources result from human activities. On the other hand, the already formed social resources constitute a proposal for future social activities. Participants of the social life may accept this proposal or replace it by another social structure.

Basing on the sociological achievements, I distinguish three significant social areas: economy, politics and community (more often described as socio-cultural domain). I adopt social functions as criteria for distinguishing social areas. The economy domain is to produce goods and services. The aim of the politics is to gain and exercise power, as well as gain, keep and protect social positions, using state agencies or organisations which substitute it. The function of socio-cultural domain is to ensure continuity of social life and to vest with sense the given forms of social life, e.g. through socialisation processes, social contacts and matching social status of individuals. These processes are observed in the following areas: religion, sport, recreation, amusement, health care, education, entertainment, arts and science.

The above mentioned social resources and domains of social life belong to different logical orders. Therefore each type of social resources can take a form of economic, political or social and economic relations. For example, the economy constitutes (i) a part of collective awareness, i.e. visions, ideas, dreams and knowledge, technical and financial competences, as well as symbols connected with production, trade, distribution and consumption; (ii) a part of normative culture, i.e. the values and norms which regulate economic behaviour and take a form of institutions, procedures and economic roles; (iii) a part social practices, i.e. routine and habitual interactions which duplicate individual or collective economic activities; (iv) a part of social distances, i.e. divisions, barriers, similarities, complementary or excluding interests, but also economic needs. The same refers to politics. The politics means political awareness, political culture, political practices and interests. In the education area we distinguish educational awareness, educational

culture, educational practices and interests which go together with educational undertakings (Gumuła, 2008).

Universals—typical social resources

It is quite common to believe that processes based on typical social resources are predictable as they are supposed to proceed in accordance with the existing regularities. In stable social systems, this is really “normal” situation. It appears, however, that sometimes also those changes which originate in typical areas may be surprising. The reality itself changes and, as a result, the regularities which are followed by subsequent changes also alter.

Raymond Boudon states that spontaneous, unintentional effects of individual and collective actions represent a general mechanism called “reverse effect”. According to his definition, we have to do with unintentional effects when at least two persons endeavour to achieve a precisely specified goal and eventually, they achieve something they did not aim to and which may be even undesirable for one of them (Boudon, 2008). The “reverse effect” is difficult to foresee because social changes result from reciprocal impact between the existing rules and many different actions and intentions of individuals. Therefore, the desire to find a universal key to foreseeing the future is utopia.

Raymond Boudon lists a lot of examples of the “reverse effect”. For example, a paradox of Alexis de Tocqueville. According to him, the Great French Revolution resulted from amelioration in bourgeoisie’s situation which improved in the previous years. Whereas in the 20th century, the implementation in France of an extended program of education, which was supposed to eliminate educational inequalities, increased economic inequalities accompanied by general necessity of long-term learning.

Lets take some Polish examples. Four consecutive amnesty acts from 1983–87 were supposed to discredit the Opposition in the eyes of Polish society. Eventually, they caused that the Opposition started to act avowedly much before the Round Table. Also subsequent economic reforms implemented in the 1980s. were supposed to rationalize the system of centrally planned economy. They brought in only few improvements. Instead, the economic system lost its structural identity. As a consequence it was easier for Solidarity movement to undertake collective actions which resulted in radical transformation of political and economic system.

There is another paradox connected with systemic correctness. Sometimes, the behaviour which follows the existing patterns may initiate a spontaneous transformation of the systems which appeared to be balanced. This happens when the participants of social life follow only some of their common visions and programs and they neglect the other ones. They use only a part of knowledge they gained. It is sufficient for them to have some understanding of the social situation. They preserve selectively only some of values and standards, focus only on a part of their interests and at the same time, they stop protecting the other. Neglects in some areas are accompanied by excessive attention in others. Some models of social life become more attractive, some behaviour, indistinguishable in the past, become fashionable. Some interests attract more emotions and actions than others. For example, too many people want to acquire scattered goods which are limited, without breaching the existing forms of ownership. All these social actions do not remodel social universals, neither create peculiar structures, but the potential which is conducive to changes accumulates. Both, the “neglected” and the “over-focused” areas become arenas of tensions and crisis. As a result, some domains disappear, some of them expand. Implosion is observed in some areas and explosions in others. And this is the way spontaneous and radical social changes occur.

Universal social relations are full of potential which can be used for developing mutually excluding types of collective life. In order to be durable, social relations require complementary roles and some level of mutual acceptance of principles and practices. Loss of such a fragile balance leads to alterations. Their direction is not sealed beforehand. Even when chances are asymmetrical the result is determined mostly by competences of those who use the systemic resources. Some people may waste opportunities they have while the others may efficiently use the weakened, alternative potential which only look as if it can not serve apparently lost business. So, based on the initial potential it is difficult to predict which of the parties will prevail.

Anomalies—peculiar social resources

The term “peculiarities” which we use in the present study is very close to uniqueness, uncommonness, oddities, strangeness, rarities, localities, particularities and anomalies.

Social peculiarities are such components of the social system that are (i) partial social facts of local character, while social “typicalities” penetrate the whole system; (ii) social facts the structure of which differs fundamentally from the structure of their social context; (iii) their relations with the system and its other components are untypical; (iv) are relatively rare facts in comparison with “typicalities”, thus they get the status of exceptions. The peculiarities breach the existing order or they are enclaves of an alternative order (Gumula, 2008).

In the sociology, the peculiarities constitute social resources of mental, normative, interactive or stratifying character. They may include extraordinary visions and representations of social life, untypical social roles, institutions and procedures, exclusive social practices, untypical social positions which do not match the familiar system of social distances.

The peculiarities are marked out by potential “toxicity”, i.e. capacity to exert a negative influence on social environment (including its destruction). This results in alteration of major parameters, , ability to absorb external impacts which manifest in similar internal consequences.

The peculiarities are structuralised facts. If we assume that they are elementary events then the social life with its various every day manifestations should be treated as chaotic set of peculiarities. Then social life would represent general chaos, e.g. an anthill observed by an inexperienced observer who is unable to see any order in seemingly accidental struggle of ants. The surface of social life is not, however, a place where the peculiarities appear. It is an area where diversities manifest. It is the area where we find similarities and differences in people’s behaviour. The peculiarities and “typicalities” are systems of relations between social events. They are sub-systems or system segments. In other words, the peculiarities are peculiar structures and “typicalities”—the universal ones.

Social actions constitute basic elements of social ties. Some of activities copy, and thus duplicate, the existing common structures, i.e. universals. Other activities “form” completely new figures. When the latter start to repeat then peculiar social structures emerge. At the beginning, they are classified as social anomalies. In a favourable situation, in the case when the system does not reject the new element effectively, germs of new structures consolidate, expand, and then transform the environment. Further activities release the peculiar potential of social changes, consolidated already in “bridge-heads” of “new” social relations. This is one of possible ways spontaneous social changes manifest.

It is extremely difficult to foresee to which extend the potential inherent in the peculiar structures will be used for changing the World. Only a small part of the social potential materializes in real life. It activates only when people become aware of it , when it is defined or when human

activities are oriented to it. Otherwise, many opportunities are lost. They become only a fragment of “a history that never happened” (Demandt, 1999).

Furthermore, at the beginning of any process not all opportunities are given; some of them start to emerge only, the other appear as consequences of the choices made. When some opportunities are used well, social changes occur. As a result, at following stages, new potential emerges. And it may radically change the environment of human activities. The potential which pointed out the framework for individual and collective choices in the long-term, is continuously updated. At the same time, it adjusts the existing opportunities and possibilities of choice. Any subsequent situation includes the potential for social changes, which differs from the one which emerges during the primary crisis. Attempts to solve critical situation trigger new peculiar structures which give new opportunities and make consolidation of the system in accordance with the previous social standards difficult.

Usually, the social system is able to deal with peculiarities. However, despite the anomalies are rejected the existing trends can not continue. It happens that the transformation of the system is the price paid for the rejection. For example, effective battle of a government against monopolies and corporations may sometimes result in the transformation of market economies into the economies with important share of distributive practices. This is so because state institutions still interfere in market relations despite prerequisites of excessive interventionism have already disappeared. Suppression of ultra-leftist, rightist, fundamentalist and populist movements which manifest themselves in democratic societies may conduce to the transformation of democratic structures into the authoritarian ones or in any form of dictatorship. Battle against terrorism which threatens democracy induces social potential conducive to empowerment of state officials and reduction of democratic freedom.

It is difficult to foresee consequences of systemic tolerance for anomalies. In some circumstances social system may remain unchanged. This happens especially when peculiar structures are too weak to disturb typical social ties. They are simply ignored. In addition, some social systems are united by ordinary relations which are very flexible. New numerous peculiarities emerge with no risk to be damaged. In such a situation, a new form of symbiosis may arise. It consists in mutual absolute necessity accompanied with such relations where one party is dominating and the other is subordinated.

Sometimes, however, a consent to the peculiarities conduce to radical systemic changes. The peculiarities expand to such extend that they spread over the system which falls into pieces or is transformed into a new one. The existing ordinary relations disappear. Sometimes, they turn into peculiarities and endure as ‘fossilized’ relics. At the same time, a new general model arises. By its form, it turns back to earlier peculiarities. It may copy a peculiar model or become any of its variations.

Susceptibility of social systems to transformation, resulting from peculiarities, depends, among other things, on their homogeneity. When universal social relations are chaotic and weak, even slight impulses sent by individuals who act in an untypical way increase the potential conducive to surprising changes. Such unbalanced systems, sometimes called “dissipative structures” (Prigogine, Stengers, 1990), are even susceptible to accidental, weak and untypical impulses which lead to irreversible changes. Anomalies and “new types of orders” arise and expand in chaotic environment. They give rise to new organisation structures. In such a case, radical changes—metaphorically called “a butterfly effect”—do not require breaching of strong structural barriers.

In the situation where homogenous universal structures arise or distinctive structural processes with poor peculiar structures gather momentum, institution of new order requires much more effort from individuals and groups. We have note that even balanced systems may be “infected” by peculiarities. The transformation proceeds in many steps. First, the seats of “innovators” increase

their potential, then the structure is pushed outside the break-even point. Next, such a fluctuating system may reorganise itself in accordance with new principles including germs of enclaves of alternative order.

Which universals and which peculiarities?

A. Spontaneous potential of the future

Numerous strategic analyses carried out on the place of the Atlantic Community in the world clearly show that in the coming 50 years, the Atlantic Community will lose its leading position in the world and will be disintegrated. The global centre of economy will move to the Pacific region.

Projections and forecasts which point to a radical change in the geographic and economic map of the world refer to a relatively homogenous and repeated many times set of factors boosting changes in India, China and other countries of significant economic growth. The named factors are as follows:

- demographic factors,
- geographic allocation of raw materials, especially energy sources,
- increasing labour productivity in the Eastern countries,
- low cost of labour force,
- organization culture which allows for the labour force to be quickly mobilized, shifted or exploited to maximum and for the ethical standards to be ignored,
- popularisation of the “ethics” of becoming wealthy among citizens of those countries;
- avoidance of environment protection related costs;
- fast development of economic infrastructure;
- cheap imitative methods of implementing new technologies developed in the Western countries, which conduce to growth and, in the long-term, provide tools to maintain the “stand-by mode”;
- expansion of education;
- specific economic nationalism present in the economic behaviour of governments, entrepreneurs and consumers;
- widespread private property (full and exclusive, similar to this in the European countries), with simultaneous driving out of different forms of collective, state or “shared” property;
- lasting high dynamics of the GDP growth, which is a consequence of all previous factors.

Transformation of the global economic system may really follow this pattern. But it is also possible that new centres of economic growth may emerge. The scenario that Western domination will last, can not be excluded either. Most of all, such categories as the Atlantic Community, East, West, North, South may be replaced by totally different global centres of economic growth and by new configuration of values, ideology and interests.

In fact, we may be sure about few things, only. First, diverse social resources (economic, political, social and cultural) are given. We may express our explicit opinions about them, their existence and potential. Under condition, of course, that we correctly assess the present. Second, we know current trends. This makes us expect that, based on the inertia principle, some regularities will replicate. The latter belief, however, is not so obvious any more because not only the reality changes but the regularities which the changes follow also alter.

New geopolitical and economic map which will depict the world A.D. 2050 will be fundamentally influenced by spontaneous processes. They will surprise us because they will proceed in a different way than it was supposed to result from the existing regularities, our plans, intentions, projections

and forecasts. The spontaneous processes may strengthen the already existing trends. They may modify them significantly or replace by others.

We may try to identify at least a part of spontaneous potential of the future, which is already present in the social system in the form of different universals and anomalies.

We start by presenting some selected universals due to their inherent “surprising” potential. In such a context, the anomalies, which can infringe the existing order even more, will also manifest.

B. Risk Society

The first universal trend which I would like to discuss consists in the fact that Western societies have become risk societies. We witness constitution of social resources fraught with higher and higher risk (Beck, 1999).

At the mental level, ideas and principles treating high risk as a relevant, economic and efficient solution have become widespread. At the normative level, the legal regulations which legalize risk threatened technical, structural and financial solutions have become more general. Both, procedures and institutions are oriented to financial, economic and immediate efficiency and they are not safety-oriented at all. Incidents and risks are supposed to be ‘cured’ by emergency procedures (and small reserves of social and technical resources). At the interactive level, every day involvement of all participants of risky undertakings is replaced by the activity of risk managers, risk assessment commissions and risk governance committees, as well as other people responsible for risk management. At the level of social interests and distances, inequalities in access to even more rare good, such as safety are preserved. This trend exceeds the borders which were defined before as the safe ones. Risk managers think that they are able to guarantee safety for themselves by separating them from the risk which they convey to others. They forget about the interdependence between their safety and the safety of the rest of the society.

This situation can be very well illustrated by “discretionary groups”. More and more often we may observe a show where a well known businessman, politician or official is accompanied by a large group of masked and armed special forces officers. What is it for? Most of all for legal safety of those who control the operation. On one hand, we have to do with lack of the first-line policemen, lack of policemen in the streets. On the other hand, however, many of functionaries spend their time protecting privileged places, institutions or persons. They document events and prepare analyses for different recipients which are able to take care of their interests. This category includes among others insurance companies, tax offices, media, banks, central and local government.

The 18th December 2009, Heathrow airport in London, early morning. The previous night, weather suddenly changed. It was snowing. There was a 10-centimetre layer of snow. The airport authorities implemented emergency procedures. As a result, there was even more confusion than the changes of the weather might have caused. Flights were significantly delayed. Helpless crowd whirled in check-in queues and at gates where passengers and their luggage were examined extremely scrupulously. Lack of competent information, lack of personnel and lack of reserve airplanes were clamant. It seems that the management of legal risk which the airport managers were concerned about was more important for them than the management of risk related to passengers service. This airport may serve as an example of how definitions of different risks generated real risk. Only untypical, 10-centimetr layer of snow and typical weather were sufficient to activate those risks. The author reached Poland late in the night.

The presented banal examples illustrate a much more wider and deeper phenomenon. Public and private institutions while focusing on immediate cost reduction need to create risky financial,

structural and personnel related solutions. At the same time, they separate and protect themselves from those risks in local enclaves of safety. Effective risk management generates savings. In the case of individual countries, this conduces to economic growth. But at the same time this masks significant risks which accumulate in individual countries and globally as well. Many economic, political and social institutions start implementing risky solutions (i.e. only one energy supplier, granting poorly collateralised loans, etc.).

Development of social resources characteristic for societies of risk results in diminishing adaptation potential of societies. In addition, it causes surprising consequences which have signs of a “reverse effect”. I have already mentioned one of such effects. The agents of the process are ready to breach the risk management limits which were defined earlier as safe ones. This inclination stems from the fact that they level off potential negative effects they may suffer from by separating from the risk they have already generated. They are like designers and air mechanics who are absent on the board during test flights. And this exactly constitutes the uncontrolled excessive risk which appears as a spontaneous effect of safe risk management.

We may also talk about safety enclaves in the risk society. National central banks are good examples of such anomalies in post-modern countries. First they focus on ensuring safety for the financial system. Then, they are interested in meeting economic criteria (thus minimizing operation costs is not their priority). These costly enclaves of society avoiding excessive risks should also be taken into consideration when scenarios of global changes are analysed.

In the context of the above considerations, a question arises: to which extend do the societies in China, India, Brazil—and other growing countries—assume a character of a risk society and due to the globalisation they become similar to the Western countries and to which extend do they focus on safe social and natural environment? The answer is important from the geopolitical and economic perspective as on the year 2010. It is due to the tension between the universal trend (expansion of the risk society) and alternative enclaves focusing on safe structural, legal, financial, technical, energy related and other solutions.

I would like to say that it is not my objective neither a glorification nor a criticism of presented above trends. Both universal and peculiar trends have got their strengths and weaknesses. My aim is to stress the fact that further choices made in the analyzed plane will be of the key importance for the geopolitical map of the world. I apply the same approach to the analysis of following universals and anomalies.

C. Society of Consumerism

There is a second universal trend which may influence the shape of future map of global society. It consists in consolidating social relations characteristic for a society of consumerism. The goods which have been just produced are immediately consumed (Bauman, 2004). Furthermore, rich countries and some wealthy social classes also consume the wealth accumulated by previous generations. This process has got such a momentum that the parts of the World and the social groups which may economize and accumulate the wealth start to become social anomalies.

The process stems from dissemination of ideas and values. Fashion is responsible for fast moral ageing of those consumer goods which are in good condition and might be still used for a long time. Due to the fashion they are pushed out of the market and new product and new services are generally desired. The majority of marketing actions build in the society readiness to spend money, to buy superfluous things not because they are really needed but under the stress of a *crochet*, and to run into debt. Consumption particularly matters to producers of goods and services. This fact is masked by officially published opinions stating that the increase in

consumption conduces to welfare because it generates demand. In order to and by satisfy this demand new jobs are created.

Production of shoddy goods constitutes an important element of the process discussed. Laboratories are looking for low-quality non-durable products which will replace long-lived goods and which spoil the market of producers. Highways are built in such a way that the repair works are desperately needed after several years.

This process infiltrates all significant social relations. It has penetrated the collective awareness to such extent that the GDP growth is treated as a basic index of welfare. Undoubtedly, the continuous growth of GDP may translate into welfare if a significant part of GDP is accumulated, thus it increases the wealth of households and other economic entities. It appears, however, that a producing society will not become an enriching society if (i) it immediately consumes everything it produces, (ii) produced products are quickly used, (iii) new products pushes out the recently produced ones and turn them into rubbish. There are different undesired effects of the presented trend; among other things, over-used natural resources, degradation of environment, 'over-trained' society, weakening of family ties and friend bonds, lack of reserves to survive long-last recessions, catastrophes and emergencies.

We may imagine that collective matters are managed in a different way. That means households have reserves of goods and financial resources at their disposal, houses are solid and safe, objects of daily use are durable, economic and social infrastructures are sustainable. It is possible to imagine temporary decrease in number of jobs. But we can also imagine that there are other possible activities which generate income for the whole society and individual families without causing social exclusion. For example, new division of labour and new proportions between working time and leisure time.

After all, we do not have to imagine all this because in the shoddy consumers' society there are also social enclaves whose peculiar standard is to save and accumulate and produce long-live and durable goods. In favourable situation, these anomalies may turn into new universals.

In the past decades we had to do with many counterattacks of those social enclaves which appreciate quality, durability, saving, and accumulation of resources. There was a time when Toyota challenged shoddy American cars. Currently, we witness Toyota's bad luck. Due to a damage revealed recently, the company will have to repair millions of cars. American firms are very happy. Now they offer their products as the ones which may compete in respect of quality. The described incident does not belie the projections that durable and good quality products (technically good, not measured by customers' satisfaction as defined by ISO 9001 standard) may start to supersede shoddy goods. On the contrary, we may observe that rubbish have strong competitors in durability and quality. On the car market, several years ago, dealers offered one-year guarantee. Then they extended it to two years. Now, some producers offer five-year and even seven-year guarantee.

One more example. More and more researchers are involved in creating synthetic indexes of social welfare, which would replace the GDP index. This tendency is triggered by a new model of society which differs from the one inherent in the shoddy consumers' society.

Eventually, I would like to emphasize that the conflict between consumers' society and peculiar social enclaves which focus on accumulation of resources is an important playground where decisions on future forms of countries belonging to the Atlantic Community and their relations with China, India and other countries shall be made. Choices which will be made in this matter by individual countries will have a significant impact on the future geopolitical map.

Three scenarios are possible: (i) all important players will incline towards shoddy goods and consumption and they will neglect accumulation of goods, (ii) some of them will decide to increase production and consumption, whereas the others will multiply resources by producing

and accumulating at the same time, (iii) it may also happen that multiplication of resources will become a characteristic feature of some social groups, i.e. a new “super-class” which will be supranational or will be driven by economic patriotism.

Incidentally, more and more representatives of that wealthy super-class rich in financial capital come from the extra- Atlantic Community countries. There are a lot of possible solutions. It is difficult, however, to predict their effects. Especially because the globalisation is so complicated process. On one hand, it consists in “homogenization” of societies and on the other hand, in fixation of differences in various areas. In such a case, integration takes a form of complementation of separate and different economic, political and socio-cultural systems.

D. Individualization vs. new collectiveness

Individualization is another universal trend , at least in the West (Beck, Beck-Gernheim, 2002; Giddens, 2009). It consists in the fact that individuals (more precisely—individual families) try to deal with their individual issues by getting into direct contact with other individuals or organisations which may help them to solve their problems. Rarely, they profit from the intermediary of communities typical for 21st century, such as political parties, trade unions or massive social movements.

The individualization is a process which does not only apply to middle classes. It also covers the excluded ones. Representatives of the latter get sometimes involved in populist movements. This is rather a short-term involvement as a result of which only situation of a small group of participants improves and does not change the life of majority of excluded people. In general, they have to take care individually of their interests and to shape individually their biographies, without having recourse to membership in larger communities.

In the case of middle classes, the individualization is justified by individual interests of their members. Generally, they are going well. We can not say the same about the excluded ones. We may explain this situation by lack of general vision of collective strive for individual interests, which attract them, and discredit collective ideologies of the 20th century.

Occasional trials of calling the excluded people together may be treated as political anomalies. However, we can not pass over such a scenario in silence. For ages, “redundant people”, “people for milling”, “marginalised people” (in sociology, different names are given to the excluded ones) constituted the base for radical social movements; especially those which treated violence as an instrument supporting social changes.

In my opinion, middle classes may become explosive in crisis situations. Their high standard of life and social status are based on weak foundations. As it was already said, they consume their income without delay and do not increase their reserves. Next crisis or an unexpected catastrophe (i.e. ecological one) may stripe real weakness of their wealth foundations. Truly speaking, currently, social capital, e.g. some resources of social relations, constitutes their only wealth. Contacts and social, corporate and professional connections are sufficient to make work accessible for them, to ensure current income and help them to spend it quickly. The collapse of such an apparently durable social capital, based on micro-relations and mutual dependencies, may force them to recourse to traditional (or new) forms of collective protection and to take care of individual interests.

Collective forms of taking care of individual interests, which become anomaly in the West, in Asian countries are one of universals. Partly, they are based on traditional communities by the intermediary of which masses contact with the environment. In Asia, “archipelagos” of individualism expand in the sea of collectivism (e.g. also as a result of the Western influence) and they are marked as social anomalies.

It is difficult to foresee now which of these tendencies—individualization or collectiveness—will prevail in the world. It is highly probable, however, that it will become an important area of conflict. These processes are not isolated. Susceptibility to external influences, progressive integration and interdependence are important features of the globalisation.

In the West, the individualization has been supported by prosperity, a sense of security and stability. Such situations do not last for ever. Next crisis or catastrophe may provoke withdrawal from the individualization in favour of collective forms of dealing with individual issues. The West is quite reluctant to import the individualization. It seems thus, that collective tendencies are more likely to win. But nothing is granted. This refers to the individualization as well as to new potential forms of collectiveness, which may arise from similar social situation, ethnic division, religion, shared ideas, the Internet etc. New forms of collectiveness are much more connected with social anomalies than with new universals (Olcoń-Kubicka, 2009). Nevertheless, in favourable situation, some of them may turn into universals in the coming decades.

E. Reflexive society

At the end of the 20th century, researchers started to use the expression of “reflexive society” in order to name a universal process of new quality (Gidens, 2009). It means that knowledge becomes a basic social resource which is decisive in the economic growth and stimulates transformation of societies. New ideas, skills, disclosures and discoveries, technical and technological innovations, fast data processing and—most of all—exchange of information and access to it, are the key factors of economic growth.

General access to the information via the Internet and other modern media constitutes an important feature of the globalisation process. The Internet which has revolutionized the process of generating, exchanging and processing the information (i) is conducive to accumulation of knowledge, (ii) crosses borders which leads to diminution of differences between the existing areas of ignorance, zones of high level of education and innovative areas, (iii) though the differences between individual regions still exist in the area of generating knowledge, backward regions are able to maintain the “stand-by mode”, thus they have at least chance to get acquainted with the discoveries. This creates a structural possibility of joining the process of generating knowledge because the backward regions maintain intellectual contact with the heading innovative ones.

Reflexive society: what does it mean ... reflexive? It is a society susceptible to persuasion. There are different types of reflexivity. Increasing number of members of Western societies, even the majority of them, are “prisoners” of immediate economic and political marketing. The areas which in the 20th century were under the influence of the intelligentsia, intellectuals, ideologists of massive social movements turn into anomalies. In the European countries, the intelligentsia loses its ethos pointing out to its missionary and educational role. It harbours in exclusive enclaves, cultivates high culture in privacy of exclusive circles, develops prognostic and social imagination. It turns into post-intelligentsia (Śpiewak, 2005). Are there any chances to quit the peculiar areas of high culture, strategic thinking and social imagination?

This type of passive reflexivity causes that the processes contributing to the globalisation are not preceded by far-sighted visions. In some way, those processes are spontaneous because they are not intentional. Spontaneous fashions and temporary slogans become intellectual pap which social masses are larded with. Potential strategic plans, far-sighted ideas, reasonable projects become secrets of economic elites and corporations. They are used to keep up advantage of those elites and corporations over the remaining part of the society. It turns out that, for the time being, the knowledge, imagination and courage are not sufficient to expand the strategic thinking globally and disseminate it over individual households.

For two thousand years, some universal values have been finding their way to the Western societies. In the second half of the 20th century they were expressed by political communities (especially in citizens' communities of some states). Citizenship means, among other things, that people share a canon of values (honesty, integrity, self-respect, honour, empathy, kindness, readiness to treat others according to the same criteria irrespective of ethnic, religious and political affiliations or opinions professed). This universal trend is accompanied by another universal one which consists in readiness to breach any common value in the name of a particular interest of different groups belonging to larger political communities: corporations, exclusive social movements, toxic minorities. Membership in such exclusive groups is conditioned by readiness to accept organisation roles, including the readiness to accept and obey to the internal morality and—at the same time—readiness to reject the universal values. This co-occurrence of competitive axio-normative systems, to which individuals submit interchangeably, may increase the pace of social changes. This constitutes a significant threat for democracy and citizens' society—at least in the Western countries.

The reflexive society is not only the society of knowledge but also the society which is extremely flexible, not very proof against ideas which sometimes are extremely extravagant, peculiar and which breach generally accepted models and values. As there are no signs that in the coming decades, the states which are governed by autocratic methods will open to uniformed ideas and values—more precisely, they will be very selective in drawing from the resources of culturally expansive countries—"cultural amalgamation" variant of globalisation is very probable (Sztompka, 2002). Only some areas of the culture will be "homogenized". The majority of them will stick to local identity—not necessary traditional but resulting from the above mentioned persuasive measures. Today, it is difficult to state which ideas will reach the rank of universals and which of them will become rooted in the individual regions or strata of society. This is the current potential of social changes which the reflexive society is filled up with. The rest depends on people's initiative.

F. Universals and anomalies from the global perspective

Globalisation is a complex process which occur all over the world and consists in (i) bridging the gap between individual regions, companies, households and other entities, (ii) economic and socio-cultural integration, (iii) deepening interdependencies. It seems that the conclusion that the above mentioned clashing universals and anomalies will result in some typical global processes, thus will result in uniformisation, is logical. Such a scenario, however, is not the most obvious, neither the most likely. The following scenarios are equally probable: (i) amalgamation where some of areas of the collective live will be subject to uniformisation and the other will preserve their self-identity, (ii) degradation of current expansive regions, with simultaneous progress of civilization in areas of secondary importance—exactly resulting from close contact and interdependence, (iii) a new form of alter-globalism and isolationism, i.e. a typical "reverse effect"—a reaction to the existing globalisation process will turn out.

Manuel Castells's (2000) concept of net society gives a lot of inspiration to development various scenarios of the possible use of the available social resources of the contemporary world. By using the categories of net and self, the author creates models of a global society. On one hand, the contemporary society is involved in the net of global interdependencies by different various media (i.e. by means of the Internet, financial institutions, international organisation and power supply infrastructure). On the other hand, however, the "self", that means different local communities, small social movements, various groups and organisation, old and new "tribes" are able to preserve in their identity within the net framework. They are even able to extend it through the net. In

order to achieve that a strategy of selective opening or closing to influences coming from the net and a strategy of selective use of the potential of the net may be applied.

In China, for example, state institutions are treated as a specific filter of global economic connections, which is used for importing new technology and exporting products. At the same time, Chinese authorities close themselves to political influences from the West and at the same time, they reorganise their state and society observing the rules of hierarchy, autocracy and economic patriotism, whereas the Atlantic Community members also promote economic openness in those areas where it is profitable for them. This is the case, for example, of free movement of goods and services and free flow of capitals. At the same time in those countries, state institutions and international organisations are used to obstruct free movement of workers. Similar strategy is applied in case of agricultural products.

In the case of China and members of the Atlantic Community, we have to do with the same game where state agencies are involved. All parties play "openness and fence building" game. In this game, in each round different social resources are important and consequences (costs and profits) are different. The democracy supports free development of individuals. It is unable, however, to suppress impunity of big financial players and moral hazard gambled by financial corporations. It facilitates the domination of the financial system over the real economy and impedes strategic thinking (especially in the case of politicians). The autocracy in Chinese or Middle East version supports state control over corporations. As for today, it is conducive to strategic thinking and implementation of strategic plans. Whereas it hinders free thinking and innovations. There are no signs of change in these trends on both sides in the nearest future ... unless new universals arise in the meantime.

Bibliography

- Bauman Z. (2004), *Work, Consumerism and the New Poor*. Open University Press UK Limited.
- Beck U. (1999), *World Risk Society*. Cambridge, Mass. Polity Press.
- Beck U., Beck-Gensheim E. (2002), *Individualization, Institutionalized Individualism and Social and Political Consequences*. Sage. London.
- Boudon R. (2008), *Efekt odwrócenia: niezamierzone skutki działań społecznych*. Oficyna Naukowa. Warsaw.
- Giddens A. (2009), *Sociology (Revised and updated with Philip W. Sutton)*. Polity Press. Cambridge.
- Demandt A. (1999), *Historia niebyła: co by było gdyby...?* Państwowy Instytut Wydawniczy. Warsaw.
- Gumuła W. (2008), *Teoria osobliwości społecznych: zaskakująca transformacja w Polsce*. Wydawnictwo Naukowe SCHOLAR.
- Olcoń-Kubicka M. (2009), *Indywidualizacja a nowe formy wspólnotowości*. Wydawnictwo Naukowe Scholar.
- Prigogine I., Stengers I. (1990), *Z chaosu ku porządkowi*. Państwowy Instytut Wydawniczy. Warsaw.
- Sztompka P. (2002), *Socjologia: analiza społeczeństwa*. Wydawnictwo Znak. Cracow.
- Śpiewak P. (2005), *Między indywidualizmem a niezależnością*, in: Domański H., Rychard A. Śpiewak P. (Ed.), *Polska jedna czy wiele?* Wydawnictwo Trio. Warsaw.

HANS VAN ZON

THE END OF ANGLO-SAXON GLOBALISATION AND THE FUTURE OF EURO-ATLANTIC INTEGRATION

In this article the future of the Euro-Atlantic relationship will be analysed, looking in depth at the fault lines that appeared during the new global depression that started in 2008. This depression is a turning point not only for Western but also for global capitalism. Financial globalisation that took off in the 1970s and first caused major financial crises in the periphery now disrupts the heartland of global capitalism. The current depression means the end of the claim to superiority of Anglo-Saxon casino capitalism and it highlighted the emergence of powerful new global economic players. It means the end of a uni-polar world, and the strengthening of regional blocs. It also questions a global financial architecture centred around Wall Street and the City of London.

In the USA, and also in the UK, a financial oligarchy is still in power and threatens the global economy. An eventual resurgent EU needs to distance itself from the USA in many respects, trying to define and defend its own interests. In a multi-polar world the EU needs to balance its foreign relations and diminish its dependence on the USA. The EU can only strengthen if a core EU emerges that leaves behind those EU countries that are closely tied to the US and that prevent a strong EU to develop.

European identities will be strengthened, especially in view of the need to formulate policies towards the growing Muslim minorities within its borders and the challenge to cope with the very different cultures some new EU entrants brought into the EU. In this process also differences with US culture will be highlighted. The US will become more inward looking, preoccupied with integrating its minorities and stifling social unrest. For the USA, Europe will further loose in significance.

The EU, more than the US, can show the world a way forward in tackling environmental challenges and the quest for sustainable social and economic development.

However, in the short term the EU will be preoccupied with centrifugal forces and managing crises in its immediate neighbourhood. US led NATO will become outdated and insignificant.

1. AngloSaxon globalisation

Economic globalisation, that started in the 1970s, was very much an opening up of the world economy for Anglo-Saxon capitalism. A surge in global liquidity after the OPEC oil price explosion

and the growing size of pension funds, provided an impetus for the relaxation of capital controls in the developed capitalist world that started in the USA and the UK. Also, a series of developing countries took up massive debt during the times of cheap money. After the US sharply raised interest rates (1981), indebted developing countries were threatened with default and the IMF stood by while imposing the Washington Consensus. This implied privatisation, deregulation and opening up the economy for foreign capital. It also meant the furthering of export led growth. Relaxation of capital controls started to spread over the world and this financial globalisation was the trigger for what is now commonly known as economic globalisation. The Anglo-Saxon type of liberal capitalism was propagated as a model that fits all.¹ Economic globalisation was not an inevitable outcome of natural economic development but US led.

It meant the massive avoidance of taxes by the spread and growth of off-shore financial centres. Everywhere it meant weakening of trade unions, abolishing of subsidies for the poor and the pushing back of the developmental state. It meant turning the trend in the developing world towards state managed capitalism and the developmental state into a trend towards deregulated capitalism that is open to foreign penetration. Economic globalisation allowed the massive relocation of industry from developed to the newly industrializing countries.

After the Asian financial crisis (1997), that the IMF triggered and deepened, Asian countries drafted the conclusion not to rely anymore on the IMF and to avoid at any cost foreign debts (see Stiglitz, 2002). It led to structural current account surpluses. On the other hand the USA was printing dollars and running large current account deficits. Increasingly, the global trade became a game in which the US produces dollars and the rest of the world produces real goods dollars can buy. US capital did not de-industrialise as it invested abroad but the USA as a country did, which process has important consequences for the future role of the US as a hegemonic power.

Increasingly the USA and the UK, or to be more precise, Wall Street and the City of London, became the financial centre of the world, i.e the centre of the neural network that constitutes the world economy. Wall Street and the City of London became so integrated that we can speak about the New Wall Street System (see Gowan, 2009).

While introducing 'financial innovations', it sucked the world economy of liquidity. Everywhere in the world, the elite channelled its surplus money towards the banks in the tax paradises, London and New York. Global Financial Integrity estimated that during 2002–2006 the illegal capital transfers from the developing world increased yearly by 18.2 per cent to reach in 2006 an amount of between 859 and 1060 billion dollars. The IMF did nothing against this.

Off shore capital increased from 7 billion dollar in 1963 to 50 billion dollars in 1973, 475 billion dollars in 1979 till 6 trillion dollars in 1990. In 2008 it increased, according to the Tax Justice Network, to 11 trillion dollars. These tax paradises were part of the New Wall Street System, recycling their money to the big banks in London and New York. The New Wall Street System transformed into the global Las Vegas. Gambling was made possible by deregulation, bribing policy makers, auditors and rating agencies.

London got a boost during the 1970s when it became a major centre for recycling petrodollars and became an outpost for US banks and companies after the US abolished capital controls. This was also related to the fact that remaining US restrictions on interest ceilings did not apply in London. American banks overseas assets increased from 80 billion dollars in 1976 to 300 billion dollars in 1981, with most of their lending out of London (Hutton, 2002, p. 191). Six major US banks, partly operating from London, held the bulk of the financial derivatives market. London

¹ The international financial institutions never put it this way. They presume to just propagate sound economic policies. However, their policy prescriptions usually reflect dominant practices in the liberal Anglo-Saxon economies. For example, the IMF has a core set of international standards for corporate governance that emphasise share holders value, as practised in the Anglo-Saxon countries.

and New York are the world's truly global financial centres. Also, London and New York are the major centres of corporate headquarters. The predominance of London in the hierarchy of European financial centres contrasts with the meagre performance of the British economy in European perspective.²

In 2001, the UK and the USA together accounted for 39 per cent of cross-border bank lending (20 and 19 per cent respectively), 73 per cent of equities turn over (44 and 29 per cent respectively), 47 per cent of foreign exchange dealings (31 and 16 per cent respectively), 63 per cent of fund management (13 and 50 per cent respectively) and 71 per cent of corporate finance (11 per cent and 60 per cent respectively).³ In 2007 42.5 per cent of derivatives trading was localised in Great Britain, 24 per cent in the USA. Credit related derivatives trade was for 40 per cent in the USA and 37 per cent in London (Gowan, 2009, p. 16). The IMF estimated that out of a total of 4 trillion of toxic assets worldwide, those tied to the US stood at 2.2 trillion (Huffington Post, 8 April 2009). But the IMF estimates that European banks have more bad assets than US banks.

Looking at external positions of banks (in all currencies vis-à-vis all sectors, September 2008) the UK comes, with respect to assets, on the first place with 6403 billion dollars while the USA on second place with 2924 billion dollars. If we include British dependencies, like Cayman Islands, Guernsey, Isle of Man and Jersey, Great Britain comes up to 8927 billion pounds, that accounts for 27 per cent of global assets (website of Bank for International Settlements).

In 1970 currency transactions were valued at 18 billion dollar a day, in 2000 this increased to 1000 dollar and in April 2007 it amounted to 3.2 trillion dollar a day. In 1970 only 20 per cent of currency transactions were speculative in nature, nowadays it is 98 per cent. The value of currency transactions, most of which takes place in New York and London, is now 100 times the value of trade in goods and services.

On top of this, the USA and the UK received the bulk of FDI.⁴

2. The emergence of the New Wall Street system

From the New Wall Street System funny money, in the form of financial derivatives, expanded like a bubble. Financial services became the major export product of the USA and the UK. The financial industry exploded in size. By 2007, it accounted in the USA for 42 per cent of corporate profits.⁵ In 2007 the financial sector took 12.2 per cent of value added in the USA for its account, against 11.7 per cent for industry.

One of the financial innovations was the hedge funds that were not regulated at all and did not pay taxes. It was not only part of the shadow banking system, having access to massive amounts of cheap money, it also allowed the buying up of enterprises in the real economy, restructure them, split them up and sell them for a hefty profit. In this process enterprises were usually loaded with debt. Almost all hedge funds, that are seen by many as locusts and had a large role in the triggering of the new global depression, are located in the USA and the UK. The UK is host to 80 per cent of European hedge funds (The Guardian, 31 August 2009)

² The dominant players in the City of London are now foreign owned. The London affiliates typically occupy central positions within their corporate systems, often having managerial responsibilities. Two thirds of all banks in London are foreign, nearly half of them established after 1980.

³ The Observer, 6 January 2002, taken from the Corporation of London report.

⁴ According to UNCTAD, received Foreign Direct Investment in the USA was, in 2008, 2093 billion dollars, in the UK 1347 bn \$, Hong Kong 1184 bn \$, France 1026 bn \$, Belgium 748 bn \$, The Netherlands 673 bn \$; Germany 629 bn \$, Spain 537 bn \$, Canada 520 bn \$ and Italy 364 bn \$

⁵ The Economist, 22 March 2008. In 1985 the percentage was 12 per cent; in 2000 25 per cent.

The trend of financialization and marketization of economic life world-wide favoured those countries that were ahead with these trends. American bank's share of the world financial services market has doubled over the last twenty years (The Economist, 22 March 2008). The deal value for global mergers and acquisitions was during the first half of 2002 for the USA 186 billion dollars, for the UK 80 billion dollars, for Germany 43 billion dollars, for France 29 billion dollars, for Italy 23 billion dollars and for Japan and Canada 22 billion dollars.⁶ Among the major winners of financial globalization was organised crime that expanded enormously and made extensive use of deregulation in international banking (See Glenny, M., 2008).

Also in the telecom and software sectors the US asserted its dominance. In the New Economy, the USA has become the major hub through which most electronic communications are channelled. For example, intra-European electronic communications are channelled through the USA. In Asia more than 93 per cent of Internet traffic is channelled through the USA. This provides the US companies that control communication networks with huge receipts, but also poses security problems for US competitors.⁷ US corporations have the advantage of being backed by a powerful state while the clout of the EU and Japan in supporting interests of their corporations in the international arena is much smaller. The US was the major mover behind telecom deregulation all over the world. It became a requirement of World Bank and IMF in structural adjustment programmes. The US Telecoms act, deregulating telecommunications, was a trigger for a Telecoms boom that generated \$ 1000 billion all over the world, and later even more in losses when prices for Telecom shares dropped. By 2001, 62 per cent of global information technology business originated in the USA and American companies owned 75 per cent of the global software market. Almost all commercial satellites are US owned. Obviously, the US was the winner in the battle over information society.

After the demise of the Soviet empire the marketisation and the unification of the world economy under US auspices was facilitated by the fact that the US became the only super power. In some respects the world became uni-polar.

After the end of the Cold War the USA emerged as the only superpower and dominated world affairs more than any other global power has done. In 1997 Zbigniew Brzezinski, national security advisor to President Carter and one of the architects of NATO expansion wrote that *'The brutal fact is that Western Europe, and increasingly also Central Europe, remains largely an American protectorate, with its allied states reminiscent of ancient vassals'* (Brzezinski, 1997, p. 59).

In the New World Order, with the USA in its epicenter, economic and military power are closely intertwined. The Bush administration seems to take the British Empire as an example. One of President Bush's closest advisors, Haage, quoted J. Gallagher and R. Robinson (The Imperialism of Free Trade): *'Imperialism is a continued reality of economic expansion in modern times. Those who associated imperialism primarily with colonies and colonialism and who took therefore the scramble for Africa in late 19th century colonial expansion as the basis for a general model of imperialism, were wrong. British imperialism throughout the 19th century remained essentially the same in its inner logic despite the concentration on expanding free trade in one period and on annexing colonies in another.'*⁸ *British policy followed the principle of extending control informally if possible and formally if necessary. To label the one method 'anti-imperialist' and the other 'imperialist' is to ignore the fact that whatever the method British interests were steadily safeguarded and extended. The usual summing up of the policy of free trade empire*

⁶ The Economist, 6 July 2002.

⁷ See *Manière de Voir*; Nr 46, July/August 1999 (Revolution dans la Communication), p. 58.

⁸ Quoted in Foster; J.B. (2003), p.3.

as 'trade not rule' should read 'trade with informal control if possible; trade with rule when necessary'.⁹

The USA profits enormously from its dominant position in the world economy. Therefore Henry Kissinger could say that '*the basic challenge is that what is called globalization is really another name for the dominant role of the United States*'.¹⁰ The gains of being the world's hegemonic power by far outweighs the burdens.¹¹ The US current account deficit that refers to the balance of trade in goods and services is gigantic if compared with deficits of other countries. The Central Banks of the world changed dollars for US Treasury Bonds that means an 'I Owe You' that probably never will be paid back (See Hudson, M. 2003).

American economic power is also used to force trading partners to comply with American foreign policy objectives.¹² American intelligence sources are used to help American corporations. World-wide eavesdropping in the framework of the Echelon program in which the US secret services co-operate with the secret services of the UK, Australia, New Zealand and Canada, also involves industrial espionage in the EU.¹³

Gradually the nations of the North have become integrated in a single military system, loosely grouped around the United States. The USA calls the shots and the Anglo-Saxon countries are the closest allies and the first to assist the USA in combat actions.¹⁴ This integration process accelerated after the demise of the Soviet Union and the terrorist attack on the United States (11 September 2001) that led to a broad anti-terrorist coalition around the USA. Nowadays, US spending on defence equals that of the defence budgets of the next 15 highest spending countries

⁹ Ibidem.

¹⁰ Lecture at Trinity College, Dublin, quoted in Gindin, S. (2002), p.1.

¹¹ Above account sheds some light about the US claim that it has a disproportionate share of the burden of defending the Atlantic community. Indeed, USA military spending as a percentage of GDP is higher than most of its NATO allies. Defence spending per person was, in 2000, 898 dollars in the USA, 468 dollars in Great Britain, 365 dollars in France 245 dollars in Germany and 176 dollars in Italy (The Observer, 10 February 2002). But, the benefits of being a hegemonic power are usually not mentioned. Moreover, in this respect it should also be recalled that with NATO military operations, like in the former Yugoslavia, there is a division of labour: the USA deploys relatively more military hardware, but the European NATO allies pay relatively more, especially if taking into account the aftermath of military actions. In the case of the former Yugoslavia, the EU countries bear almost all costs of reconstruction. The same pattern emerged with the war in Afghanistan.

¹² For example, foreign companies are sued in US courts for doing business with expropriated properties in Cuba. American influence is also used to impose decisions in international financial institutions, like the IMF, in pursuit of political goals. For example, when the USA persuaded Pakistan to help the USA in its attack on Afghanistan after the terrorist attack on the World Trade Center and the Pentagon (11 September 2001), it promised Pakistan new IMF loans.

¹³ The Guardian, 24 February 2001. Later, other countries, like Germany, became third country participants but these countries have very limited access to the Echelon network. Telephone and electronic communications intercepted in North Yorkshire are immediately transferred to the USA. A report written for the European Parliament estimated that the Echelon eavesdropping helped American companies to obtain European orders to an amount of 26.7 billion dollars between 1993 and 2000 (De Volkskrant, 26 January 2001). The Clinton administration decided that US secret services should support US enterprises in their negotiations abroad. According to a European Parliament report, published in 2001, America's National Security Agency (NSA) intercepted faxes and phone calls between Airbus, Saudi Arabian Airlines and the Saudi government in early 1994. The NSA found that Airbus agents were offering bribes to a Saudi official to secure a lion's share for Airbus in modernising Saudi Arabian Airlines' fleet. The planes were in a \$6 billion deal that Edouard Balladur, France's then prime minister, had hoped to clinch on a visit to Saudi Arabia in January 1994. He went home empty-handed and Boeing and McDonnell Douglas could make a deal after an intervention of President Clinton with King Fahd. The point is of course that US companies are bribing as well. But they cannot be so easily caught. The French government advises enterprises that negotiate contracts above 1 million dollars not to use mobile phones and email, given above mentioned interceptions by the Anglo-Saxons.

¹⁴ After the end of the Gulf War, it was the UK and the USA that continued to bomb Iraq. In Afghanistan (2001), apart from US forces, military from the UK, Canada and Australia were engaged in combat operations. During the second Gulf War (2003) it was the USA, the UK and Australia that attacked Iraq.

combined.¹⁵ Defence spending in the USA increased from 48 billion dollars in 1982 to 607 billion dollars in 2008.

The USA used its power not to create a stable institutional infrastructure that could regulate conflicts but imposed its will on the institutions of global economic governance while ignoring the interests of major parts of the world. This was clearly visible in the role of the IMF and the USA in triggering the Asian financial crisis and the way the World Trade Organisation operated. NATO expanded eastwards and militarised relations with the new Russia while Russia was humiliated.¹⁶ It started to include countries with unsettled territorial disputes and unresolved ethnic national claims although this is precluded by NATO rules. NATO started to operate out of area while increasingly functioning as an instrument of US power. This was especially visible in Afghanistan where no clear EU interests are at stake.

However, the USA is less able to control developments in NATO and EU countries are reluctant to follow the USA outside the Atlantic area.¹⁷ There are enhanced security risks within NATO as, increasingly, not very democratic nations are becoming member that are willing to gamble at the cost of international security.

3. The credit crisis signalled the beginning of the end of US hegemony

The unfolding of the credit crisis highlighted the dominance of financial capital especially in the USA and the UK. It showed how the centre of global capitalism was rotten. Trillions of dollars have been poured into an insolvent banking system, without any transparency and without getting anything in return. In the US, junk derivatives are bought with tax payers money, in the process of which banks and hedge funds make hefty profits. In this way they are twice rewarded for their irresponsible behaviour. Moreover, the regulation of the financial sector is hardly tightened (this practise has been criticized recently by French President Sarkozy and German Chancellor Merkel).

The new US administration under Obama seems to act fully in accordance with the interests of Wall street, not Main Street. It means the strengthening of a system that is parasitic on the real economy. This will inevitably deepen the depression. This crisis is comparable to the financial crises in peripheral countries, like Argentina. Also in Argentina the weight of the financial sector, including pressure of the IMF, prevented the solution of the crisis.

The transformation of funny money into real money will create a new bubble that will feed inflation and will lead to a dollar crisis. This and a possible default of the USA will lead to an accelerated demise of US global power. It may turn the USA into an inward looking power.

¹⁵ The Guardian, 6 February 2002.

¹⁶ According to William Pfaff (Tribune Media Services, 29 May 2009) *'Under pressure from Americans apparently eager to humiliate Russia, the NATO governments were persuaded to offer Georgia eventual membership in the alliance, which Georgia's reckless president, Mikhail Saakashvili, took as authority to attack and try to seize autonomous South Ossetia, provoking a short and sharp war with Russia, which Saakashvili lost. Yet Washington has tended to behave toward (Russia) in an antagonistic manner while demanding cooperation (which it has often received) on matters of concern to the US.'*

¹⁷ According to ex UK minister for Europe Denis MacShane under the Obama administration *'The US has de facto abandoned the idea of asking Europe to go to war while the American administration re-Americanizes the conflict in Afghanistan.'* The conflict *'retransformed in a two-tier operation that involved a political component and a overwhelmingly American combat force'*. According to MacShane America's job is *'forcing peace'*, while the job of the Europeans is *'maintaining peace'* (International Herald Tribune, 6 June 2009).

A dollar crisis might also give interesting investment opportunities for outsiders in the US but it is likely that US government will prevent a take-over of US industry by foreigners.

A dollar crisis might also mean the strengthening of the present trend of regionalisation of the world economy and a subsequent consolidation of a multi-polar world. The US will lose the privilege to have the world's currency and cannot afford anymore borrowing from the rest of the world in exchange for printing real money.

The International Monetary Fund, World Bank and World Trade Organization will become irrelevant and increasing protectionism will above all affect inter-regional trade, less the trade within the major regional blocs (Latin America, East Asia, NAFTA and EU).¹⁸ The US empire is already overstretched and the US will be forced to withdraw from Afghanistan, Pakistan and Iraq.

However, for a long time to come the US will be the only preeminent power. But US power was above all based on soft and economic power, not military power. The limits of US military power have been shown in Iraq and Afghanistan. Although for a long time to come the US will lead in some key technologies, such as biotechnology and nanotechnology, this lead will gradually erode as the emerging regional powers will also invest in science and technology. US society might face a big crisis because of lasting high unemployment levels and associated mass poverty. The USA, with its weak social safety net, does not have the instruments to prevent the emergence of a huge underclass with associated crime. In the USA an oligarchy emerged that is insensitive for society's problems. While the 0.1 per cent richest got 2.9 per cent national income in 1985 they got 7.5 per cent of national income in 2005 (Le Monde Diplomatique, March 2009, p.18). One per cent of US citizens take 20 per cent of national income (Le Monde Diplomatique, November 2008, p. 1).

US competitiveness has also been undermined by the decades long neglect of the infrastructure, education and healthcare. According to Leslie Gelb, president emeritus of the US Council of Foreign Relations, *'A decline starts with weakening fundamentals in the US. First among them is that the country's economy, infrastructure, public schools and political system have been allowed to deteriorate'* (Foreign Affairs, May/June 2009, p. 56).¹⁹

In the long term the US will transform from a country in which white-protestant Anglo-Saxon culture is dominant towards a coloured, predominantly Hispanic, multilingual and catholic country.²⁰ This trend will also feed into the consolidation of a pan-American sphere of influence. But the USA also will have to face the challenge of dealing with failed states in its immediate environment, to begin with Mexico.

The importance of Latin America and East Asia will increase for the USA, while the links with Europe will further weaken. The continued support for Israel and the policy of the USA to undermine any potential regional hegemonic power in the wider Middle East will further weaken its position in the region but will also highlight diverging interests with the EU that is interested in stability on its borders and peaceful relations with its Muslim minorities.

¹⁸ China has a lower representation quote in the IMF than Switzerland or Belgium. Thirteen ASEAN countries created a fund of 90 billion dollars to assist ASEAN countries in difficulties (De Volkskrant, 3 May 2009).

¹⁹ According to S. Abramsky *'California, so cash strapped, because of decades of anti-tax revolts and irresponsible, unfunded spending mandates that it can't pay even its basic bills and is hoping to sell off priced public lands and buildings to plug just a tiny fraction of its deficit'*(The Guardian, 28 May 2009). California has, mid 2009, an unemployment rate of 11per cent and millions more in poverty.

²⁰ Demographic analysis shows that in 2050 half of the US population will be black, Hispanic and Asian. Whereas Hispanics account now for 14 per cent of the population, they will attain 29 per cent in 2050, the percentage of blacks will remain at 13 per cent while that of Asians will rise from 5 to 9 per cent (USA Today, 2 December 2008).

4. The end of neo-liberal Europe and the renaissance of core Europe

The credit crisis showed the weakness of the European project. EU countries devised increasingly diverging responses to the crisis, in this process even undermining the Euro. The EU Commission remained inactive. The illusion of the euro project was that a common currency might be possible without a common economic policy. This was already evident for Italy that after the introduction of the euro could not anymore restore its competitiveness by devaluations. Upward wage pressure was in Italy higher than in other Euro countries with the result of higher inflation in Italy. It means that Italian products and Italy as such is becoming too expensive. Also, within the EU and the euro area, unfair competition remained despite the common market, for instance in the sphere of taxation policy. Instead of stimulating growth, as was promised during the 1990s, the euro hampered growth. The EU countries that did not introduce the Euro, did much better in terms of economic growth and unemployment (Le Monde Diplomatique, February 2009, p. 7).

In response to the crisis, the monetarist guidelines surrounding the introduction of the Euro, such as balanced budgets and reducing inflation, were abandoned overnight. It also appeared that some countries within the eurozone, like Ireland and The Netherlands, went much further in deregulating the financial sector than others with the consequence that the banking crisis affected the eurozone in a very differentiated way. The semi-integrated financial model in the euro-area proved to be insufficient to deal with major disturbances in an era in which a number of financial giants operate cross-border without adequate cross border regulation. However, the trend in the EU was less instead of more shared sovereignty. Pleading for more powers for the EU means losing votes as has been shown in the elections for the European Parliament (7 June 2009) when Eurosceptic parties won. In the wording of Scharpf (2006), a problem solving gap appeared in the EU which may undermine legitimacy in the EU and its member states. The global depression showed that monetary union cannot be achieved without political union.

The global depression also deepened divisions within the EU, especially between the old and the new Europe, the latter more open to the casino capitalism and US influence while the old Europe more sticking to the remnants of the welfare state. It is also a divide about the rationale of the EU, between the EU conceived basically as an extended free market and a EU of shared sovereignty. In this process the French-German axis re-emerged again although it is obvious that this axis is less powerful in the EU of 27 compared to the EU 9 of the 1970s. Merkel and Sarkozy distanced themselves from Anglo-Saxon capitalism when writing that *'the model that we want is a responsible market economy that favours both entrepreneur and employee, not the speculator; a market economy based upon long term investment, not on returning a fast profit'* (Die Welt am Sonntag, 31 May 2009).

In its response to the economic crisis the EU showed its weakness by not providing a common response. Governments are increasingly focussing on national crisis management. In the words of Joschka Fischer, former German foreign minister, *'the EU is increasingly seen as a framework for asserting national interests, rather than an aim in itself'* (The Guardian, 30 May 2009). Especially in the post 1989 generation he notices an indifference towards the ideals of a European destiny. Even in Germany the EU is no longer seen as the key project in national politics.

The free market conception of the EU also received a boost with the entry of a series of Central European countries. Many of these countries were willing to follow the US while not even consulting the EU in major foreign policy decisions, such as the instalment of the US anti-missile shield and US bases. Some of these countries do not follow the EU rules in many other aspects. Especially Romania and Bulgaria are clan states rather than market economies where organised

crime and politics are intertwined.²¹ Cooperation in the framework of the EU proved to be extremely difficult. It gradually appeared that countries where the rule of law is absent can not be integrated into the EU.

A complicating factor is the fact that in most new EU entrants the economic boom after 2000 relied very much on borrowed money while most of these countries are much more affected by the global economic crisis than the core EU countries. Much of East Central Europe is heading for a prolonged economic crisis with associated social unrest.

This means that the process of EU enlargement will come to a standstill. It also means that in view of divergent interests within the EU and the complicated decision making procedures, progress within the EU can only be achieved if a smaller group of EU countries, preferably in the context of the euro area, goes ahead with integration, forming a core EU that can draw the rest of the EU out of immobility.

Another fundamental trend visible in most EU countries is the growing problem of non-integrated ethnic minorities from other civilisations. It seems that the original optimism about the automatic integration of these minorities, especially the second and third generations, has been misplaced. Increasingly, these minorities constitute a new underclass while retaining and reinforcing anti-European attitudes. This has led to a clash of cultures within the EU. But also between EU countries a clash of cultures occurred. For instance, between some new entrants that saw the EU primarily as a source of funding and less as a community of shared interests and destinies and the old member states that have a more cooperative attitude towards diverging interests and policies.

These clash of cultures will feed the growing awareness of the assets of European and Western civilisation but will likely also feed reactionary nationalism and xenophobia.

The clash of cultures was, among others, visible in the row about the Mohammed cartoons published in a Danish newspaper. Even secularist Turkey demanded apologies from the Danish Prime Minister Rasmussen that he refused to give because, rightly, he was saying that as a Prime Minister he can not apologise for something a newspaper has written. Turkey almost blocked the appointment of Rasmussen as secretary general of NATO. It again highlighted the deep divisions with the Muslim world on how state and society should relate to each other.

Another basic trend has crystallized over the past two decades: the EU is surrounded by an arc of crisis. The socio-economic divide with the countries neighbouring the EU has deepened and many of these states became increasingly ungovernable. Some countries, such as Bosnia Herzegovina and Kosovo, became failed states where organised crime and politics are not distinguishable. In view of this developing crisis the EU has no other choice than toughening its visa regime while better policing its borders. Apart from that it has to develop a powerful neighbourhood policy. In many ways, the EU has to distance itself from some of its member states that do not comply with EU rules. It has to resist pressure of the USA and some EU states to let failed or almost failed states in the EU under the pretext that it would stabilize the situation in those countries.²²

²¹ "Other countries have the mafia," said Atanas Atanasov, a member of Parliament and a former counterintelligence chief who is a magnet for leaked documents exposing corruption. "In Bulgaria, the mafia has the country." (International Herald Tribune, 5 October 2008)

²² Recently, the USA, under the Obama administration, has stepped up efforts to integrate Turkey, Bosnia and Herzegovina into Euro-Atlantic structures. Deputy Assistant to the US Secretary of State Stuart Jones declared that 'Americans are not satisfied with the Brussels leadership in the Balkans' and criticized a number of European countries that are calling for a delay in the accession of more Balkan states in the EU and NATO. US Congress passed a resolution on Bosnia and Herzegovina into the Euro-Atlantic community, saying, among others, that 'the full incorporation of Bosnia and Herzegovina into the Euro-Atlantic community is in the national interest of the US and important for the stabilization of South-Eastern Europe'. Europeans were shocked by the appointment of a new US special envoy to the Balkans region (such an envoy only exist, so far, for Iraq and Afghanistan) (see Mitchell, 2009).

Generally, the world is faced with the phenomenon of a proliferation of drowning nations, accelerated by the new global depression that affected peripheral countries much more than core countries, at a moment that US power is in accelerated decline and other powers are increasingly introvert, preoccupied with the solution of crisis situations at home. It is obvious that in this situation the EU should focus at stability in its immediate neighbourhood.

The EU has interests in this arc of crisis that are very much divergent from the interests of US led NATO (see for this Hart and Dimes, 2009). This became especially apparent in the policy with regard to Russia that was treated by the USA and NATO as a defeated power. Relations with Russia became militarized with the eastward expansion of NATO. A number of new NATO members and countries that have been promised membership thought that they could punch Russia in the nose and then hide behind the USA. This was evident in the Georgian-Russian war that Georgia provoked and that became a Russia-USA proxy war. Therefore the eastward expansion of NATO has been called by George Kennan the worst foreign policy mistake by the USA since the end of the Cold War.²³ And also in the Middle East the US lead was misguided. As Leslie Gelb (2009) noticed, G.W. Bush *'rushed blindly into the Iraq war without hard evidence and fought it for years without a clue—no information, no plans, just prideful boasting'*. And the EU followed Bush. Also, NATO drew a number of EU countries into the unwinnable war in Afghanistan, where no vital EU interests are at stake, while neglecting the gradual disintegration of Pakistan with its nuclear weapons targeted at India. Also, in its basic treaty the EU submits the EU foreign and defence policies to NATO.

Therefore the EU has to develop quickly its own defence force and strengthen its capabilities in the sphere of foreign policy. It is obvious that this can only happen while excluding the UK and some other EU countries on its periphery. This can only occur after a purifying crisis within the EU. Also, the EU core that wants to move forward has to strengthen support for the EU among its population. Euroscepticism increased after the EU became increasingly associated with unpopular policies such as privatisation of public services, deregulation and lack of support for a social Europe. Too much the EU wanted to emulate the US model that is now deeply discredited. This disenchantment with the EU was reflected in the rejection of the EU basic treaty in two of the EU founder countries (France and The Netherlands). The EU project can only be re-launched if people feel the EU represents their interests.²⁴ But the centre left, that in principle could have offered a social democratic vision of a European future, has been discredited after its embrace of high finance and heedless globalization.

5. The role of the UK and some other opponents of a strong Europe

The UK always acted as a brake on European integration. Traditionally, British leaders felt closer to the US and the US-British alliance (the privileged relationship) was seen as a guarantee for the security of the UK which has been traditionally challenged from mainland Europe. With the development of the New Wall Street System since the early 1980s, the economic alliance has been strengthened very much. Concomitantly the alliance in foreign policies developed with the UK unconditionally following every move of the US.

Britain also diverged from mainstream Europe in its radical socio-economic reforms, since 1979, that moved Britain closer to the United States. Also in defence matters Britain moved

²³ Washington profile, April 2009 (www.washprofile.org), interview with Stephen Cohen.

²⁴ For the elections for the European Parliament, June 2009, in The Netherlands, one of the EU founder nations and traditionally one the fiercest supports of EU integration, only 36 per cent of the voters turned up while above all EU sceptic parties gained.

closer to the USA while France and Germany kept some distance towards the United States. In fact, the UK acted like a Trojan horse for the USA in Europe.

In his speech to the Confederation of British industry, Gordon Brown said that '*Europe's economic future depends on an ever-deeper and closer economic relationship*' with the USA (*The Independent*, 17 November 2003). The British government persistently dismissed calls by the European Commission for harmonisation of corporation tax. It prevented tougher regulation of the financial sector and protected, on the EU level, the interests of hedge funds. Brown attacked Europe as '*inward looking, inflexible and sclerotic*'. In Brown's view, the 'varieties of capitalism' debate has been conclusively resolved in favour of the US business model. Mr Barroso, the president of the EU commission said (to Brown) '*You cannot go to a beefeaters' club and say you are a vegetarian.*' (*The Independent*, 6 July 2006).²⁵ Both Gordon Brown and Tony Blair moved in the direction of the idea that the old vision of an integrated social Europe is now bust, and the challenge is to embrace open markets, not raise walls.²⁶

Developments in the EU very much went into the direction the UK wanted while getting many more same minded allies in continental Europe. A divide between the new and the old Europe developed that became first manifest in the preparation of the Iraq war. In the EU the bloc of countries that does not want a strong EU but a loose group of countries centred around a common market, became stronger with the enlargements since 2004. Also, since the Iraq war, the EU more closely followed US policies, especially visible in the wider Middle East. The EU slowed down the integration in the sphere of defence and foreign policies. Instead, the European security system became NATO-centred while excluding the non-NATO EU member states. The EU also became more neoliberal and pursued social, fiscal and ecological dumping policies.

Therefore, the new EU 27 is solidly pro-US while the core of the old EU has retained a relative independence with regard to the US. The new Europe is highly integrated with the US in a common economic, political and military system, herewith acting as a brake for the unification of Europe on the basis of common European interests. Under US pressure, centrifugal forces are growing in the EU.

This is rather odd given the new opportunities Europe got after the fall of the Iron Curtain. For the first time in history Europe can be united and strong. Unlike during the Cold War, there is no need to seek shelter in the shadow of the USA. Also the challenges that ask for an independent EU, are greater than ever before.²⁷ But the willingness to be strong and united is very weak. The EU misses strong and visionary leadership. Also, the EU still clings to a neo-liberal world view, with its belief in self-regulating markets, that has become totally discredited with the collapse of the financial system while refusing to work on a social and regulated market economy.

The USA will try to strengthen the inner circle of the informal US empire, consisting out of the Anglo-Saxon countries.

²⁵ Chris Patten, then British EU Commissioner, claimed Mr Brown had '*made extremely negative speeches about Europe, giving the impression that the rest of Europe is having to depend on food parcels in comparison with the great economic miracle in the UK*' (*The Guardian*, 22 June 2004).

²⁶ This is the background for the Labour party to block a proposal within the socialist grouping in the European Parliament to bring forward a socialist rival for the appointment of a EU commission chairman, because Barroso proved to be a good chairman (*The Guardian*, 5 June 2009).

²⁷ For example, a re-regulation of EU Financial services is blocked by the UK (*The Independent*, 10 June 2009).

6. Weaknesses of Western civilisation exposed

The new global depression not only affects the economic sphere. It exposes major weaknesses of affected societies and questions major values underpinning the policies of the past decades. It is a crisis of globalisation and a collapse of a neo-liberal worldview.

In the USA the unbridled greed of the elite will be questioned as will be the hedonism that was so much furthered by consumer society and the credit economy. It will also question the hyper-individualism and the demise of the state and the public good. It will bring on the agenda the question of what a society is and what a good society is.

Due to the lack of a social safety net, a substantial part of the US population will be trapped in depravity. US society will be undermined from within. The problem is that short-sighted Wall Street still dictates government policies. However, although both the Democratic and Republican parties are captured by financial capital, American democracy could be powerful enough to mobilize the anger of the population with regard to the looting of the nation's resources and channel it in the direction of a rejuvenation of the US political system, leading to the end of dominance of financial capital.

In most EU countries a rudimentary welfare state has been maintained and interest representation is still better developed than in the USA, although eroded, while the state has been less broken down than in the USA. Therefore, the EU has better instruments to cope with the phenomenon of impoverishment and lumpenisation of part of the population, especially the ethnic minorities. But at the same time we see a xenophobic and nationalist turn in politics that undermines the strengthening of the EU. Therefore, initially a further fragmentation of the EU is likely. However, the trend can be reversed if a core EU centred around the French-German axis, can revive the federalist ideas of the founders of European integration.

During the Cold War a rather cohesive system, through Euro Atlantic integration, held the West together. Socio-economic competition from the East helped, indirectly, to support the welfare state in Western Europe. After the end of the Cold War the West as a community of values and common interests gradually disintegrated while uni-polar US policies failed to create a new international structure that could adequately accommodate the interests of other powers than the USA. Several authors compared this situation with the 1920s when the victorious powers of World War I failed to create a fair peace and ignored the Soviet Union (see *The Twenty Year Crisis*, E.H. Carr). The same systemic flaws are recognizable in the New International Order that the USA helped to create. NATO and the international institutions of economic governance played a very negative role here, one-sidedly looking at Western interests. James Sherr described NATO as overextended, overburdened and apprehensive. *'For 8 years the US embodied the 'arrogance of power' and none of its wisdom. The events of 9/11 have not only taken NATO out of area but into the global arena and possibly out of its depth'* (Zerkalo Nedeli, 11 April 2009).

Many in Western Europe believe that a community of values can sustain a strong Euro-Atlantic partnership. But is it common values rather than common interests that underpin alliances? And what about the European states that fought each other for centuries? Moreover, it seems that with respect to values Europe and the United States are drifting apart. Americans oppose state interference and high taxes while most Europeans accept state managed capitalism. Most Americans are more eager to go to war than Europeans who have seen so many wars on their territory. Individualism is more pronounced in the USA. With respects to the advance of science and technology, Europeans are more inclined to use the precautionary principle. Europeans are more inclined to support multilateralism and more aware of global environmental problems.

With respect to the most pressing global problems Europeans tend to have a different approach than Americans. The same can be said with respect to differences between Europeans on the one hand and Latin Americans and East Asians on the other hand.

7. Conclusion

The international order that emerged during 1945–1950 reflected the power configuration at that time. On the Western side it included NATO and the institutions of global economic governance that were all US led. Economic globalisation, that was enabled by the liberalisation of capital markets under the aegis of IMF and World Bank, strengthened the New Wall Street system, centred around Wall Street and the City of London. The New Great Depression marks the end of the claim to superiority of the Anglo-Saxon economic model and accelerates the relative decline of the USA. Regional economic blocs will likely be strengthened while US dominated institutions, including NATO, will weaken. The New Great Depression showed major weaknesses in the EU. Firstly, it showed that monetary integration cannot be accomplished without political union while the recent trend was towards a minimal shared sovereignty. Secondly, it showed the widely diverging responses to the economic crisis and the inability, in the present decision making framework, to formulate a common anti-crisis policy. Thirdly, it showed that part of the EU, i.e. the UK, is integrated in the New Wall Street system and that therefore the EU is deeply divided in the midst. A European renaissance is only possible if a core EU, preferably around the euro area, is consolidating itself outside the current EU decision making framework.

The NATO has gone out of area since 9/11 while divergent interests within NATO became increasingly apparent. NATO seems to be outdated and a common EU defence and security policy is more needed than ever before. In a multi-polar world the EU needs to develop balanced relations with all major powers and should not become hostage to US interests. This is especially visible in its relations with Russia and with the wider Middle East.

Bibliography

- Brzezinski, 1997, *The Grand Chessboard*, Basic Books, New York
- Foster, J.B., Magdoff, F. (2008) 'Financial Implosion and Stagnation—Back to the Real Economy' *Monthly Review*, December.
- Foster, J.B., 2003, 'Imperial America and War', *Monthly Review*, May.
- Gelb, L. 2009, 'Necessity, Choice and Common Sense', *Foreign Affairs*, May/June 2009
- Gindin, S. (2002), 'Rethinking Crisis', *Monthly Review*, November.
- Glenny, M., 2008, *McMaffia*, Random House, London
- Gowan, P. (2009), 'Crisis in the Heartland—Consequences of the New Wall Street System', *New Left Review*, Vol 55, January-February 2009
- Hart, G., Simes, D. (2009) 'The Road to Moscow', *The National Interest*, May/June (TheNationalInterest-online)
- Hudson, M. 2003 *Superimperialism. The economic strategy of American Empire*. (2nd Edition), Pluto Press, London
- Hutton, W. (2002) *The World We're In*, London: Little, Brown
- Michell, P. (2009) 'Biden in the Balkans: US asserts interests in a shattered region', *Global Research*, 21 May 2009.
- Scharpf, F.W. (2006) *Problem Solving Effectiveness and Democratic Accountability in the EU*, Reihe Politikwissenschaft, 107, February; Institute for Advanced Studies, Vienna
- Stiglitz, J. (2002) *Globalization and its discontents*, London, Penguin Books

KRZYSZTOF SZCZERSKI

TITANIC IN OURSELVES

The Atlantic community and the Neo-Geopolitical Paradigm

Thinking about a future of the Atlantic community is like contemplating Breughel famous painting titled “Blind men” on which five blind persons conduct themselves through a way, stumbling and falling down.

We can regard them not simply—as a personification of the West in its decline—but rather as a symbol of the current global arrangement as such. We live in the age when globalization made distances diminishing and bind political and socio-economic actors in many different networks, but we cannot mystify this situation with “an order” (structured balance) as it does not actually define any substance, but only the form. The point is, that—in current stage of international relations—globalization is not longer an answer to the question of a nature of world politics, as it does not provide a long term vision or—coming back to Breughel—any vision at all of what happens when the world survived “the end of its history”. Instead we can observe a group of leaders guiding themselves to unknown. This is partly because the world lost a leadership of the West (regarding as a community of certain civilization).

As one of the result of this situation we are confronted by the pervert paradoxical knot—seeing ourselves as weakening part of the world we are surrendering our position to new giants which—in fact—are also as weak as never in their history. China, India, Persia are not sources of civilization initiatives, they do not bring breakthrough innovations, ideas, deep philosophical revelations. On contrary, they used to convey this kind of revelations in past, when they were a real global giants—starting from numbering ending at paper and gunpowder.

Nowadays, in economy, all of them are trying to conquer Western positions by being more effective in game invented by the West, i.e. to produce more cheap goods for the global market, and in fact those goods are either cheaper copies of the Western originals or simply products of off-shored divisions of our big companies. The political innovations of new giants, like Chinese state system, are no attractive for the Western peoples, at all. Their social models—deeply divided and “sectored” societies, appalling social disparities, lack of basic social services are simply not acceptable. So where the problem lays?

The answer is simple—new global stratification is neither based on liberal globalization, nor on civilization advantages or moral hierarchy. Instead—we are witnessing revival of geopolitics in post-globalized era as a new rule of the game—formation of the “neo-geo” (neo-geopolitical) paradigm of the world order, which is overwhelming and consuming other networks of hierarchies. Only in that perspective we may understand how the new stratification is forming and why it is so important for the future of the Atlantic community.

The twenty-first century has started three times with the three different paradigm organizing global politics. It is not new throughout the history that calendar periods are not equal to political ones—beginning of the 20th century is also disputable—was it 1901 or rather 1914 when the 19th century order collapsed.

From the political perspective we can distinct three dates for the initiation of our century—1991, 2001 or 2008.

The first of the three is—of course—marking the end of Cold War and its bipolar order of “stability by confrontation”, as it was a year when the Soviet Union was dissolved. That time the most popular was a consideration that new century would be a “kingdom of liberal globalization”. The world was supposed to be a faltering network of multiculturalism, new technologies of communication, global economy and global governance replacing traditionally dividing international politics of the past. This order was supposed to have one “friendly giant”—the United States of America—global guardsman responsible for guaranteeing its harmony without domination.

These hopes ended with the second launch of the 21st century—9/11. We did change a paradigm from liberal governance of networks to a global “war on terrorism”. It was especially important from three perspectives: firstly it showed that there was no global agreement on the position of the USA as friendly dominant, secondly—that a list of global actors must be supplemented by non-state, violent, actors as terrorist networks and, thirdly, that the idea of economy as a force that keeps peoples peacefully together is a myth. In reaction to the second start of the 21st century we were witnessing the most serious crisis in the transatlantic community which has dug a ditch still existing.

The third and final commence of our century has also a very significant date: 8/8/8—the 8th of August 2008. It was a day when the Olympic Games in Beijing began and the war in Georgia started. This was the final signals that geopolitical order is in full augmentation. With the Olympics in China, the West paid the tribute to new world stratification, awarding a new giant with one of its old symbolic jewelry: an Olympic Idea of Peace and Fair Play. War in Georgia can be regarded as first classical geopolitical confrontations in 21st century. Neo-geopolitics set many signals even before that date—starting with “energy politics” (using energy market for political actions), proliferation of nuclear weapons and nuclear technologies, economic “re-colonization” of African mineral resources, ending at virtual (Internet) aggressions and Internet censorship killing freedom of the net. All of them showed that we are going to be confronted with stratification rather than harmonization, securing spheres of influence rather than open co-operation, maximization of relative advantages rather than fair competition.

So the West is losing in the game we were best of players in the past centuries, but somehow we lost our abilities nowadays. There are two reasons: the first is through the internal divisions, the second is ideological impotence.

Since it was invented, there has always been a temptation for the states to play geopolitical game individually and not to be too much bind by formal mutual guarantees or alliances. In fact it has been a game with only one rule—the winners takes it all. With one exception, and that was NATO as a instrument of Atlantic community during the Cold War. Of course, among the Member States of the Alliance we were witnessing sometimes very serious differences in particular actions, but nobody denied the role of it in general geopolitical confrontation on global scale and in guaranteeing basic security for the West. Nowadays NATO role is debated and somehow blurred. In the same time particular countries are regarding security threats differently and there is a little common point of view as regards a list of enemies and partners. This opens door for “*divide et impera*” (divide and rule) game by outer actors (third states) which is disintegrating the West and contributing to the decline of its global role.

Neo-geopolitical paradigm warns us that the common destiny of the West may be overshadowed by temptation of some of countries to play individual roles accordingly to the rules of the game which recognizes only the strongest players. If the Western countries agree that world politics is a playground of a few—the biggest and the most assertive and cynical, then an iceberg is close to our ship...

Secondly, some of the most popular modern political ideas of the West are still rooted in the 20th century ideology of globalization which was supposed to bring an end to traditional modern international relations. This ideology was as popular among liberals (market economy wins over politics) and idealistic schools in IR (values and rules win over power game) as among the Left (the world of peace and unity in diversity).

The problem is that this perspective ignores two important perspectives which has to be taken into consideration while discussing the future of transatlantic community.

One underlines the crucial factor of a moral dimension in the history of peoples, the second, puts a question mark on a future of democracy in Europe and possibility of transatlantic government.

The future of any community or individual is a consequences of its today's choices and they depend equally on a reasonable calculation as well as self-assurance coming out from virtues. The moral dimension, in this case, has nothing to do with a religion or any faith, it is rather the question of possessing what Machiavelli named *virtù*—an ability (or rather a talent) to shape the future, ability which comes from courage, motivation and self-determination. Shaping political path for future generations is not only the question of vision or being smart, having foresight and having enough provisions. It is also the problem of having solid moral basis to choose the path which is not popular nowadays for the sake of those not born yet or to stand for a values of the community when they seems to faint even if politics of today disregards the problem.

Let us just look at the two historical examples taken from our own continent which can serve as warning sirens for the European Union and its place in the transatlantic neo-geopolitical context. They are both taken from the same period of the late 18th century—the times of Enlightenment when the Reason ruled. This period witnessed an collapse of two different political entities in two rather distant part of Europe. Regardless important differences between those two, their faith can be very edifying. One was the Republic of Venice, the other was Poland—an unique “republican kingdom”. Venice is one of the legends of Europe, city of arisen from the dreams, *Serenissima*—the Everlasting republic, hometown of art masterpieces and glamour, city which not only once saved Europe (Battle of Lepanto, 1571) but throughout centuries was playing major role in its politics. And then, in the late 18th century we see Venice as “an outdated state” (N. Davies, “Europe. A History”), a city of hazard and moral decline not able to fight for its future. The Napoleonic army swept it away as an unvalued little piece of land (so unvalued that soon Venice was to be given by France to Austrian Empire). If we look at it in details, it is a truly shocking story of a total collapse of political community not because of severe circumstances (famine, war, plague) but simply by its internal degeneration. They were not lacking anything but virtues. One of the most famous Polish historian of 19th century—Michał Bobrzyński once said: “It is not an intellectual achievement to name the causes of a tragedy when they appear, it is important to name them when they still can be overcome and to see the seeds of decline when everything looks perfect”. This is true both for Venice who simply was morally too weak to stand for its own even if was still able to organize best carnivals, and for Poland of 18th century which went under partition by its three neighboring “superpowers” of that time—Prussia, Russia and Austria, and disappeared from the map of Europe on the full sight of other European countries which did nothing to save it. And Poland of that time was not a marginal, small country as Venice. It was impressively big in size (the biggest single private family estate—Tulczyn was nearly as big as

Belgium is today) and only hundreds years later its army saved Europe (Battle of Vienna 1683) just like Venice once did. Poland collapsed under its own governance inability, caused by the fact that Polish nobility was unable to decide on indispensable state reforms because they were sure they lived in the best-possible-regime of personal freedom and their country is too big and too rich to be just simply wiped away from the map of Europe. Very few mourned for Venice and Poland that time, the history went on without them, the new powers emerged on the scene.

I wish the Western leaders will be courage enough not to follow examples of those who had everything but finished up with nothing but bitter dreams.

The other perspective I would like to put on the agenda is “a futurology of democracy” as a political mechanism of government. Many scholars seems not to touch this field when saying about “success of multiculturalism” as they focus only on its cultural and social dimensions. But it is worth to think for a while what would be the political consequence of Europe as “a multi-cultural society”—who will be responsible for governing it, are Europeans ready (with growing hesitation) to share not only their land and labor market but also their political institutions with those who come from different culture and religion? So far the discussion on immigrants’ influence on the culture is still taking place with a view of minorities’ rights in the societies in which “mainstream Europeans” have clear majority. That is why it is quite easy (but as we already see not that easy) to discuss the limits of our openness or the rules of co-existence with the Others, being on the superior position. Our laws give Them rights because We agree on it. But what happens if one day in one of the countries people will realize that they are inevitably becoming a minority in their own state? Not only from cultural point of view—strangers in your own land but also from simple political arithmetic—the number of voters. Will they try to stop democratic principles or establish a sort of limits to it?

I would argue that in coming future the question of democratic equality will arise as one of the major dividing line in political discourse in Europe. A futurology of democracy says that we can expect an argument about “coming back to the roots of democracy”. The slogan is “Let us go back to ancient Athens !” where equality was limited and there were different classes of community membership. In Europe we will observe the emergence of the idea to disconnect human rights from citizens (political) rights, what is nowadays one of the principles of liberal democracy—we are all equal as persons that is why we have all the same rights to choose political course of the community. Europeans of the future will put a question mark on it—they will be quite generous in giving the Others rights to live next door and to work instead of them (as they will be older and older) but they will limit their voting (or generally speaking, political) rights. We will observe the policy of “cooptation to the governing community” strictly guarded by those who claim to be “ancient Europeans”. We can already see little traces of this attitude when listening to the debate about the borders of Europe and the limits of the EU further enlargements. We, as Europeans, regard ourselves as being into a possession of an unique treasure—our way of living and we start to consider with whom we would be ready to share it. In the future the same question will be adequate not to the outside peoples but to inside fellowmen. And what we will say then?

The future has already begun. Strategic planning of next steps always begins with *ex ante* analysis, which does not actually mean that our current situation determines our future but clearly indicates that our current knowledge about ourselves is decisive for further strategic choices. And this knowledge comes from ability to name and evaluate accumulated experiences.

History for communities are like memories for human being. Without them person becomes helpless—does not know what and why is going around, who are the other people in a room and which of them are friends or enemies. In the end is vulnerable and completely dependent on others’ choices and explanations. In this sense history is a future. Europe needs to learn its

common history again, after the artificial division by the Iron Curtain no longer exists. Through this it will gain knowledge about forgotten richness of its cultural traditions and bitterness of the post-war experience. Learning history may also sometimes be difficult to bear, if one has to admit his misbehaving from the past, but it is the only way to clear up a water before we can sail to our splendid future.

In fact, as it was said before, the modern era (second half 19th century and nine decades of 20th century) has ended, but the post-modernity revealed to be rather a blink of history. We are now living in re-modernity, which is a patchwork of classical geopolitical game in globalized world.

That is why it is of crucial importance to rebuild Euro-Atlantic strategic community based firstly on common geopolitical interest.

Part II:
Value Systems—Science and Technology

ANDRZEJ P. WIERZBICKI

CLASH OF CIVILIZATIONS OR IGNORANCE OF DEEPER VALUES OF THE OTHER?

Abstract

The concept of *Clash of Civilizations* (Huntington 1993, 1997) was already many times debated and criticized, and even paraphrased to *Clash of Ignorance* (Said 2001). However, many opinions of Huntington remain valid today, while other of his conclusions appear rather shallow. This paper tries to explore and explain this ambivalence by two methods. One is an improved, more up to date diagnosis what really happens in the world today. Another is a reference to deeper values underlying each civilization, using the concepts of *hermeneutical horizon* (stemming from Husserl, Heidegger, Gadamer, but specified more precisely by Król 2005) and its broader interpretation as *hermeneutical perspective*, an intuitively accepted system of such deeper values (Wierzbicki 2009). In particular, it is shown that the Buddhist values underlying many Far East civilizations are misunderstood and shallowly treated by Huntington, possibly also generally by Western culture. The lack of understanding of deeper values characteristic for other cultures might be the reason of the ignorance suggested by Said. Therefore, in order to promote a *Dialogue* or an *Alliance* of civilizations, it might be necessary to apply the method of *reconstruction of a hermeneutical horizon* (Król 2007) or of *hermeneutical perspective* to the systems of deeper values of different civilizations and this way to promote a deeper understanding of the Other.

Keywords

Clash of civilizations, clash of ignorance, dialogue of civilizations, alliance of civilizations, understanding of the Other; hermeneutical horizon, reconstruction of hermeneutical horizon, hermeneutical perspective.

1. The importance and shortcomings of “Clash of Civilizations”

The book *Clash of Civilizations* (Huntington 1997) is perceived today—in the year 2010—as prophetic by many authors (see, e.g., Kukliński 2010), who after the great financial and economic crisis perceive a decline of the economic dominance of United States and European Union. In order to omit a deeper analysis and definition of the tacit coalition of the United States of America, Canada, Great Britain and the European Union, I shall call it shortly the *Atlantic civilization* or *Western culture*. The perception of the decline of economic dominance of the Atlantic civilization is often combined with the clash of basic values of the democratic world versus Islamic fighters, etc.; also with the metaphor of *sinking Titanic* to describe the position of the Atlantic civilization today.

The main thesis of Samuel Huntington is “*The fundamental source of conflict in this new world will not be primarily ideological or primarily economic. The great divisions among humankind and the dominating source of conflict will be cultural*”. This thesis is both correct and shallowly exaggerated. Culture has many dimensions and is not necessarily a source of conflict. Culture will be the dominating force of world differentiation, but not necessarily of great division among humankind. Culture influences strongly ideology and economics, but is also influenced by them in a feedback loop. This shallowness: as we shall see later, results mostly from an Atlantic-centric cultural imperialism, belief that only a progress copying Western culture is valuable, a belief combined with a lack of understanding and implicit condemnation of other cultures.

Such criticism has been already used before, for example in the paraphrase *Clash of Ignorance* (Said 2001). However, this criticism appears also too shallow: the metaphor of *Clash of Civilization* is important, it describes some phenomenon that emerges in the world today, even if it might overemphasize the dangers of the phenomenon. Therefore, it is important to analyze this phenomenon on a deeper basis in two respects. One is the *diagnosis: what really happens*, what might be the most probable outcome of the processes we observe today, analyzed from a position free of the Atlantic-centric cultural imperialism; the book *Clash of Civilization* is not free from such a bias, moreover, its diagnosis is already old and might be outdated today. The second is an attempt to *reconstruct hermeneutical perspectives* of the different cultures or civilizations, described in a later part of the paper. I feel qualified to analyze these two difficult issues because I spent over four years in Japan, traveling often to neighboring countries, especially to China, and discussing with my friends the specific situations of India or Brazil.

In response to his critics, Samuel Huntington correctly points out the importance of a *paradigm* and quotes Thomas Kuhn (1962). However, the understanding of the foundations of a paradigm has been considerably increased since *The Structure of Scientific Revolutions*. A much more fundamental concept, underlying any paradigm, is the *hermeneutical horizon* as specified by Zbigniew Król (Król 2005, 2007), with its extension to *hermeneutical perspective*. Therefore, in the second part of the paper, I concentrate on the importance of these concepts in the understanding of any possible *Clash of Civilizations*.

2. The diagnosis: what really happens in the world today?

This diagnosis must be necessarily simplified and shortened, because a second book longer than the *Clash of Civilization* might be written to describe the complex situation of the world today, in the year 2010.

1) The first important point of the diagnosis is that the *Atlantic civilization was partly successful in transferring such values as democratic freedom and free market to the countries with largest populations in the world, such as China, India, Brazil, Russia (popularly called BRIC countries)*. Of course, it was only a partial success, because each of these countries adapted such values to its own cultural tradition; and changing cultural tradition is a very long term process, requiring generations.

2) The second important point in this diagnosis is that *this partial success was the reason of an inevitable decline of the economic dominance of the Atlantic civilization*. The four countries mentioned above are demographically much stronger than the countries of Western culture and, given a modest economic success resulting from point 1), inevitably will become also stronger economically. The current financial and economic crisis only underlined this inevitable development.

3) The third important point is that *the situation is made much more complex by the informational revolution, an aspect not recognized by Huntington*. Due to informational revolution—started by the Western culture—with all its aspects (Internet, World Wide Web, electronic learning and commerce, etc.), the progress is accelerated, but also combined with greater opportunities and greater dangers. Three aspects of this complexity must be mentioned:

3a) The value of the free market is endangered from within, *high technology markets become oligopoly markets due to informational revolution*. Informational revolution leads to dematerialization of work and to knowledge based economy; but this decreases marginal production costs to such an extent that the competitive prices of the free market (which should be equal to marginal production costs) are no longer applied. This is possible only if the market is dominated by oligopoly, often with open or tacit price collusions—and we observe this today on all high technology markets, starting with pharmaceutical markets.

3b) *The growing inequality due to informational revolution* (a natural consequence of any greater technological change) *is transformed into anti-Western sentiments*. Informational revolution contributed, on one hand, to the globalization of economy and increasing global economic inequalities (particularly in small countries) resulting, between others, from an unlimited transfer of profits of large global corporations to their countries of origin. On the other hand, informational revolution brought an annihilation of spatial limits of access to information and knowledge. As a result, the one sixth of global population that lives today in extreme poverty can learn without any difficulty—by TV and Internet—what are the living standards, habits and excesses of the elite of rich countries. Inevitably, this leads to envy and reprobation—we should rather wonder that terrorist attitudes are actually limited to a part of one culture, whose specific religion promises paradise after a martyr's death.

3c) The information revolution brings not only threats, also great chances, e.g., it will inevitably lead to improving equal rights of women in all countries in the world. However, *the greatest chance is an open access to education by Internet*: young and ambitious people even in poor countries will have not anti-Western, but ambivalent sentiments, if they can profit from a greater access to education and cultural diversity using Western sources. For example, a great European attraction for Far East civilization is the diversity of European culture; no matter, whether Japanese or Chinese, they enjoy traveling to Europe and going sightseeing (Huntington misses this point, perhaps also because the American culture is much less diversified and rich than the European).

4) The fourth important point of this diagnosis is that *the loss of dominating economic position of Atlantic civilization in favor of BRIC countries might have advantageous effects by limiting anti-Western sentiments*: if a majority of world population will be not only reasonably well-off, but with raising expectations, we can concentrate efforts on the part living in extreme poverty.

5) The fifth important point of this diagnosis is that *the Western culture might remain an important geopolitical and geo-cultural player, provided it increases the depth of its' understanding of other cultures—generally, the understanding of the Other*. This is really the most important drawback of the book *Clash of Civilizations*: the book displays a very shallow understanding of cultures different than the Western one.

6) The sixth important point of this diagnosis is that the rise of importance of the most populous countries in the world might give an impulse towards *increased world governance, in a form of an institution similar to European Union but of a global coverage*. Such a development might be actually very positive and the European Union might use its experiences in the coalescence process to become an actor of global change. See also (Wierzbicki 2010).

Some additional comments might enhance this diagnosis. It is not true, as some authors believe (see, e.g., Opala et al. 2008), that the rise of China equals the failure of democracy; it only equals the failure of naïve neoliberalism. China has a long cultural tradition of central government and Confucianism, related to rice agriculture, see below. Hence it is impossible for China to turn towards democracy in one generation; but the young generation in China is well aware—between others, due to informational revolution—of the advantages of democracy and awaits their turn. Thus, a more decisive change towards democracy in China might be expected around 2050.

3. Hermeneutical perspectives of other cultures

It is important to realise that, due to the informational revolution (see, e.g., Castells 2000), we live in a time of changing civilization eras, *long duration historical structures* such as defined by (Braudel 1979), who analyzed two such recent eras: the era of print and formation of capitalism 1440–1760 and the era of industrial civilization 1760–?. We might select the year 1980 (because of personal computers and broad use of computer networks starting around this time) as the end of the era of industrial civilization and the beginning of the next era of informational or knowledge civilization. This great civilization change might be accompanied by basic changes of social relations, of conceptual foundations, of *episteme* in the sense of (Foucault 1972)—the way of creating and justifying knowledge characteristic for a given historical era—also changes in dominating *paradigms* (Kuhn 1962) and their underlying *hermeneutical horizons* in the sense of (Król 2007)—the intuitively accepted systems of assumptions about truth of basic axioms.

The concept of a hermeneutical horizon was used in philosophy before by Edmund Husserl (see, e.g., 1973), Martin Heidegger (1927), Hans-Georg Gadamer (1960), but Zbigniew Król (2005, 2007) specifies this concept more precisely, illustrating it on the example of belief in the truth of basic axioms and assumptions of Euclidean geometry: he shows that the axioms of Euclidean geometry were understood differently by classic Greeks, differently by Descartes and Newton, differently today. Mathematicians of today, in order to communicate, must understand the axioms similarly to each other, and obtain such understanding in the process of education. Thus, the hermeneutical horizon of mathematicians is in a sense objective: it is a result of deep reflection and testing the truth of basic axioms, leading to a certain doctrine of teaching mathematics, typical for a civilization era, not for a particular culture or civilization: a Hindu or Japanese mathematician understands those axioms today similarly to a Western mathematician. And such horizon is a long duration historical structure, its change is difficult and usually related to a change of a historical era. Moreover, the problem of *reconstruction of a hermeneutical horizon*, as shown by Zbigniew Król (e.g., the problem of finding out how did the classic Greeks understand the axioms of Euclidean geometry) is difficult, but solvable with enough intellectual effort.

However, if this happens among mathematicians, it might happen also in other professions. From personal experience, I know that telecommunication engineers on entire globe have also a system of deep convictions which makes it easy to communicate between themselves. These intuitive beliefs about what is true, e.g., in telecommunications, are obviously also results from an educational doctrine, but they are also well tested through engineering applications and no doubt are long duration historical structures. They might be less precisely defined than the axioms of Euclidean geometry, hence I propose to call them more loosely *hermeneutical perspectives*; thus, a hermeneutical perspective is an intuitively accepted system of assumptions about truth of basic beliefs, while a hermeneutical horizon is a hermeneutical perspective where beliefs become more precise axioms.

We can also try to apply the methods proposed by Król to reconstruct a hermeneutical perspective. For this, we need only to be aware that, say, telecommunication engineers have such a hermeneutical perspective characteristic for their profession and to ask what beliefs constitute this perspective. Naturally, to answer this question, we need to satisfy at least two conditions. First, we must have a positive or at least neutral attitude to telecommunications; we would not answer this question correctly, if we believe (as some humanist philosophers of technology do) that all technology and in particular telecommunications only enslaves people. Second, we must have some understanding of telecommunications, coming from first hand experience, at least a good and prolonged contact with telecommunication engineers. When reconstructing a hermeneutical perspective, we assess an *intuitive system of accepted beliefs*, and we would not learn this system even by direct questioning (see, e.g., Wierzbicki 1997, 2005), we can only infer it indirectly.

How does all above relate to the *Clash of Civilizations*? The first conclusion is that globalization has also a cultural dimension, starting with professional cultural groups. If mathematicians or telecommunication engineers on entire globe understand today each other, other dimensions of cultural divide might be not as strong, as Huntington wants us to believe.

The second conclusion is that what is applicable to cultural professional groups, might be also applicable to cultural civilizations. *Cultural civilizations have also different hermeneutical perspectives, and to understand deeply a different civilization we should try to reconstruct its perspective, the system of intuitively assumed beliefs about truth.* In other words, in order to understand deeply the Muslim culture we must reconstruct its hermeneutical perspective, try to analyze without bias what are the deepest beliefs motivating this culture. Since I did not live in a Muslim country long enough, I shall not attempt this task; but it is doable.

However, I lived long enough in Japan, a country deeply influenced by Buddhist values, and I can reconstruct at least some elements of Buddhist hermeneutical perspective. In the *Clash of Civilizations*, Huntington does not adequately account for the extent and possible future impact of the Buddhist culture that includes Japan, other South-East Asian countries, large parts of China and India. And this culture could have a very positive impact, if a *Clash of Civilizations* would indeed be coming.

4. Hermeneutical perspective of Buddhist culture

The main element of such a perspective I would call *fundamental naturalism*, characteristic for a Buddhist culture. It is based on two basic assumptions. First is a basic ontological assumption of naturalism that *humans are not alone*, that beside us there is an external part of reality containing living subjects and non-living objects, which I shall call shortly *nature*; moreover, that *we learn in interactions not only between ourselves, but also with nature*. The second is more decisive for fundamental naturalism: it is an assumption that *humans are not lords, but parts of nature, and other parts of nature can be as well treated as subjects*. Both assumptions appear sometimes in Western culture, but are often dominated by opposite beliefs. Naturalism—expressed by the first assumption—is strongly attacked by skeptical philosophy or by postmodernist constructivism. Fundamental naturalism—expressed by the second assumption—is contrary to Western cultural tradition, both Christian and materialistic (Christian religion assumes that God has given to humans the lordship over nature, materialistic Marxism assumed that people have the right to transform nature).

Fundamental naturalism is not equivalent to atheism. Buddhists believe in God, only not as the Creator, but as the ultimate Goal; this resolves the inner contradictions of the concept

of benevolent Creator, who created world including evil¹. Such beliefs were also sometimes encountered in Christianity, e.g. St. Francisco was also a fundamental naturalist. Fundamental naturalism is close to the ideology of defenders of natural environment or *greens*. For that reason, environmentalism is a natural belief for a Buddhist.

Fundamental naturalism might have diverse consequences for the Western philosophy, that since Plato believes in the domination of humans over nature and limits epistemology to human cognition, without asking how a tree recognizes summer from winter or how a dog recognizes a well wisher, a person that likes dogs. I have argued elsewhere (Wierzbicki 2009) that since the cognition of non-human subjects has a preverbal character, it is similar to the concept of human intuition.

Another aspect of Buddhist culture is that it was created in a monsoon climate, hence in a civilization requiring advanced water engineering for supplying rice fields with water. This resulted in a *group mentality* of Buddhist culture, the *belief that working together in a group creates a greater value*; *individualism* is a feature of Western culture. Buddhist culture is thus not against government, it easily blends with Confucianism, although remains independent. Group mentality is not against competition, either, but promotes rather group competition over individual competition inside the group. Between others, this feature resulted, e.g., in the Japanese successes in quality control, etc.

Still another aspect of Buddhist culture is its suspicion towards philosophical skepticism. It is related to fundamental naturalism: if humans are part of nature, nature can teach them knowledge and wisdom. And the argument that nature is a human concept, thus an effect of our thinking and thus supposedly cannot be the cause of our thinking, as proposed by (Latour 1987, p. 99), leaves a fundamental naturalist unconvinced: naturalism is accustomed to circular reasoning or rather feedback effects in describing developments, does not find them paradoxical.

5. Conclusions

I have presented above only an outline of the hermeneutical perspective of Buddhist culture, it certainly deserves much more detailed study. But even this shortened analysis results in a conclusion: *we certainly understand a foreign culture much better, if we try to understand its' most fundamental beliefs.*

Thus, *rather than preaching an inevitable Clash of Civilizations, we should think about methods of preventing it.* The method of reconstructing hermeneutical perspective might be a useful tool of such prevention, increasing the understanding of different cultures, thus promoting a *Dialogue* or an *Alliance* of civilizations and a deeper understanding of the Other.

Moreover, Antoni Kukliński (2010) is right in his warning “I am convinced that the United States and Europe should strongly resist the allure of a genteel surrender”, but the analysis presented in this paper justifies an extension of this warning and a positive conclusion: *United States and Europe should anticipate the development and prepare own moves worth an important geopolitical and geo-cultural player; for example, an initiative towards increased world governance.*

¹ There are many attempts to resolve this fundamental contradiction, but all are logically wanting, starting with the classical “you should not question your Creator” (which assumes the existence of a Creator and uses actually a circular argument), or that “the Creator gave humans free will and evil results from the application of free will” (which overlooks the fact that our free will is not absolutely free, e.g., we cannot penetrate hard walls by pure free will, hence the limits of our free will were decided by the Creator), etc. Buddhist assumption that there was no Creator is much more consistent logically.

References

- Braudel F. (1979) *Civilisation matérielle, économie et capitalisme, XV-XVIII siècle*. Armand Colin, Paris
- Castells M. (2000) *End of Millenium: The Information Age*, Vol. 1, 2, 3. Blackwell, Oxford UK
- Foucault M. (1972) *The order of things: an archeology of human sciences*. Routledge, New York
- Gadamer H-G (1960) *Warheit und Methode. Grundzüge einer philosophischen Hermeneutik*. J.B.C. Mohr (Siebeck), Tübingen
- Heidegger M. (1927) *Sein und Zeit*. Niemayer, Halle
- Huntington S. P. (1993) The Clash of Civilizations? Foreign Affairs, Summer 1993
- Huntington S. P. (1997) *The Clash of Civilizations and the Remaking of World Order*. Simon and Schuster, London
- Husserl E. (1973) Cartesianische Meditationen und Pariser Vorträge. [Cartesian meditations and the Paris lectures.] Edited by S. Strasser. Martinus Nijhoff, The Hague, Netherlands
- Król Z. (2005) *Plato and the Foundations of Modern Mathematics* (in Polish, Platon i podstawy matematyki współczesnej). Wydawnictwo Rolewski, Nowa Wieś
- Król Z. (2007) The Emergence of New Concepts in Science. In Wierzbicki A.P., Nakamori Y, eds (2007): *Creative Environments*, op.cit.
- Kuhn T.S. (1962) *The Structure of Scientific Revolutions*. Chicago University Press, Chicago (2nd ed., 1970)
- Kukliński A. (2010) The Geostrategic Reconfigurations of the Global Scene. The Experiences and Prospects of the XXI Century. This volume.
- Latour B. (1987) *Science in Action*. Milton Keynes: Open University Press
- Opala P., Rybiński K. (2008) The Rise of China and the Failure of Democracy. In: A. Kukliński, K. Pawłowski (eds.) *Futurology. The challenges of the XXI century*. Reupus volume 4, Nowy Sącz
- Said E. (2001) The Clash of Ignorance. *The Nation* October 2001
- Wierzbicki A.P. (1997) On the role of intuition in decision making and some ways of multicriteria aid of intuition. *Multiple Criteria Decision Making* 6:65-78
- Wierzbicki A.P. (2004) Knowledge creation theories and rational theory of intuition. *International Journal for Knowledge and Systems Science* 1:17-25
- Wierzbicki A.P. (2009) Metafizyka naturalizmu fundamentalnego. In A. Motycka (ed.) *Nauka a metafizyka*, Wydawnictwa IFiS PAN, Warszawa, in print
- Wierzbicki A.P. (2010) Wyzwania i zagrożenia przyszłości — refleksje metodologiczne i interdyscyplinarne. In: J. Kleer, B. Galwas, A.P. Wierzbicki (eds): Wyzwania przyszłości. Komitet Prognoz "Polska 2000 Plus" przy Prezydium PAN, Warszawa

IVO ŠLAUS

CRISIS—VIOLENCE AND WAR —VALUE SYSTEM AND CHANGE

1. Crisis

The world is in a global economic and moral crisis compounded by the destruction of our environment, by scarcity and unreliability of energy supplies, by declining social capital — lack of trust among people, of self-confidence and of leadership. These crises are interconnected and interdependent. Though the crisis is global, each country — because of its specificities — has to face this crisis in its own specific way. The present world is only partly global, but it is fragmented when it needs to generate, stimulate and anticipate necessary and desirable changes, and when it is necessary to react quickly. The economic crisis which today shakes the whole world is the greatest challenge facing the globe and each individual state. In mid-October 2007, Rodrigo Rato, then director of IMF, said that the financial crisis is the biggest problem, more important than terrorism, the danger of weapons of mass destruction and the war in the Middle East. The Financial Stress Index (FSI) shows that of 113 financial stresses over the past 30 years, 43 were generated in the banking sector and 87 affected two or more states. The current financial stress affects almost all countries (1,2). Obviously aware of the economic problems, President of the Federal Republic of Germany Horst Köhler in early November 2007 organized with the Club of Rome a discussion on the challenges of the next phase of globalization (3). Already in 1992 Joseph E. Stiglitz warned of the need of greater government regulation of mortgage securitization (4). Though market economy has achieved significant successes (5), extreme consumer society and unlimited privatization (6) destroy Nature and people; they are not sustainable (7) and violate basic moral laws.

Basic features of the contemporary world are interconnectedness, globalization and rapid changes and they are in large measure generated by science. The solution of the problems of our world demands even more scientific research, so that science, research and knowledge intertwine our life, leading to knowledge-based society. The goal of the European Union is to become knowledge-based sustainable society by 2025. For instance, comparison between economic development measured by human development index (HDI) and consumption of energy measured in tons of oil equivalent (toe) demonstrates that HDI increases until energy consumption reaches 3 toe/person-year. If all countries would reach that level by 2030, then the consumption would increase by 2.6 times completely destroying our Earth, if all the energy would come from fossil fuels (8). Obviously, more research in natural, technical and social sciences is needed.

Creators and carriers of knowledge are people and therefore, the people are the greatest wealth of any country. We argue that the overcoming of the present crisis should never threaten people and their creative potential in any country. Moreover, any and all actions should lead to improving environment and improving the quality of life of humans — active, educated and happy people.

Today the demographic picture of the world is rapidly changing: till the end of this century the number of inhabitants of our Earth will reach about 9–10 billions, but in two centuries it will decrease to about 2 billions (e.g. the population of China will start decreasing in 2029 (9)). This is the result of a decreasing fertility rate. At the same time the life expectancy is increasing. It increases 2–3 months each year so that in 2050 more than 50% of inhabitants of Germany and Croatia will be over 52, and of Japan and Bulgaria over 56. It is incorrect to state that the society is aging since a person 70 years old today is more active and healthier than a person of 50 hundred years ago (10). This demographic transition occurred in less than 50 years! The retirement system: retirement after 65, introduced more than 100 years ago in Europe by Chancellor Bismarck, is not sustainable. The world and scientists have not been prepared for this rapid demographic transition and its consequences. This again emphasizes the need for more research.

Employment in many European countries is rather low — below 70%, and it is particularly low for persons younger than 30 and older than 50. The aim of the EU is to achieve over 70% (as Denmark did emphasizing flexicurity: flexibility + security (11)). Today the population of some countries is decreasing and of some countries is still increasing, and there is difference in job demands stimulating migrations. Migrations represent opportunities and problems (12). In spite of unemployment some countries need migration of workers (13). It seems that we still do not completely understand the nature of the present crisis, and this is at least partly caused by inadequate socio-economic indicators (14, 15). In a global world of rapid changes economic development will be based on the restructured economic system (16). All actions and measures to overcome this crisis have to enable and facilitate the realization of our strategic goal (17) — development of the sustainable society based on social cohesion (18) and knowledge. Most “old” tools designed for a system that was not interdependent and it was slowly changing cannot be useful. It is possible to develop various scenarios, but future is always full of surprises (19). Each country has to find its own successful solution.

2. Violence and War

The concept of violence is derived etymologically from *violentia* meaning vehemence, a destructive force, providing so called minimalist conception of violence, and also from *violare*, i.e. to violate rights, to infringe upon (20). The Concise Oxford Dictionary defines violence as “Unlawful exercise of physical power.” The meaning of lawful is described by Max Weber “State has a monopoly on violence practiced within the confines of a specific territory.” WHO defines comprehensive concept of violence (21) as “The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.” The phrase “use of power” includes also neglect and omission — the sin of omission!

Presently each year more than one million people lose their lives, and many more suffer non-lethal injuries. In 2000 more than 1.6 million persons died due to violence, i.e. 40 persons per 100,000. Violence is the leading cause of death for 15 — 44 year old. Violence is ten times more

frequent in low and middle income countries than in rich countries linking at least to some extent violence and poverty.

One can distinguished between visible, direct violence and invisible violence which includes cultural and structural violence, which turns out is even more destructive and deadly than direct violence. Violence has space and time contexts. It can be proximate and distant, remote, back-staged. Violence has “conflict” history, including “the history of the future”. Collective violence includes social, economic and political violence. Social violence comprises cultural norms, distruction of trust and of social networks and of social capital, abuses of human rights, and also poor and wrong education, inequality, fueling of group fanaticism along social lines (religious, ethnic, racial). Political violence includes war, terrorism, torture, genocide, state violence, democide (death by government), unequal access to power; lack of democracy — lack of checks and balances. Economic violence is manifested through crime (22), denying access to essential services (energy shortages and ecological footprint) and creating economic division (inequalities, breakdown of social cohesion: larger inequalities shorter life expectancy and larger crime rate), and also unequal access to resources and abusive control over key resources.

There are many consequences of collective violence. For example, 1) impact on health: infant mortality in 1993 in Sarajevo increased since deliveries of premature babies doubled and average birth weight fell 20%, decline in immunization in Bosnia&Herzegovina declined from 95% in 1989 to 35% in 1994, similarly morbidity and psychological stresses increased; 2) demographic impact: number of refugees in 1970 was 2.5 millions and in early 1990-ties it was 30 million persons and many children became child-soldiers and child-criminals. 3) socio-economic consequence of violence is estimated in cost of billions/trillions of dollars annually, resulting in decrease in productivity and in reallocation of resources.

Peaceful societies are exception. It is estimated that 90–95% societies were engaged in war. Evidence from 12,000 BCE found in the Nubian cemetery reveal 50% violent deaths. Though, throughout most of history war casualty rates were 60% compared with few percent today, a war among nuclear powers today would result in a destruction of humankind or at least of the present civilization. There are other unexpected conclusions in early societies, e.g. there is no correlation between population density and war, between war and trade, and most important activity even in most war-like society are peaceful, e.g. art and pleasure. Therefore, it is important to ask “Does modern biology and social science know of any biological factors including those concerned with the biology of violent behavior; that constitute an insurmountable or serious obstacle to the goal of world peace based upon principle of equal rights and self-determination of people and including an ultimate goal of general and complete disarmament through the United Nations?” There are historical examples that violence has been abandoned when it was counterproductive! Archaeologists discovered a civilization in Canal, Peru, that lasted a thousand years. Total population of Canal is estimated to over 20,000 and Canal people engaged in commerce with their neighbor and in pleasure (24). Warfare changed radically over time, i.e. it is culture caused and culture shaped. There are several peaceful tribes today. In May 16, 1986 The Sevilla Statement on Violence was issued (25) stating that it is scientifically incorrect to claim that animals make war, and since we are like animals, war is our destiny. It is incorrect to claim that war is part of our nature, that we have violent brain, genetically programmed and that evolution “selected” aggressive behaviour, and that war is caused by instinct. The Sevilla Declaration was signed by 20 leading scientists and it concludes with “We conclude that biology does not condemn humanity to war... The same species that invented war is capable of inventing peace.”

Elimination of war and violence is presently essential to assure our existence. On one side, it has been shown that democide — death by governments of mostly their own citizens has resulted in 20th century in killing 170 — 360 million children, women and men, more than the battle/ war

dead estimated to about 50–70 millions (26). Democide is committed by absolute power; its agency is government and inadequate laws, as M. Gandhi correctly emphasized “An unjust law is itself a violence.” On the other side, war is now obsolete and here are my arguments: 1) Old political (war as a continuation of politics by other means as stated by von Clausewitz) and economic (to conquer to get resources, women, and simple looting (27)) justifications are no longer valid. No war since WWII (28) accomplished “desired policies”, and war leads to destruction of resources. 2) Peace Index (29), developed by the University of Sydney group and by the Economist team based on 24 input indicators puts Norway, Denmark and Japan at the top of the list. France is ranked 36th and Vietnam 37th, UK 49th, Croatia 60th, Turkey 92nd, the USA 97th, India 107th, Pakistan 127th, Russia 131st and North Korea 133rd — all nuclear powers are ranked very low and famous old dictum “prepare for war to enjoy peace is clearly incorrect”. 3) Domsday clock on the front page of the Bulletin of the Atomic Scientists put in 1947 the humankind at 7 minute before midnight. Following the end of the Cold War in 1990 it was at 17 minute before midnight and now it is at 5 minute before midnight. Namely, most important: no current threat facing humankind, e.g. ecological and economic disaster; pandemics, climate change, shortage of energy can be solved by war. Actually war and violence make all problems and threats worse. As President D. D. Eisenhower said in his speech on August 16, 1953 “Every gun made, every warship launched, every rocket signifies in the final sense a theft from the hungry. The world in arms is not only spending money. It is spending the sweat of its laborers, the genius of its scientists.” And Aurelio Peccei wrote in 1984 “To ensure the development of humankind, it is necessary to banish war, any military and non-military violence from our culture. Violence and its ideology are remnants of the past., social pathologies incompatible with the new era.” “Aggressive behavior, especially its more dangerous forms of military action and criminal assault is learned. But the learning is prepared — we are predisposed to slide into irrational hostility under certain conditions.... These rules have evolved during the past hundred thousands of years of human evolution.....However, these rules are now obsolete.” as emphasized by E.O. Wilson.

3. Value Systems and Change

Twenty-five centuries ago Heraclitus from Ephesus declared “Panta rei” — everything flows, changes. Concepts of cultures, identity, civilizations, laws, human right and responsibility, emotion, education, paideia, spirituality, religions, mind, brain, intelligence and needs changed throughout history. Human beings and social structures (e.g. family and the state) also changed.

Average life expectancy increased from about 40 at the beginning of the 20th century to almost 80 today drastically influencing health care, employment and education — concepts that themselves shaped from the mid 1800-ties on. Demographic changes prompted massive migrations. Slavery began in prehistoric times but exists even today. On January 27, 1416 the Republic of Dubrovnik forbade slaves to be transported through its territory. Slavery was abolished by Akbar the Great in India, in 1833 in the British Empire and in 1865 in the USA. When Aristotle wrote in his *Metaphysics* “All men have a desire to know” and when Jefferson wrote in the Declaration of Independence that “All men are created equal and they are endowed by the Creator with certain unalienable rights” neither of them meant all persons. Though Aristotle discussed the concept of rights, the notion of human rights appears for the first time in 1525 in the “Twelve Articles of the Black Forest” during the German Peasant War. Until 19th century many Western democracies had property qualification, i.e. only landowners could vote and often the voting right was weighted by the amount of taxes they paid. Other conditions were gender, religion, race and literacy. For instance, Catholics in Britain were allowed to vote only after 1829 and Jews after 1858. In

Canada several religious groups opposing military service were not allowed to vote in 1917. In 1906 Finland, at that time a grand duchy of the Russian Empire, formed their own parliament elected by all adult citizens — women included. In most European countries women voted only after World War I and in Switzerland only after 1971. Short-lived Corsican Republic (1755–1769) was the first to grant suffrage to all inhabitants over the age of 25. Freedom in the World lists New Zealand as the only free country in 1893, in 1972 there were 43 free countries, 38 partly free and 69 non-free countries. In 2002: 2.5 billion people lived in free countries, 1.46 billions in partly free and 2.17 in non-free countries (30). Though states were formed five millennia ago, there is a dramatic change from the “*Cuius regio, eius (illius) religio*“ of the Augsburg Treaty of 1555 and the Westphalian Treaty of 1648 to present sovereign nation states that are multinational and multicultural. Family also changed: from an extended family to a current pattern where single-parent family plays a large role and where fertility rate dropped significantly below 2.1 — the replacement level.

In the contemporary interconnected, interdependent and fast changing world changes are even faster. Fast changes and interconnectedness are generated by scientific research. Modern science developed through disciplinary research. Last two centuries were characterized by physical and life science: quantum physics, theory of relativity and theory of evolution. “Nothing in biology can be understood without evolution.“ wrote T. Dobzhansky. Yet almost half of humankind negates evolution (31) and believes that God created humans, animals and plants about 10,000 years ago and that belief is consistent during the last 25 years. However, “Evolution is a fact, and from a Christian perspective, one of the greatest God’s works.” (32)

“Evolution on this planet is a history of the realization of ever new possibilities... Through the new knowledge it has defined man’s destiny and responsibility to be an agent for the rest of the world... It is as if man had been appointed managing director of the biggest business of all, the business of evolution.” Thus wrote Julian Huxley (33) outlining biological and socio-cultural evolutions, the second one being much faster and accelerating since the agricultural revolution. Biological and socio-cultural evolutions are now intertwined. Today human beings are directing the evolution, but they are also responsible for assuring conditions for the evolution to develop either on our finite Earth or anywhere in the universe where our ingenuity brings us. The present epoch is Anthropocene Epoch (34). Human beings are the threat and dangers, but also the most important resource, and so far an underused resource.

Human beings produce facts and information: reliable, true but also incorrect, and definitely much too many to be able to adequately process. Through curiosity, creativity and research human beings produce expertise and flexpertise, knowledge, some buried as tacit knowledge — justifying a famous M. Polanyi’s statement that we know more than we think. In spite of tremendous progress of scientific knowledge we still know much less than we need: in physics we think we understand 4% of our Universe. We know that 23% of our Universe is Dark Matter and 73% Dark Energy, but we have no clue what they are. We hope that Large Hadron Collider at CERN will explain the masses of particles, or maybe we hope that it will not, so that we may find New Physics. Notwithstanding great progress in brain research, the mystery of brain-mind relationship and the issue of our irrationality puzzle us. We think we know how to measure our rational intelligence to solve logical and strategic problems (IQ), but computers can be designed to have similar features. The awareness of our feelings and of the feelings of others — the emotional intelligence (EQ) (35) is important. There are arguments that EQ is at least to some extent a basis for IQ, i.e. if the brain area with which we feel is damaged we think rationally less effectively. Animals have also feelings. Intelligence is even more complex (36). Human beings longing for meaning and asking the ultimate question require spiritual intelligence (SQ). There

are arguments that parts of our brain are associated with SQ and even the label “God’s spots“ is used for them. According to H. Gardner (37) we possess multiple intelligences.

“There are more things in heaven and on the Earth than are dreamt of in your philosophy, my Horatio“ or — maybe — there are more things in our thoughts and dreams and the virtual might be considerably larger than the real. To face challenges of the contemporary world we might need new out-of-the-box thinking and more than thinking. We need knowledge to face opportunities, threats and dangers and, if Aristotle was correct in his *Nicomachean Ethics*, we might need knowledge to be happy.

Frank Zappa wrote “Information is not knowledge, knowledge is not wisdom, wisdom is not truth, and truth is not beauty...“ Psychologists, sociologists and philosophers are addressing wisdom (38) — of an individual, of a collective and of a crowd (39). Can a social group be composed only of wise persons, would then the burden of wisdom be too much? Are really wisdom and happiness anticorrelated? Can God be happy and wise?

It is argued that cultures are for social groups what instincts are for individuals. Should one seek for the meaning and genesis of value systems through the evolution: biological and socio-cultural, and try to understand which value systems give evolutionary advantages? How are beauty and wisdom related to evolutionary advantages? Even a superficial view shows that there is more beauty in the world than the evolution requires. Beauty is related to symmetries and broken symmetries, and they are related to conservation laws and to space dimensionality. In one dimension there are only 5 possible varieties of frieze patterns, in two dimensions there are 17, in three dimensions 230 and in four dimension 4783 different patterns. Is abundance of beauty related to a space we actually live in, though not aware of it? Symmetry limits and enriches. On the other hand there is much less wisdom than the current epoch demands. Is that related to our value systems that originated in particular historical circumstances that are no longer relevant?

World Value Survey Association (WVS) performed five systematic studies of value systems 1981–84, 1989–93, 1994–98, 1999–2004 and 2005–2008 involving 97 countries and 88% of the world population. Their main results are (40):

- 1) WVS displayed values in a two-dimensional space. One axis extends from survival and conformity to self-expression and the other from traditional to secular/rational values. Self-expression represents rising demand in economy and politics, higher tolerance for diversity and child-rearing stressing imagination rather than obedience and hard work. Survival values are focused on surviving and on conformity with existing/imposed rules. Traditional values include high level of national pride, high regards for family values, low tolerance and abhorrence of abortion, euthanasia and divorce. Secular/rational values stress scientific and rational approach.
- 2) There is wide difference among countries (see Fig. 1), and contemporary cultural/religious/geopolitical areas: e.g. Africa, Protestant Europe, English-speaking, ex-communist and Confucian countries are indicated. WVS shows that Montenegro, Serbia and Croatia are more secular/rational than the USA and Ireland, and that Confucian countries are more secular/rational than ex-communist, English-speaking or Catholic European countries.
- 3) Values changed, e.g. values in Italy changed from (-0.35, +0.35) to (0.25, 0) and in France from (+0.1, +0.75) to (0.65, 0.82). However, data show no convergence of values. Societies are as distinct in 2007 as in 1981!
- 4) Values are crucial for economic development, quality of life and for governance.
- 5) More knowledge shifts values toward higher self-expression.
- 6) There is a positive correlation between democracy and self-expression. Countries whose citizens have higher self-expression in general are democratic and have higher human rights.

Similarly, the higher conformity correlates with lower effective human rights. Countries that have lower level of democracy than their citizens' values are likely to soon become democratic.

- 7) Modernization and endeavor to become a knowledge based society have conflicting effects on religiosity: decreasing it and increasing.

Value Survey involves measurements of indicators. It is necessary to measure, but one has to know what and how and with what precision. It is beyond this paper to assess the reliability of WVS. I find WVS interesting and indicative, but definitely not conclusive. Lack of meaningful measurement prevented Aristotle to understand motion and forces, and in economics and in scientometrics we still have unreliable indicators.

Each activity has its own value system. There is similarity among them, but also contradictions and incompatibilities, at least on the first level.

The value system of economic activity includes work (work is a much broader concept than employment and some work is non-monetarized and some even non-monetarizable), employment, money, competition, cooperation, productivity, consumption, welfare and profit. It does depend on inventions and innovations, and therefore, on research and development. All economic activities are involving human-nature interactions, but the value system presently emphasizes money and profit over everything else. Studies of characteristics of CEO show that organized, dogged, anal-retentive and slightly boring persons are more likely to strive as CEO than creative, emphatic and team-oriented persons. This is the characteristics of what economic activity is today rather than what it should be.

Science is cumulative and objective, and it is problem-solving focused, primarily in those "areas where the light is" (within these areas is all incremental research and also some breakthroughs). Curiosity and heresy are integral features of scientific research and a unique mixture of discipline and challenge that may appear as disobedience. In addition to hardship and frustration scientific research is a great fun. It was B. Pascal who said: "We come to know the truth not only by reason, but still more by our hearts". The domain of science keeps increasing, but it is nevertheless finite and our daily life takes us constantly beyond the domain of science — and we might not be even fully aware of that. Science and/or technology cannot give us the answer if we are deeply in the domain beyond science.

Religions assure salvation through obedience and respect of certain laws, practices and rituals. However, "What is involved in God's commandment is not an obedient submission to the will of God revealed in law. Anyone who understand the commandments legalistically and not in the light of love is constantly faced with the conflict of duties.... God's concern is not law, but human being." (41)

Politics permeates everything. Though Aristotle claimed that politics is the essential science, there are great incompatibilities between scientific research and politics. Politics has been defined as the art of possible (42). Its main objective — its value is political power. Politics does not tolerate heresy and disobedience and it hardly accepts diversity.

On a higher level economic activity, religion, scientific research and more broadly knowledge, as well as politics and more broadly governance are all concerned with a human being and therefore, human beings should be the essential value, and all other values should be changed and/or abandoned if in any way they contradict or hinder the achievement of the basic value — benefit to human beings. *Now we are slaves of many laws, rules and values that contradict our main values.*

In 1973 John M. Smith applied game theory (43) to animal strategies. Animals not only compete but also share a resource if that is beneficiary. Competition and cooperation are two modes of interactions among social groups. Human beings are social animals and our values are based on social network history. In a complex network of actors with many interactions, where all

The Inglehart-Welzel Cultural Map of the World

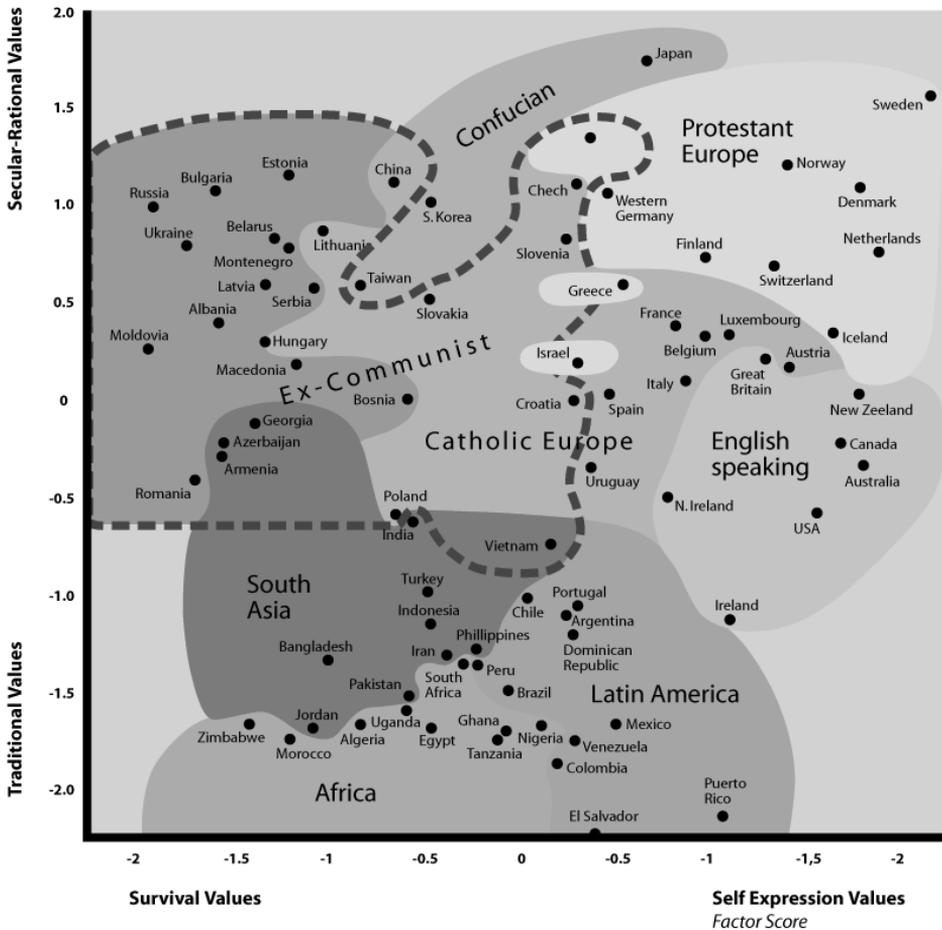


Fig. 1. Results of world values survey 2005–2008

actors are confined, the winning strategy is: tit-for-tat: cooperate and never be the first to defect, retaliate only after your partner has defected, forgive and cooperate after retaliating just once (44).

The basis of all major religions is the Golden Rule. In 500 B.C. Confucius states “What you do not want others to do to you, do not do to others.” And in The Mahabharata in 150 B.C. “This is the sum of all true righteousness: deal with others as thou wouldst thyself be dealt by.” And more action oriented “Thou shalt love thy neighbor as thyself.” (Lev.19:18, 1000 B.C.) Who is my neighbor? In a fragmented world actors could move from one area to the other and therefore avoid retaliation. In a global world we are all interconnected and the correct answer was given by Darwin “As man advances in civilization, and small tribes are united into larger, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him. This point being once reached, there is only an artificial barrier to prevent his sympathies extending to men of all

nations and races.” (45) And by Nobel laureates’ declaration in 2000 “*As never before, the future of each one of us depends on the good of all.*”

Future always includes surprises. Next hundred years will see increase in world population to 9–10 billions and increase in life expectancy by another 20 years. By 2020 nano-machines will be routinely used in medicine — entering the bloodstream to feed cells and to extract waste. By 2030 mind uploading will be possible. By 2040 “human body 3.0” could alter its shape and organs could be replaced by superior cyber implants. Synthetic biology — design and construction of new biological devices and systems that do not exist in the natural world — is being rapidly developed (46). In a few decades several existing and developing technologies will converge: nanotechnology (manipulation with atoms), biotechnology (genes), information communication technology (bits) — ICT and cognitive neuroscience (neurons). Artificial intelligence and machine-machine interaction will likely be common in a few decades. By 2300 the world population will decrease to two billions because of fertility decline. Within few decades median age of the population of most European countries and even of China will be 50 and the percentage of those over 65 and of those over 80 will be substantial. These are scenarios and there will be surprises!

In an interdependent, global and fast changing world human beings and social structures will change, so will cultures and identities. Now 70% of citizens are dissatisfied with their governments and think that their country is going in a wrong direction. In almost all evaluations of the trust in various institutions: governments, parliaments, police and business are at the bottom (sometimes surprisingly the army is very high). Should we change them? The 20th century gave us enough reasons to avoid revolutionary changes. It is the means that were incorrect, not the change. The change is needed as was emphasized by Marcus Aurelius “What can take place without change?... Can anything that is useful be accomplished without change?” Most citizens favor democracy, but currently democracy is reduced to free elections (47) (elections are within a constrained set and often produce poor results (48), markets allow more freedom of choice), ignoring checks and balances and disregarding the need to actually empowering all citizens *to be able, motivated and entitled to govern their lives without hindering but actually stimulating and promoting leadership*. Political leadership is very complex. Plato argued for philosopher-king and was supported by Erasmus “Unless you are a philosopher you cannot be a prince, only a tyrant.” Napoleon stressed that leader is a dealer in hope.

The essence of the Golden Rule is that “people are the true wealth of nations. The basic aim of development is to enlarge human freedom and choices so that people live full and creative lives. This must benefit everybody equitably.” (49)

There are about 5,000 different cultures today and they are as crucial for us as the biological diversity. Out of 5,000 cultures about 1,000 have more than several million people. Yet there are only 200 sovereign states. Sovereignty today is considerably different from that of the 16th century and it will change even more, but they are still needed to assure that people are the real wealth. Cultures change, disappear and more people belong to more than one culture. The aim to have one civilization, i.e. one system of laws is cumbersome.

Economic activity considerably changed and will change even more. Agriculture decreased and services skyrocketed. Khalil Gibran wrote that work is a love made visible. The current employment rate in the working age cohort is about 60%, EU striving to reach 70%. However, the role of robots is greater and greater. Sugar factory near Brussels decades ago employed 5,000 workers and now has only five workers and robots. The joke is that a modern factory will have robots, one dog a one person. Robots work, a dog guards the factory and a person feeds the dog. Though it is clear that machine have numerous shortcomings, the question what should human beings do is nontrivial — obviously much less manual work and considerably more creativity and critical thinking. Throughout history society educated workers and soldiers. The ideal was

expressed recently by one CEO “I have a group of highly intelligent employers who do not think.” World now needs creative and critical doers-thinkers: to do, to challenge and to change. The current global crisis cannot be overcome in a same way as previous ones since the present is distinctly different from the past. We never had ecological footprint of 1.29, nor weapons of mass destruction. A value of goods, their price, markets and a virtual monetary sphere (now larger than the real economy) have to be investigated and probably changed. A. Smith, D. Ricardo, K. Marx, F. von Hayek, L. von Mises, J. Keynes and the Chicago school are giants of economy, but we now live in a different time where we are consumers and producers, exploited and exploiter, and changes are so fast that we cannot perceive *our permanent interests*. Money is technology — useful and dangerous — as fire, nuclear and biotechnology. It should always be a servant of human beings and not a value. In a global world where global commons are essential, should money and private property be changed? St. Bernard de Clairvaux said “I have what I gave to others.” It is important to be rather than to have. The current global crisis cannot be solved and future ones cannot be prevented *only* by demanding that people change their behavior: The system is faulty and has to be modified.

We and our values are the products of biological and socio-cultural evolutions. While the socio-cultural evolution carries the imprint of specific historical circumstances that may no longer be valid, our biological evolution makes ourselves. Biology imprinted in us the Golden Rule and curiosity, our desire to know (Aristotle, *Metaphysics*). “Human existence depends upon compassion and curiosity. Curiosity without compassion is inhuman. Compassion without curiosity is ineffectual.” (50) We do need more values, but the two: Golden Rule and curiosity are our basic and common values and all others should be treated as replaceable. This is a very tall order. It is much easier to adhere to numerous laws, than to follow the Golden Rule and assure conditions to fulfill our curiosity.

The change is needed as was emphasized by Marcus Aurelius “What can take place without change?... Can anything that is useful be accomplished without change?” What has to change? As A. Peccei stressed “The greatest obstacles are our individual and social limits: psychological, cultural and political expressed through personal and collective myopia, irresponsibility and incorrect governance, destruction of trust, our overreliance only on IQ rather than on EQ and SQ as well. We do need new economics, as we need novel education and novel governance, we need new values — all emphasizing global world but without reducing the uniqueness of each individual human being.

References and Comments

- 1) World Economic Outlook — October 2008: Financial Stress, Downturns and Recoveries, the IMF (WEO, p.133–138); K. Rybinski et al, Gordian knots of the 21st century, Ministry of Regional Development, Warsaw, 2008. L. Brown, www.earthpolicy.org/Books, Dec 17, 2008 asserts that the real price of oil is five times that which the consumer pays at the pumps, when the costs of finding sources of oil, production and delivery to the pumps, including the huge cost of climate change, pollution costs, and military costs of securing energy sources, are added. The price of a barrel of oil in the summer of 2008 was \$150 and projections (WEO, p. 119) to August 2009 foresaw that the price would be around \$100, with a 50% chance that it would be between \$70 and \$115. As we know, the price of a barrel is now around \$35. Are we at the beginning of Cognitive Capitalism (see Carlo Vercellone «Work, information and knowledge in the new capitalism: hypotheses on cognitive capitalism», lecture at a conference at McGill University, Montreal, May 2006)? The unregulated capitalism is not sufficiently resistant to be able to survive a collapse even of a single «hedge» fund, as was the case with the 1998 collapse of LTCM (New York Times column of Nobel Prize winner P. Krugman). Al Gore and David Blood in the Wall Street Journal also stress the need for ‘sustainable capitalism’. Harvard Business School Centennial Global Business Summit held in November 2008 was aimed to evaluate the values

- of market capitalism. Knowledge-based society is not a society using available knowledge, since always societies used available knowledge. Neither the knowledge-based society is a society where science and research are exclusively in the service of economic development, a servant to economy and politics. Knowledge-based society is a society generating and anticipating changes, capable of progressing with changes without destroying either humans or nature. It is a society where knowledge is the basic resource and people — generators and keepers of knowledge — are the true value. Today's economic crisis reveals the sins of the structure. W. Buffet has called the contemporary economic crisis the Pearl Harbour of today's America and has sought prompt action. Buffet has proposed tax rises for the rich, commenting "I am paying the lowest tax rate that I have ever paid in my life and that is not correct."
- 2) Warning the participants at the G-20 Washington Summit, Nov 15–16, 2008 Hazel Henderson stressed the importance of urgent reforms of the unregulated economic system, where daily some 2.000 billion US dollar (global annual GDP is only 60.000 billion USD) is 'traded', of which 90% is pure speculation. In 1970s James Tobin recommended the introduction of tax on speculation, following an even earlier suggestion of J.M. Keynes. In 1989 L. Summers supported that proposal. (iNS/news/net 2008–11–20, H. Henderson «Ethical markets»). Money is a source of many speculations. However, though we use money for less than 5000 years, it is a very useful invention. In a knowledge-based society it will be necessary to introduce significant modification, more than just improving the Bretton Woods agreement of the mid 1940-ties of the last century. At the General Assembly of the World Academy in Hyderabad in October 2008. G. Jacobs in his invited lecture "Towards a World Currency" lays out the initiative of Nobel Prize winner R. Mundella for introducing a world currency (Cooper, Richard. (1987) *The International Monetary System: Essays in World Economics*, MIT Press, p.259. Stiglitz, Joseph. (2006) *Making Globalization Work*. W.W. Norton & Co, Inc, Mundell, Robert. (2000) *Exchange Rates, Currency Areas and the International Financial Architecture* [Internet], Remarks delivered at an IMF panel, 22 September 2000, Prague, Czech Republic. Available from: <http://www.usagold.com/>. Mundell, Robert. (2002) *Currency areas, volatility and Intervention*, Columbia University, Discussion Paper #: 0102–09, January 2002. Available from: <http://www.columbia.edu/cu/economics/discaprp/DP0102–09.pdf>, p.11.
 - 3) Before being elected President of Federal Republic of Germany H. Koehler was the managing director of IMF, i.e. R. Rato's predecessor.
 - 4) Joseph E. Stiglitz in his article "It does not take Nostradamus" *Economists' Voice*, Nov. 2008 <http://www.bepress.com/ev> refers to an article of his from 1992, quoting from it thus: "The evidence of incompetence of banks is, by now, bountiful: a series of disasters — real estate loans, oil and gas loans" and he continues "I warned two decades ago of the need of greater government regulation of mortgage securitization."
 - 5) All the socio-economic indicators show that quality of life (with some oscillations) has grown continuously over the last two centuries. Perhaps the clearest indicator is the improved nutrition: the average value for the entire world has grown from 1960 to 1997 from 2250 kcal per person per day to 2750 kcal per person per day and, even more meaningfully: for developing countries from 2100 to 2600 kcal per person per day. Life expectancy has increased everywhere. Increased quality of life is certainly a result of scientific and technological advancements, but also of the market economy, which ensures a high degree of individual freedom.
 - 6) The former member of the German Parliament E.U. von Weizsäcker, held a lecture in Zagreb during the General Conference of the World Academy in November 2005 entitled "Are we destroying the European dream?", in which he criticized the tendency to privatize everything. The Republic of Croatia from 1990 onwards sold "the family silver", with the income received not directed towards production and exports.
 - 7) By 23 September 2008, humanity used up all the resources that our Earth has and was able to provide for the whole year. It means that the Ecological footprint reached 1.27/person, or that humankind in 2008 consumed 27% more than the Earth provides, thus depriving our descendants. The goal is to reduce the ecological footprint print to 1 by 2030, but if we continue this consumption, waste and pollution that will not be possible. This is, as suggested by the Nobel Prize winner Paul Crutzen, the Anthropocene epoch — the epoch in which man has a disproportionately large, often negative impact on nature and on himself (see also: *Conclusions InterAcademy Panel, Academies of sciences, Tokyo, May 21, 2000 "Transition to Sustainability "*. See also *Proceedings of the General Assembly of the World Academy of Art and Science, Hyderabad, India, Oct 2008*). Nicholas Stern in «*The Economics*

- of Climate Change» asserts that the cost of stabilizing climate change between now and 2030 could be around 1.6% of GDP, while the cost of non doing anything will require later 5–20% of GDP
- 8) C. Llewellyn Smith and D. Ward, *Fusion Power*, *European review* 13 (July 2005) 337–359
 - 9) R. Jackson and N. Howe, *The Greying of the Great Powers — Demography and Geopolitics in the 21st Century*, *European Papers on the New Welfare*, No.11, January 2009, p. 123–137
 - 10) Prof. O. Giarini established in Trieste a journal “*European Papers on the New Welfare*”, devoted to researching demographic transition and retirement systems. Instead of an erroneous concept of “aging society” we have argued for “*svecciamiento*” — active, healthy and happy persons older than 70.
 - 11) The Indian Congress Party won the last elections setting a goal of full employment. Federal Republic of Germany President Köhler in his speech in Berlin in October 2007 also highlighted the importance of full employment.
 - 12) The German Marshall Fund of the US Study, Dec 2008 shows that 50% of Americans and 47% of Europeans believe that immigration is more a problem than an opportunity.
 - 13) Croatian Chamber of economy organized at the end of the last year a discussion on the relationship between the need for workforce and migration.
 - 14) The first Nobel Prize winning economist J. Tinberger already criticized the use of GDP, and RF Kennedy said “We cannot measure national achievements by GDP, since GDP includes air pollution, destruction of redwoods, the production of napalm and nuclear warheads. It does not include the health of our families, the quality of their education; it is indifferent to the safety of our streets.” GDP has many advantages, but it is important to analyze whether it is a dangerously deficient indicator during this economic crisis. In addition to GDP, there are a range of indicators which have been introduced in order to compensate for the shortcomings of GDP, e.g. HDI (the Human Development Index), ISEW (Index of sustainable economic welfare) and GPI (Genuine Progress Indicator). While GDP per capita for the United States has grown more than threefold since 1950, GPI per capita has not even doubled.
 - 15) J.M. Barroso, the European Parliament and the Club of Rome in mid-November 2007 organized a meeting dedicated to finding better indicators than the GDP
 - 16) An illustrative example as to how an economy can rapidly and successfully restructure is the USA during World War II, when the automobile industry stopped producing cars and switched to military production. (L. Brown, in Plan B 3.0, e-version).
 - 17) As stated by J. M. Barroso presenting the European Commission Plan “The Plan must be big and bold enough to work in a short-term, yet strategic and sustainable enough to turn the crisis into an opportunity.»
 - 18) EU pays considerable attention to social cohesion within each member state and amongst all the member states and has established funds to strengthen social cohesion. Economic inequalities, particularly inequalities in personal income threaten social cohesion. Plato estimated that a harmonized society needed the ratio between the highest and lowest incomes to be no more than 5:1, and even J P Morgan argues for a ratio of less than 20:1. Today these ratios are over 100:1. In the USA the ratio between the income of senior managers/chief executive officers — CEOs and the average income of workers was 369:1 in 2003 and by 2007 had grown to 521:1 (*World of Work Report 2008*, *Income Inequalities in the Age of Financial Globalization*, ILO and Intl Institute for Labor Studies), while in 2007 in Hong Kong it was 160:1, in Germany 148:1 and in Holland 103:1 (pp. 17,19). Economic inequalities within states have risen since 1990 (pp. 1–8), even before this economic crisis, question remains whether that would have happened if manager wages were tied to general economic success. In the period from 1990 to 2005 two thirds of all countries exhibited growing inequalities (growth of GINI coefficients and the ratio of the top decile to the bottom decile in terms of income) For example the GINI from 1990 to 2000 rose from 0.28 to 0.41 in Estonia; from 0.27 to 0.35 in Macedonia; falling only in Slovenia from 0.28 to 0.26. In the USA it has risen from 0.42 to 0.45 and in Finland from 0.20 to 0.28. It has fallen in Switzerland, Denmark, Germany and France but only by 2–3% (p. 11). If it is based on innovation and successful production, rising inequality can be a driver of economic growth and a creator of wealth, but this is not the case in this context, and especially when the rise in inequality is considerable, then it is a threat to social stability and an inhibitor of economic efficiency. High inequality results in an increase in the crime rate. Quantitative indicators suggest that reducing inequality is one of the most effective measures in reducing the crime rate (p. 22). For example, when inequality in Columbia was reduced to the rate of that in the UK, crime fell by 50%. High rates

- of inequality also result in higher levels of corruption (p. 24), increased macro-economic instability (p. 28) and reduced life expectancy. Life expectancy in 2006 in the 10% of countries with the lowest inequalities was 77.4 years, and in the 10% with the highest inequality only 60 years (pp 2 and 23). Sweden's GINI is 0.25 and the decile ratio is 3.6%: 21.7%. The same indicators for the Czech Republic are 0.254, and 4.3%:22.4%, for Slovenia 0–284 and 3.6%:21.4% and for Croatia 0.29, and 3.4%:24.4%. It is often argued that inequality is a product of the poor labour of workers. Data from 1990–2006 show (p 7) that productivity in most countries rose faster than wages. It is important to analyze the real sources of inequalities and how inequality is perceived. Research in 23 countries between 1989 and 2004 (<http://www.worldvaluesurvey.org/>) shows that inequality is not acceptable. For incisive analysis of inequality and its economic consequences see X. Sala-and-Martin «The World Distribution of Income — Falling Poverty and Convergence Period», *Quarterly Journal of Economics*, May 2006 and B. Milanovic «Worlds Apart: Measuring International and Global Inequality», Princeton Univ. Press, Princeton, 2005, «Where in the world are you» World Bank Working Paper NoXX, Dec 2007 «An even higher global inequality than previously thought» , Dec 2007.
- 19) The European Commission's autumn projections (IP/08/1617) predict varying economic growth from +4% for Slovakia, Bulgaria, Romania, and Poland, to a fall of 2.7% for Latvia, and similar for the UK, Ireland, Spain and Estonia. The EC forecasts in 2009 a state deficit of 7% for Ireland and more than 3.6% for Finland, and 5.6% for the UK, 3.5% for France, 3% for Italy and Spain and 0.2% for the Netherlands. In some EU member states there is deflation, while in Estonia, Bulgaria, Latvia and Lithuania inflation is around 10%. The extent of the changes is visible through the fact that Island had the highest HDI (0.968, USA 0.951 and Germany 0.935), and the economic crisis has almost destroyed it. US National Intelligence Council at the end of November 2008 published its forecast «Global Trends 2025: A Transformed World» www.dni.gov/NIC_2025_project.html Surprises always characterize the future and one can only include so many in scenarios. The NIC offer four scenarios «A world without the West», «October surprise» (impact of climate change), «BRIC Bust-up» (a conflict between India and China about water and food. 70% of water use goes on agriculture) and «Politics is not always local» (non state networks become dominant). This forecast like the one five years ago concentrates on the dominance of globalization, but unlike its predecessor emphasizes the necessity of prompt system reform.
 - 20) Wikipedia/Violence; V. Bufacchi, Two Concepts of Violence, *Pol.Studies Rev.* 3 (2005), 193–204; Jamil Salmi, *Violence and Democratic Society*, Zed Books (1993) London; , J. Galtung, *Violence, Peace and Peace Research*, *J. Of Peace Research* 3 (1969), 167–191
 - 21) World Report on Violence and Health, WHO, Oct 3, 2002; http://www.who.int/violence_injury_prevention/violence/en
 - 22) M. Glenn: McMafija, Croatian translation, Naklasda Ljevak 2008
 - 23) L.H. Keeley «War Before Civilization: the Myth of the Peaceful Savage» (1996), Oxford University Press, Oxford
 - 24) Th. Hartmann, *Threshold — The Crisis of Western Civilization*, Viking Penguin, 2009; Anthony Adolf, *Peace — A World History* , J. Wiley and Sons, N.Y. (2008)
 - 25) 1986 Sevilla Statement on Violence, www.unesco.org/shs/human_rights/hrfv.htm; see also M. Ramirez/Pugwash; Sevilla Declaration is related to the UNESCO Statement on Race (1950–78), UNESCO Culture for Peace Program (1994) and Jerusalem Statement on Science for Peace (1997)
 - 26) Twentieth Century Democide, www.hawaii.edu/powerkills/20TH.HTM, R.J. Rummel
 - 27) I was told that few weeks before the beginning of the Iraq war, private art collectors were informed that various objects from the Baghdad museum could be purchased at bargain prices.
 - 28) An exception is the First Gulf War fought with a very limited and clear objective — liberate Kuwait, private discussion with general Colin Powell
 - 29) Global Peace Index, see Wikipedia and www.visionofhumanity.org/gpi/results/ranking.php
 - 30) A. Karatnycky, Nations in transit: emerging dynamics of change, <http://www.freedomhouse.org>, 2001, accessed January 15, 2003
 - 31) Appendix: The History-Deniers, in R. Dawkins, *The Greatest Show on Earth — The Evidence for Evolution*, Bantam Press London, 2009, pp. 427–437
 - 32) Sunday Times 2004 in R. Dawkins, *The Greatest Show on Earth — The Evidence for Evolution*, Bantam Press London, 2009, pp.5–6

- 33) Julian Huxley, Transhumanism, in *New bottles for new wine* (1957)
- 34) P. J. Crutzen, “Geology of Mankind: the Anthropocene», *Nature* **415** (2002) 23.
Will Steffen, Paul J. Crutzen and John R. McNeill, “The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?” *Ambio*, **36**, No.8 (Dec 2007), 614- 621
- 35) EQ concept can be traced to Darwin, see D. Goleman, *Emotional Intelligence*, 1995, Bantam Dell, NY and H. Gardner; *Frames of Mind. The Theory of Multiple Intelligence*, 1983, Basic Books, NYS
- 36) D. Zohar and I. Marshall, *Spiritual Intelligence — The Ultimate Intelligence*, Bloomsbury Publ, London, 2000
- 37) H. Gardner, *Multiple Intelligences*
- 38) Academia Europaea conference *Information — Knowledge — Wisdom*, Stockholm November 2009
- 39) James Surowiecki, *The Wisdom of Crowds*, Doubleday, Random House, Inc. 2004 Surowiecki was interested in how markets work. Markets are made o different people wiith different levels of information and different intelligence. Sometimes people make right and sometimes stupid decisions. The crowd is definitely not smart when the people in the group are biased in the same direction or when people start paying too much attention what other members of the crowd think. For instance, this is how market bubbles in late 1990-ties happened. In a TV series “Who wants to be a millionaire” the contestant can ask for help either the audience, or a friend — an expert, whom they chose ahead of the contest or they can reduce the number of options. It turns out that the expert gives a correct answer in 65% of cases, while the audience gives a correct answer in 91%.
- 40) World Value Survey, www.worldvaluesurvey.org
- 41) H. Küng, *On Being a Christian*, Collins, London, 1977
- 42) Grouch Marx defines “Politics is the art of looking for trouble, finding it everywhere, diagnosing it incorrectly and applying the wrong medicine.”
- 43) J. Maynard Smith and G. Price, *Nature* **246** (1973) 15–18;
- 44) Matt Ridley, *The Origin of Virtue: Human Instincts and the Evolution of Cooperation*, Viking, New York, 1996, p., 190; 249 and on; D. Dennett, *Breaking The Spell*, Viking, Penguin Group, 2006, New York; J. Garreau, *Radical Evolution*, Doubleday, 2006, New York
Tit for tat, www.abc.net.au/science/slab/tittat/story.htm
R.Axelrod, *The Evolution of Cooperation*, *Science* **211** (1981) 1390–6
- 45) C. Darwin, *The Descent of Man*, (orig. 1871)
- 46) Etcgroup, *Extreme genetic engineering: An introduction to synthetic biology*, Jan 2007
www.etcgroup.org/upload/publication/602/synbioreportweb.pdf
- 47) Governance and democracy (representative, direct, referendums, subsidiarity) require extensive studies and the World Academy of Art and Science is studies them.
- 48) J.M. Coetze, *Diary of a Bad Year*, Viking, 2007, p.8 and on
- 49) *The State of Human Development*, Human development indicators, 2004, p.127, UNDP
- 50) V.F. Weisskopf “*Physics in the 20th Century*”, MIT Press, 1972, p.364

IVO ŠLAUS

AN EVALUATION OF THE 20TH CENTURY

Abstract:

Salient features of the XX century world are outlined resulting in a Gordian knot. Our greatest achievement and success is scientific progress. Scientific results have significantly influenced humankind and the world, sometimes yielding great benefit, but sometimes miscued and abused. The biggest failures in the 20th century have been inadequate socio-economic progress still characterized by inadequate governance, by war, violence, economic, energy, ecological and demographic crises.

1. Scientific achievements and breakthroughs

The 20th century has started with outstanding scientific breakthroughs: quantum theory and theory of relativity: special and general. These scientific breakthroughs have significantly altered our worldview and have had and have tremendous effects on the way we understand the world. This has been followed by the famous Gödel theorem in mathematics and by determining the structure of DNA thereby providing a deep and proper basis for the theory of evolution. These are indeed paradigmatic changes! As Bernard Shaw exclaimed «my dogma of infallibility has been shattered». The 20th century has witnessed remarkable advances in all scientific disciplines, establishment of numerous inter- and multi-disciplinary fields, e.g. nuclear medicine, bioarchaeology, scientometrics, astroarchaeology and nanoscience. Some scientific disciplines, e.g. sociology, born in the 19th century blossomed in the 20th. While science has made major progress when it has bifurcated in many disciplines centuries ago, the 20th century revived a holistic approach, consilience and transdisciplinarity. Notwithstanding fashionable «end of» stories, including «the end of science», scientific research has always opened new non-understood vistas, e.g. WMAP discovery that of the entire Universe only 4% is ordinary matter, that 23% is the dark matter and 73% dark energy, and that while the Standard model hopefully will describe our ordinary world even answering questions wherefrom masses of each «elementary» particle comes from, neither dark matter nor dark energy are now understood. Though it may seem that we know a lot, we need to know and understand much, much more.

Our process of doing scientific research, far from perfect, is definitely the most successful human activity. The parallels between science and democracy — pointed out by Carl Sagan — are likely caused by the very nature of two activities: difference, challenge and even heresy are welcome, but conspiracy and dictatorship are abhorred. Artificial pseudo arguments about priorities in research and about proportions of curiosity-driven, mission-oriented, applied research and development are all intrusion from much less successful socio-political arenas into scientific

research. Examples of a curiosity-driven research such as the discovery of x-rays, that has become the most applied ever result, on one side, and of the attempt to reduce antenna's noise eventually discovering the signal of the creation of the Universe, on the other side, demonstrate how the human desire for knowledge cannot be and should not be restricted to boxes. Scientific research has always been international. The form is constantly evolving and 20th century has given us large international institutions such as CERN and EMBO (albeit European both in name and location, but in realization truly international centres).

The success of scientific research rests on non-suppressing basic human desire to know, and that means to assure proper and lifelong education, to assure broad, numerous and various interactions between researchers and the public, and the appreciation that research provided the greatest source of human and social wealth.

Results of the 20th scientific research have been fairly rapidly applied, e.g. information-communication technology (ICT), nanotechnologies, genetic engineering and synthetic biology, technologies essential in life science and medicine: ultrasound, CT, PET and MRI, energy related technologies, notably nuclear. Some of these technologies and applications have already been abused and misused and many can find new misuses and abuses. All technologies, that humankind employs, have been and can be misused starting with fire and knife. This is not a reason for preventing or suppressing technological advances, but calls for changes, often major, in our social systems. Yet, we have no idea what are these change, nor how to implement them.

Many technologies resulting from 20th century research have been used to develop scientific instruments, e.g. Planck satellite and LHC, and we all appreciate the important role played by new instruments in scientific progress.

2. Some socio-political consequences

Human beings are the product of biological and cultural evolution. Humans change, and they change the world they live in. Human biological evolution accelerated 100-fold in the last 5,000–10,000 years. The driving forces are the growth of human population and the changed world due to agriculture, animal domestication and habitat development. Major changes that are rooted in the 20th century science are forthcoming, e.g. nanomachines will be routinely used in medicine entering the bloodstream to feed cells and to extract waste. In 20–25 years mind uploading will be possible and in 30 years “human body 3.0 could” alter its shape and organs could be replaced by superior cyber implants.

Some salient features of the contemporary world are generated by scientific research and by technologies derived from it, i.e. by human beings. We are truly in the Anthropocene epoch [1, 2]:

First, quality of life has increased throughout the world, food per capita per day has increased (Table 1) and life expectancy is now much longer (increasing now about 2–3 months/year) and healthy active life duration is longer throughout the world. This general improvement in the quality of life is superimposed on major failures that we will address later, and that cause many to disbelief that any improvement in the quality of life has been achieved.

Second, changes are now much more rapid than our lifespan and are becoming even more rapid.

Third, the world is interconnected and interdependent. World has become a single organism.

“As never before, the future of each one of us depends on the good of all” has been expressed in the statement by Nobel laureates 2000 and *“Our safety, our prosperity indeed our freedom are indivisible.”* (Kofi Annan, 2005).

Table 1.

Food per capita per day in 1960 and in 1997 [3]

year	world ave	developing world
1960	2250	2100 Kcal/day capita
1997	2750	2600 Kcal/day capita

Fourth, the “number of Earths” required “to provide” resources used by humanity and “to absorb” their pollution, emission and waste for each year has increased (Table 2). Our world is dangerously in a state of overshoot.

Fifth, the features 2nd, 3rd and 4th listed above have made our world incompatible with our present “business as usual” behaviour which leads to instability, uncertainties and vulnerability. Of course, there has never been in the history of humankind “business as usual” since there have always been changes and future always contained surprises. However, previously, changes have been much slower and it appeared as if it has been a “business as usual”.

Table 2.

Year	Overshoot				
	1970	1980	2005	2007	2050
Number of Earths	0.86	1.00	1.25	1.27	? needed ≤ 1.0

The present socio-economic epoch — referred as globalisation — involves tremendously increased global trade, global financial transactions and globally interconnected economy. Th. Friedman [4] attempts to distinguish three phases of globalization. First, driven by states, where he indicates Alexander the Great and similar conquerors. Second, driven by states and transnational companies (TNC) and an example is the establishment of the British Empire in the 19th century. The third phase is driven by and it is empowering individuals. Various modern technologies bring benefits (increasing options [5], increasing freedom) and are dangerous (global village has global idiots: individuals can by error or terror [6] cause major catastrophes using bio- and cyber-technologies). It is estimated that 24 countries (about 3 billion persons) that are active “globalizers” have increased their GDP/capita by 3%, while most “nonglobalizers” loss about 1% of their GDP/capita.

Nevertheless, there has been dramatic increase in inequality. The ratio of richest to poorest in 1960 has been 60:1, in 1990 60:1 and in 1997 80:1. The inequalities have increased recently and we will address that later on.

During 20th century there has been enormous progress in the freedom (Table 3); while in 1893 only New Zealand could have been considered a true democracy, in 2002 there have been 85 free countries and 59 partly free countries.

On the other hand, extensive studies surveying more than 50,000 persons in 65 countries on 6 continents, statistically representative of 1.5 billion citizens by Voice of the People [8] in 2001–2005 have demonstrated that only 7% of the respondents strongly agree that the world is going in the right direction, and additional 23% somewhat agree with that statement (total of 30% compared to 36% in 2001). Figure 1 displays the data grouped geographically.

It is claimed that the 20th century is the first measured century. Indicators have to be feasible, with small and controllable uncertainties, robust and reliable. All socio-economic and

Table 3.

Freedom in the World [7]

Survey	Free		Partly free		Not free		World	
	Popul. in billions	No of Countr.						
1981	1.61 (36%)		0.97 (22%)		1.91 (42%)		4.49	
1991	2.09 (39%)	76	1.49 (28%)	65	1.75 (33%)	42	5.33	183
2002	2.50 (41%)	85	1.46 (24%)	59	2.17 (35%)	48	6.13	192

political indicators, quantitative and qualitative, input and output hardly satisfy all these criteria. An interesting example is GDP/capita. It has been known already by J. Tinberger that GDP is not a fully reliable indicator. Robert F. Kennedy said: “We will find neither national purpose nor personal satisfaction in an endless amassing if worldly goods. We cannot measure national achievements by GDP, since GDP includes air pollution, cigarette advertisement and ambulances to clear our highways after carnage. It counts special locks for our doors and jails for people who break them. GDP includes destruction of redwoods and of Lake Superior. GDP grows with the production of napalm and nuclear warheads. It does not include the health of our families, the quality of their education, it is indifferent to the safety of our streets... In short, GDP measures everything except what makes life worthwhile.”

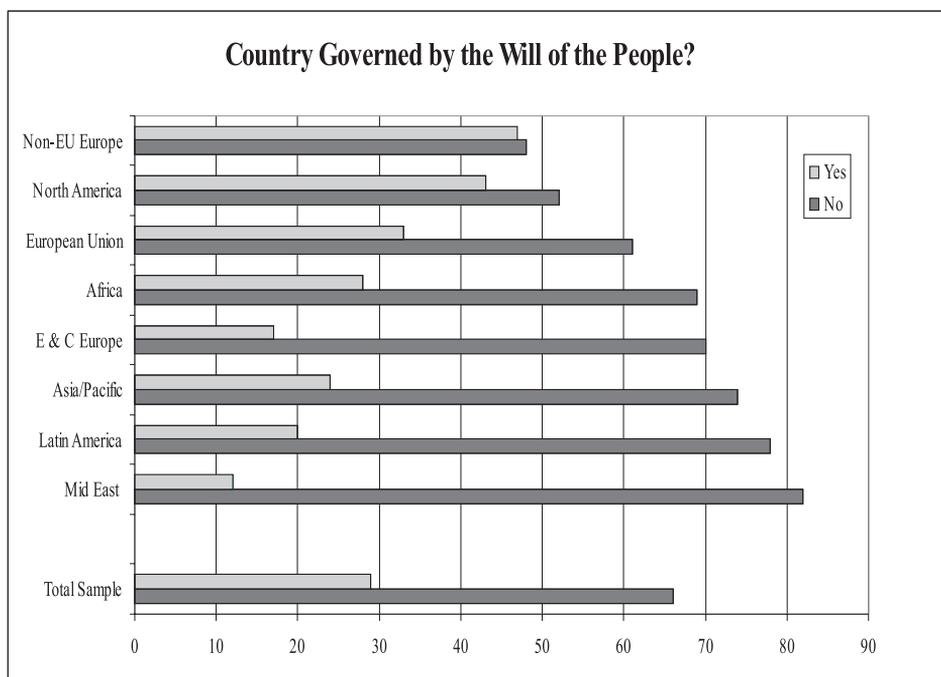


Fig. 1.

There have been several improvements in economic indicator intended to be superior to GDP, e.g. Human Development Index (HDI), Index of Sustainable Economic Welfare (ISEW) and

Table 4.

GDP/c and GPI/c for the USA				
Year	1950	1970	1990	2000
GDP/capita	11,672	18,773	28,434	36,595
GPI/capita	8,611	13,034	14,893	15,053

Genuine Progress Indicator (GPI). Large disparities between GDP/c and GPI/c for the USA from 1950 to 2000 are given in Table 4.

3. Failures of the 20th century

We are now facing several interwoven global crises: economic, which has grown from the financial instabilities of 2007 [9], inadequate and uncertain energy supplies as well as environmental, moral and socio-psychological (lack of trust, decreasing social capital) crises, aggravated by two additional features climate change and demographic transition, both of which are turning into major issues significantly influencing other crises. In addition to these crises, many countries have a variety of their own crises, e.g. deficit crisis (e.g. the USA has a deficit of \$1.2 trillions, i.e. 8.3% of its GDP), debt crisis (the USA has a debt of \$10.6 trillions, i.e. 81% of its GDP [10]) and budget shortages (one proposal for the USA has been to tax all stock purchasing activities by 0.25% which would bring \$ 100 billions per year). All these crises have their root causes in the 20th century. It has been known that they are a clear threat [11], but political leadership has tended to ignore them, so neither the global world nor individual countries are prepared for them — and that behaviour is rooted in the 20th century.

The most important failures of the 20th century are:

First, governance has failed in most of the countries and internationally. It has been argued by Th. Hobbes and B. Spinoza that the legitimacy of the government is derived from its ability to assure security, protection and peace [12]. Governments do not seem to be capable of protecting their own people and of assuring them with their basic human needs. This is the reason why citizens are unsatisfied with their governments and why they consider their political leaders to be dishonest (61%), incompetent (45%) and possessing too much power (53%) [8]. The USA public trusts physicians and scientists much more than they trust politicians [13], and the public throughout the world trusts arm force, religious leaders and physicians more than political and business leaders [8]. Contemporary world is global, but not completely. It is definitely not global when it has to anticipate, prevent and face global threats. It is composed of about 200 sovereign nation states based on the Westphalian model. However, in a global world states are hardly sovereign, and nations are defined differently in different places. In addition to those 200 states — some of them quite small, less than few millions inhabitants, a some quite larger and growing larger, there are over 600,000 transnational companies (TNC), some of them with wealth larger than some medium states, 50,000 international civil society organizations and 5,000 -10,000 different cultures, some rather small, but over 500 quite large. There are conflicts of interests and of values and in sheer numbers. There is a variety of laws being modified as societies develop [14]. Cultural diversity just as biological should be maintained and strengthened. However, preservation of cultural identity often contradicts scientific progress, and it is facilitated by closed social groups, leading almost to inbreeding. Though on the first level various social groupings: cultures, states,

TNC and international civil societies, have different value systems, on a deepest level their value is benefit of human beings, human society and environment.

Second, world wars including the Cold war and War against terror — responsible for about 100 million deaths, and government killing men, women and children of their own countries — responsible for about 200–300 million deaths [15]. Limited usefulness of military conflicts has been demonstrated by the history of wars since the end of the Second World War. War is obviously not a clever and useful extension of policy by other means, opposite to what von Clausewitz claimed. War, preparation for war and deterrence, specifically deterrence based on weapons of mass destruction (WMD), do not eliminate enemies, they create enemies and generate other threats. Nuclear weapons are not only immoral and illegal, but also unusable, and this statement is becoming true for all military means [16]. The government of the UK has stopped in 2006 using the term “War on Terror”, since the very concept of war on terror is counterproductive [17].

Third, already Plato has argued that a harmonious society requires that the ratio of the highest and lowest income does not surpass 5:1. Even J.P. Morgan has believed that the ratio should not be larger than 20:1. Today, these ratios are 100:1 and more. For instance, the ratio between the average salaries of chief executive officers in the USA and the average salary of the workers has been 369:1 in 2003 and it has grown to 521:1 in the 2007. These ratios are 103:1 in the Netherlands, 148:1 in Germany and 160:1 in Hong Kong [18]. Economic inequalities in most of the countries increased from 1990. From 1990 to 2000 GINI index increased in Estonia from 28 to 41, from 27 to 35 in Macedonia, from 20 to 28 in Finland, and from 42 to 45 in the USA. Creativity, risk taking and hard work can and should lead to economic inequalities, and fully egalitarian societies do not stimulate adequately economic growth. Increase in economic inequalities has been accompanied by significant increase in GDP/c, in the quality of life and in the overall economic progress, primarily through increasing GDP of China, India, Brazil and Russia [19]. However, there is evidence that large economic inequalities results in increase in the crime rate (e.g. if inequality in Columbia would be as in the UK, then the crime rate would fall for 50%). Larger economic inequality increases corruption, macroeconomic instability, and it shortens the life expectancy. For instance, life expectancy in 10% of the countries with lowest economic inequality is 77.4 years, while it is only 60 years in 10% of countries with largest economic inequalities [20]. The argument that economic inequality is a result of low productivity appears to be incorrect. Data show that during 1990–2006 productivity in most countries increased faster than workers salaries. Though economic inequalities require additional extensive studies [19, 21], it is already now clear that the inequality is perceived negatively and it is not accepted in at least 23 countries where the poll has been conducted in 1989–2004 [22]. It is argued that growing private wealth and great inequalities have undermined democracy [23].

Fourth, by 23 September 2008, humanity used up all the resources that our Earth has and was able to provide for the whole year. It means that the Ecological footprint reached 1.27/person, or that humankind in 2008 consumed 27% more than the Earth provides, thus depriving our descendants. The goal is to reduce the ecological footprint print to 1 by 2030, but if we continue this consumption, waste and pollution that will not be possible. Nicholas Stern in «The Economics of Climate Change» asserts that the cost of stabilising climate change between now and 2030 could be around 1.6% of GDP, while the cost of not doing it now will be 10–20% of our GDP.

Fifth, health challenges are overwhelming. There is an increase of new infectious diseases, (e.g. SARS, West Nile virus and avian flu), increasing health effects of pollutants and increasing cost of various treatments. For instance [24], each year PR China is getting richer but sicker. In the USA air pollution each year claims 70,000 lives compared with the country's 45,000 traffic deaths. Over the 18 year period death rates from motor neuron diseases, mainly Alzheimer, more than tripled for men and more than doubled for women in 10 leading industrial countries. With

the advent of synthetic chemicals the number of chemicals used is increasing by 700 each year. The study released by the US Environmental Working Group in 2005 showed that analysis of umbilical cord blood from ten randomly selected hospitals in the USA found 287 chemicals of which 180 cause cancer and 217 are toxic to the brain and the nervous system.

4. Conclusion

Failures of the 20th century form a Gordian knot — the present global crisis, which we do not fully understand [25]. Therefore, it seems that it is crucial that our attempt to solve this crisis starts from basic assumptions acceptable to everyone. The Golden Rule puts people at the basis of our values. **“People are the true wealth of every state. The fundamental goal of development is to increase the freedom of every human being so that they can live successful and creative lives.”** [26] **Our objective is to ensure that everyone is active and happy, and that we live in a society based on social justice and social cohesion in a healthy environment assuring sustainable development. In a knowledge-based society human beings are the generators and keeper of knowledge and therefore a true wealth of nations.** Two caveats should be added. First, whatever is done now to avoid economic catastrophe and reduce the effects of the crises must not reduce human and social capital, and must be strategic in order to assure that the crisis is transformed into an opportunity. Second, each country has its own features and therefore, a specific solution is required, but in a global world no action, no matter how useful it may appear for a country, should be undertaken if it threatens others. Such an approach will allow us to avoid short-term inadequate solutions, political compromises and attempts to substitute the real issue (and that is now this crisis) with a pseudo problem that would distract our attention and consume our energy. Most “old” tools designed for a system that was not interdependent and it was slowly changing cannot be useful. Typical ‘old tools’ are: 1) concentrating on actions which secure the governing structures to remain in power and defer problem solving for some time in the future in the hope that ‘miracles will happen’, 2) supporting existing economic structures though they are clearly failing, 3) lowering workers’ wages, and 4) reducing working hours, which quickly leads to lowering of wages. New ideas, new “tools” and new policies are needed. However, we must not forestall action. It is the sin of omission.

References

- [1] P. J. Crutzen, “Geology of Mankind: the Anthropocene», *Nature* **415** (2002) 23.
- [2] Will Steffen, Paul J. Crutzen and John R. McNeill, “The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?” *Ambio*, **36**, No.8 (Dec 2007), 614- 621
- [3] FAOSTAT 2000
- [4] Th. L. Friedman, “The World is Flat: Globalized World of the 21st Century”, Penguin Books, New York, 2006
- [5] It is possible that we will be suffocated by a variety of options that we are unable to chose from, see W. T. Anderson quoting P. F. Drucker in “Controversies on the Beginning of Human Life”, eds. A. Kurjak and F.A. Chervanek, Jaypee Brothers Medical Publishers, LTD, New Delhi, 2008, p.19
- [6] Lord Rees, *Dark Materials*, *The Guardian*, June 10, 2006. M. Rees predicts that by 2020 a million persons will perish in an event caused by bio-terror or bio-error: This statement is now on the e-network and everybody can bet. So far the result is even 50%:50%.
- [7] A. Karatnycky, *Nations in transit: emerging dynamics of change*, <http://www.freedomhouse.org>, 2001, accessed January 15, 2003
- [8] *Voice of the People*, World Economic Forum, Gallup Polls, Gallup Voice of the People May-June 2005

-
- [9] World Economic Outlook — October 2008: Financial Stress, Downturns and Recoveries, International Monetary Fund, Washington, D.C., 2008
- [10] Time, January 26, 2009, pages 20–21
- [11] Rodrigo Rato speaking at the Annual conference of The Club of Rome in Madrid in October 2007 listed financial instability, climate change and demographic transition as three greatest threats facing humankind, more important than terrorism, Middle East conflict and weapons of mass destruction. Index of financial stress demonstrates that out of 113 financial stresses during the last 30 years 43 have been generated in the banking sector and 87 have influenced two or more countries. Present financial stress has engulfed all countries, ref [9], pages 13–138. President of the FR Germany met with several members of The Club of Rome in November 2007 to discuss the next phase of globalisation. J. M. Barroso, leadership of European Parliament and several members of The Club of Rome met at the conference “Beyond the GDP” in late 2007.
- [12] Dietmar Braun, “Gemeinwohlorientierung in modernen Staat”, in Raymund Werle, Uwe Schimank (Hrsg.), “Gesellschaftliche Komplexität und kollektive Handlungsfähigkeit”, Frankfurt am Main, Campus, 2000
- [13] National Science Board, Science and Engineering Indicators, 2000, NSF, Arlington, USA
- [14] Franz Xaver Kaufmann, “Diskurse über Staatsaufgaben”, in D. Grimm (Hrsg.), Baden-Baden, Nomos, 1994
- [15] R.J. Rummel: *Lethal Politics*, 1990, Transaction Pub.; *Democide*, 1990, Transaction Pub, New York; according to Jung Chang and Jon Halliday, “Mao: the unknown story” — a 2005 biography of Mao Ze Dong, Mao was responsible for over 70 million deaths in peacetime, more than any other 20th leader. While 38 millions were starving to death in 1958–61 Mao was shipping grain to the USSR.
- [16] Ivo Slaus, “Global Security, Weapons of Mass Destruction and the Responsibility of Scientists”, in J. Finney and I. Šlaus (eds.) “The Role of Independent Scientists in Assessing the Threat of WMD”, NATO ARW, 2009
- [17] D. Milliband, The Guardian, January 5, 2009. Milliband has argued that “Terrorism is a deadly tactic, not an institution or an ideology.”
- [18] World of Work Report 2008, Income Inequalities in the Age of Financial Globalisation, ILO and Intl Institute for Labour Studies, Geneva, 2008.
- [19] X. Sala-i-Martin, “Global Inequalities Fades as Global Economy Grows” 2002, “The World Distribution of Income — Falling Poverty and Convergence Period”, Quarterly Journal of Economics, May 2006
- [20] Ref [18] pages 2 and 23
- [21] Branko Milanović, “Worlds Apart: Measuring International and Global Inequality”, Princeton University Press, Princeton, 2005; B. Milanović “Where in the world are you?” World Bank Working Paper No.XX, Dec 2007 and “Even higher higher global inequality than previously thought”, Dec 2007; RGoldberg and N. Pavcnik, “Trade, Inequalities and Poverty — what do we know? Evidence from recent trade liberalization”, NBER Working Paper No. W 10593, July 2004; Sudhir Anand and Paul Segal, What do we know about Global Income Inequalities? J. of Econ. Literature, 46 (March 2008) 57–94
- [22] www.worldvaluesurvey.org
- [23] Kevin Phillips, “Wealth and Democracy: A Political History of American Rich” Broadway, N.Y., 2002
- [24] Lester R. Brown “Plan B 3.0: Mobilizing to Save Civilization”, WW. Norton & Co, New York, 2008, Chapter 6.
- [25] Present global crisis are extensively studied in several projects of the World Academy of Art and Sciences, see www.worldacademy.org : projects: From Crisis to Prosperity, Global Employmentz Challenge and also www.vrijemeje.com, a bilingual web in English and Croatian containing papers with extensive references
- [26] The State of Human Development, Human development indicators, 2004, p 127, UNDP

JAN LAMBOOY

THE TWAIN SHALL MEET: SCIENCE, TECHNOLOGY AND THE GLOBAL SHIFT TO ASIA

1. The Evolution of Science as a driver of economic development

Science is a tool to understand nature and human behaviour. It delivers a wide array of insights and tools. In this paper science is used in the Humboldtian way, as an interdisciplinary set of methods for understanding our human and natural reality, not as only mathematics and physics. Nevertheless, both are very fundamental to understand technological and economic development. Even social dynamics cannot be understood without considering the results of those two major branches of science.

Technology can be defined in various ways. The most usual view in economics is to consider technology as a bundle of human capabilities, skills and routines that is used in production, primarily the production of goods but also the production of services (like surgery, or truck-driving). Technology can also be conceived as knowledge embodied in the 'hardware' (or 'tools') of capital and consumption goods. In that approach, it primarily consists of knowledge as an attribute of actors, combined with material aspects in tools, equipment, buildings and infrastructure.

Technology is derived from science and from practice. Much of this knowledge can only be applied after a considerable time due to the need of development of complementary technologies. This process can only emerge and evolve if the attitudes of people engaged are focused on experimentation and risk-taking. According to many economic historians this combination of entrepreneurial attitudes and knowledge came to fruition in Europe after the Middle Ages. Scientific research occurred also in China, Egypt, Mesopotamia and India, but the acquired insights were applied only in the Greek and Roman cultures and their heirs. The real progress was acquired in North-western Europe, where the freedom of thought and of research was large enough to develop quickly (Cohen 2009). In the 16th and 17th centuries countries like France, The Netherlands and England emerged as scientific powerhouses and at the same time as economic growth poles of the Western world. The real jump came in the end of the 18th and the 19th centuries with the Industrial Revolution.

Until 1800 the GDP per capita of European countries and China did not differ significantly. The difference increased rapidly after the Industrial Revolution and the enormous changes in the economic structure (Maddison 1997; 2005). The rise of Marxism was associated with the turbulence of economic and spatial structures, with its explosion of cities and the rise of the urban underclass.

In the USA this process was followed, but with a quite different political result, with a stronger accentuation of individualistic values. In that country the immigration did not originate from its own rural hinterland but from Europe. Nevertheless, the economic evolution and the urbanisation patterns resembled those of the Old Continent, although much earlier influenced by still newer technologies, such as electricity and the automobile.

An important aspect of globalisation is the strong relation of technology and economics with the geopolitical balance of power. The old imperial powers of North-western Europe gave way to the USA, the scientific and economic 'hothouse' of the last 100 years, with a different meaning of imperialism.

More recently we have arrived in a time with another new wave of economic and political structures, based on a broad globalisation process with entirely new perspectives. The question rises whether Asia, with its very specific own cultural heritage, will ever catch up and evolve as another geopolitical power, equal in economic force as the old western 'poles'? Will it even be a new source of political and technological developments?

Once it was said by Rudyard Kipling: 'East is East, and West is West, and never the twain shall meet'. In what regard is he right? May be not in an economic and technological sense, but what about politics and the institutional values? Here we will attempt to analyse some of the relevant features, with a special focus on the technological and economic developments.

2. Science, Technology and Economic development

Some authors emphasise the gradual development of technology and economy over longer time-horizons, whereas others stress the influence of revolutionary sudden structural changes. We refer to Anderson, Arrow and Pines (1988), Cohen (1994; 2007), Mokyr (2002) and Hellyer (2003) where this issue is discussed, in particular with regard to the influence of the Scientific Revolution on technology and economic development. However, here the focus is on the views of the interrelations of waves of new technology on long-term economic development and on global spatial patterns.

In section 4 the issue of the development patterns of the economy (endogenous, gradual, cyclical, or exogenous and in phases) will be explored with the theories of 'long waves' (Kondratieff 1926; van Duijn 1983) and of 'phases in the development' (Maddison, 1991).

In this chapter three concepts are used to investigate the various phenomena, associated with the developments of technology, economy and spatial structures.

The *first* one is the concept of the *General Purpose Technology* (GPT). This can be used to investigate the development of pervasive technologies. A GPT is a set of technologies that is pervasive to all economic production and consumption. Lipsey, Carlaw and Bekar (2005: 12–13) describe GPTs as follows: 'They begin as fairly crude technologies with a limited number of uses and they evolve into much more complex technologies with dramatic increases in the range of their use across the economy and in the range of economic outputs that they help to produce. As they diffuse through the economy, their efficiency is steadily improved. As mature technologies, they are used for a number of different purposes, and have many complementarities in the sense of cooperating with many other technologies'. As such, a GPT can be seen as a basis for new waves of improving productivity (Van Duijn and Lambooy 1982; Dosi 1982; Dosi a.o. 1988). A GPT can be investigated in various ways. For our purpose, a selection is made on the basis of the impact on spatial patterns. It can be argued that the impacts of GPTs have been extremely important for both space and economic development. Our society and our spatial configurations have been completely altered by the various GPTs, more in particular by those

that were the basis of the Industrial Revolution in the nineteenth century. The most recent wave of new technologies, connected with the introduction and dissemination of ICT (Information and Communication Technology) since the 1950s, will also have its effect on spatial configurations in physical space, but it is not yet entirely clear how this will work out in spatial configurations. A related concept is used by Carlotta Perez (2009), who uses ‘technological paradigm’, which indicates the wide use of a set of related technologies with strong interrelations with social developments.

The *second* concept — based on various authors, of whom Kondratieff (1926) is the best-known — used is that of ‘*long wave of economic development*’, that denotes the long-term economic development and the changing resource use and the composition of production (Kondratieff 1926; van Duijn and Lambooy 1982; van Duijn 1983; Maddison 1991). An evolutionary approach seems to be useful to examine the co-evolution, or the integrated view of the development of the ‘triangle’ of relations. Nelson (2005: 8) contends: ‘A viable economic growth theory must recognize the evolutionary nature of processes of technological advance, and of the ways the structure of inputs, outputs and institutions is molded and molds the advance of technology’.

The *third* concept used is ‘*complex adaptive system*’. That concept is based in an evolutionary approach and is useful to investigate more complex structural changes (Hayek 1937; 1945, in Caldwell 2004; Anderson, Arrow and Pines, 1988; Arthur 1999; Antonelli 2008). Metcalfe, Foster and Ramlogan (2006) use this concept to examine the nature of economic growth. They contend that capitalism is restless and adaptive. The basis for growth is the process of ‘self-transformation, the emergence of macro-structure from micro-diversity, and coordination through market processes’ (Metcalfe, Foster and Ramlogan 2006: 7). They also argue that it is the generation and resolution of economic diversity that is the principal source of growth.

3. Driving forces and global development

Andersson (1981) has indicated three fundamental forces determining structural economic change:

- reallocation of resources;
- quantitative expansion of the resource base; and
- technological development. In earlier theories of economic growth the first two factors were considered to be more important for regional economic development. The focus of economic theories has changed to the third factor: technology and other forms of knowledge.

Technological development has three principal influences on economic and spatial structures:

- (a) *Rising productivity*, with concomitantly increasing incomes and consumption opportunities (houses, cars, household appliances). It also leads to important shifts in the configuration of manufacturing industries and services. Combined, these shifts have a strong impact on the location of firms and households.
- (b) *Declining costs of distance*. The declining costs of transport and communication of goods, people and information can restructure the space of locations of production and consumption. However, to realise these cost-reductions enormous investments are needed, which often have been financed with public means.
- (c) *Stronger agglomeration advantages*. The combination of rising incomes and lower transport costs with the availability of trains and cars has led to spill-over effects and strong urbanisation processes with the concentration of innovation and economic growth in certain regions.

In macro-economic approaches, economic growth is investigated by looking at the development of GDP and per-capita GDP, often without a perspective of longer periods of time (Maddison 1991, 2005; Romer 1986; Solow, 2003). Well-known is the statement of Keynes, 'In the long run we are all dead', but he forgot to mention that economic and spatial structures often affect behaviour over long periods of time. The analysis of technological changes and the structural changes of the economy, like that of the sectoral composition and the altering significance of natural and human resources over longer time-horizons, are very important to understand the drivers of economic growth (Antonelli 2008). It is also necessary to look at the behaviour of the micro- and meso levels of the economy. The roles of entrepreneurs, institutions and agglomeration forces are also missing in many macro-economic studies, with a concomitant lack of understanding of the dynamic forces behind development. However, in more recent approaches on economic growth, technology and entrepreneurs are increasingly considered as a main cause for economic growth, whereas institutions (like taxes, social security, labour market policy, etc.) can either hamper or enable growth (Solow 2003; Helpman 2004; Nelson 2005).

When examining economic growth over a long period, starting with the time of the Industrial Revolution until about 1870, it can be observed that new technologies and organisational production methods and the consequent rise in the productivity level are at the basis of important structural changes (Pasinetti 1981; Maddison 1991, 2005). This caused millions of people to shift to the strongly developing manufacturing sectors, with a strong effect on urban growth. The impact of agglomeration on its turn is to create poles of attraction that can sometimes have a strong negative effect on peripheral regions.

Cohen (1994; 2009) and Hellyer (2003) have contended that the relation with the 'Scientific Revolution' has been decisive for the development of technology and the Industrial Revolution. Mokyr (2002) emphasised the endogenous nature of this process of economic growth by looking at the strong interrelations between applicable scientific research and technological and industrial developments. He found that this 'application-oriented approach to science' was particularly strong in the Anglo-Saxon world, a main reason for the Industrial Revolution to happen there first and only later in the continental countries. According to the new endogenous growth theory, R&D and investment are endogenous to the economic process (Romer 1986; Helpman 2004). But that theory does not encompass the element of time and the sources of dynamism. The discussion on endogenous or exogenous influences has also been dealt with in the 'long wave' theories.

Many theories have been developed on long-term economic growth in relatively ordered patterns (van Duijn 1979; 1983). In Russia Kondratieff (1926) developed his 'theory of economic cycles', that lasted 50 to 60 years. The Dutch van Gelderen (1913, under the pseudonym Fedder), the Belgian Mandel (1975), and the Austrian Schumpeter (1913) attempted to construct theories explaining the 'cycles', or the 'long waves' of economic development. They emphasised the existence of a regularity of the waves, meaning that certain patterns of the growth process return in every new cycle in ordered patterns. The development and the demise of cycles were inherently endogenously determined, although every new cycle was based on new technologies and new impulses from investment in capital goods and infrastructure.

The (young) Schumpeter emphasised the role of entrepreneurs (Schumpeter 1913). He was not so explicit on the longer cycles, as he focused more on business cycles with shorter amplitudes than the 50 or 60 years of Kondratieff. He explained the rise of new growth, the crisis and the recovery by the introduction of fundamental innovations by entrepreneurs and the replacement of old by new products. His explanation was that crises were motivating entrepreneurs to be risk-taking and innovative. He also contended that economic crises could be explained endogenously, as a result of investments in R&D and of exploring new opportunities and new sources for profit enabled by the introduction of innovations. Later Schumpeter (Schumpeter 1943) emphasised the role of

larger corporations in the innovation process, because the costs of R&D became too high for the smaller firms, like Chandler and Mazlish (2005) have contended. Nevertheless Schumpeter accepted that even after World War II economic depressions were challenges to entrepreneurs, and could stimulate research and risk-taking, the rise of new technologies, new firms and new sectors, but could also lead to 'creative destruction', the demise of old firms and sectors, with possible new periods of crisis (Kleinknecht 1987). Also Mensch (1975), the German researcher of innovations and long time-horizons, emphasised the rise of innovations in times of crisis. He contended that the scientific and technological knowledge (inventions) developed more evenly in time than innovations (introduction in production and markets). Innovations were peaking in periods of economic crisis.

The changing economic structure, resulting from the rise of new firms and new products and technologies, was very important to understand later bursts of rising productivity and economic growth. Maddison (1991, 2005) does not start with the assumption of regularity and of endogenous processes. According to him, technological changes cause fundamental adjustments of economic structures, but he refuses to accept the regularities of waves, insisted upon by other authors. Maddison accepts not only technology but also institutional forces (government policies) and exogenous shocks as causes for periods of 'breaking points'. He contends (Maddison 1991: 149): 'Structural changes reflect two basic forces that have operated on all countries as they reached successively higher levels of real income and productivity. The first of these is the elasticity of demand....and the second basic force has been the differential pace of technological advance between sectors'.

With Rostow (Rostow 1978), he speaks of 'stages' or 'phases', not 'cycles' or 'waves'. Breaking points are the results of exogenous incidents occurring without regularity. But, within the phases, a coherent development can be shown, which can be seen as a process of endogenous complex adjustment. Maddison (1991: 112) contends: 'In the 170 years since 1820 one can identify separate phases which have meaningful internal coherence in spite of wide variations in individual country performance within each of them. Phases are identified, in the first instance, by inductive analysis and iterative inspection of empirically measured characteristics'. He does not focus on regularities that the 'wave theorists' adhere to. Instead, he supports a more neutral view (Maddison 1991: 111–112). He concludes (Maddison 1991: 123–124): 'The move from one phase to another has been caused by system shocks (...) usually governed by exogenous or accidental events which are not predictable'. Instead of a regular and predictable 'cycle', he accepts shocks or strong interruptions of a certain growth-path, causing strong changes in the economic structure. He does not deny the endogenous character of development *within* the phases.

In my opinion Maddison seems to be closer to empirical validation than the other views as far as the effort to find periods of growth is concerned. His analysis is focused on macro economic and sectoral indicators of economic development. However, he does not pay attention to the role of entrepreneurs and their efforts of innovation, nor to the evolutionary processes of the creation of new variety, selection and the development of new kinds of urban and regional economies. His views and those of the Schumpeterian approach can be regarded as being complementary. Aghion and Howitt (1998: 244) contended that it is possible to combine the endogenous growth theory with the Schumpeterian approach: 'Cyclical downturns may be the price that society needs to pay in order to complement the GPTs that deliver the long-run growth'.

To sum up: both approaches, the cyclic or long-wave theory and the theory of phases support the idea that technological developments, economic growth patterns and spatial changes show strong interrelations, when observed over long periods. More in particular the physical space has undergone major changes by the huge urban developments. Organisations and the nature of social

and economic networks did also change. In more recent times the spatial patterns will change by the introduction of the 'computer and network technology', however; the change of physical space seems unlikely to develop at the scale seen in the nineteenth century, apart from certain Asian countries.

4. New global centres: economic and technological centres, or geopolitical as well?

The result of the process of unpredictable innovation dynamics can sometimes completely alter economic structures and locations. In the 19th and 20th centuries, the principal structural change of the production structure and of the spatial structures in the 19th century has been the almost tragic decrease of agricultural employment, combined with a strong migration to urban regions. This stream of migrants was within the home countries and outward to the New World. Today's modern western world still has a strong and productive agricultural sector, be it with only about 2 — 4% of employment. At the same time, the manufacturing sector increased until the early 1960s, after which employment and the share of GDP have declined to percentages of between 10 and 20. The various service sectors are now as important as the agricultural sectors used to be in 1800. Their contribution to employment and GDP has risen to between 65% and 80%. This structural change came about very gradually, but the main cause was undeniably the changing productivity and the differences between sectors (Nelson and Winter 1977; Pasinetti 1981; Peneder 2002).

Many countries experienced a seriously growing discrepancy between the central agglomerations and certain peripheral regions. At the global level many of these processes continue, related with the 'global shift' to Asian countries.

Technological development came in stages, economic development showed breaking points, but the long-term tendency of rising productivity and changes in sectoral composition has been the same from 1800 on. Van Duijn (1983) has raised the idea that the nature and the location of economic growth will be influenced by the rise of new global economic centres, like the USA and Japan showed in rise of new global economic centres, like the USA and Japan showed in the 20th Century, and — as we now can add — China and India in the 21st Century. In the present time we observe the results of this structural change, in the altered structures of demographics, space and global connections. The impacts of structural changes on the urbanisation structures have been enormous. The Industrial Revolution caused a strong concentration of employment and population in urban areas. Both processes (industrialisation and urbanisation) needed huge complementary investments in infrastructure. The impact on space and on the location of economic activities had dramatic effects on the lives of millions of people.

Previous technological developments fostered a strong process of urbanisation, but that took a long time to evolve. It seems that comparable developments of the changes in technology, urban development and sectoral patterns can be observed in present-day East Asia (Gill and Kharas 2009). New countries and new types of urbanisation evolve. It would be a misunderstanding to state that these new countries will just be imitators of western countries, like some have contended in the first period of development of the Japanese economy. Both China and India show surprisingly strong developments in science and technology. Examples in India are the software, steelproduction and car production. For China new developments in mobile phones, airplanes, solar energy and medical equipment are surprising for many people.

Urbanisation patterns in these countries show, of course, stronger contrasts of rich and poor, but especially in China the new developments in infrastructure are amazingly strong.

The question is whether these developments will create new global economic and geopolitical centres. The answer is confirmative, due to the enormous needs for natural resources. Many new Chinese initiatives to acquire land and access to Australian and African natural resources can be observed. New global political and financial centres will co-evolve with these new developments. Not only New York, London and Tokyo (Sassen 1991) will dominate the urban hierarchies, but also Sjanghai, Hongkong, New Delhi and Mumbai.

The western world will not only lose dominance in economic dimensions, but also in certain values. Mahubani (200.) contends that western countries have to be patient and accept that other contexts with other values will evolve, for instance the attitudes towards democratic structures. New kinds of political structures will have to be accepted in the western world, where some almost absolute attitudes about own superiority still are generally accepted.

Bibliography

- Aghion, Ph. and P. Howitt (1998). *Endogenous Growth Theory*. Cambridge: MIT-Press.
- Andersson, A.E. (1981). Structural Change and Technological Development. *Regional Science and Urban Economics*. Vol. 11: 351–361.
- Anderson, P., K.J. Arrow and D. Pines (Eds) (1988). *The Economy as an Evolving Complex System*. Reading (MA): Addison-Wesley.
- Antonelli, C. (2003). *The Economics of Innovation, New Technologies and Structural Change*. London: Routledge.
- Antonelli, C. (2008). *Localised Technical Change. Towards the economics of complexity*. London: Routledge.
- Arthur, W.B. (1994). *Increasing Returns and Path Dependence in the Economy*. Ann Arbor: The University of Michigan Press.
- Arthur, W.B. (1999). Complexity and the Economy. *Science*. Vol. 284: 107–110.
- Boschma, R.A. (1994). Looking through the window of locational opportunities. A long-term spatial analysis of techno-industrial upheavals in Great Britain and Belgium. Rotterdam: Tinbergen Institute.
- Boschma, R.A. and J.G. Lambooy (1999). Evolutionary economics and economic geography. *Journal of Evolutionary Economics*, Vol. 9: 411–429.
- Cairncross, F. (2001). *The death of distance 2.0. How the communications revolution will change our lives*. London: Texere Publishers.
- Caldwell, B. (2004). *Hayek's Challenge; an intellectual biography of F.A. Hayek*. Chicago: The University of Chicago Press.
- Chandler, A.D. and B. Mazlish (2005). *Leviathans: Multinational Corporations and the New Global History*. Cambridge: Cambridge University Press.
- Cohen, H.F. (1994). *The Scientific Revolution*. Chicago : University of Chicago Press.
- Cohen, H.F. (2007). *De herschepping van de wereld*. Amsterdam: Bert Bakker. (Will be published in English in 2009, as: *How Modern Science came to the World*.)
- Dosi, G. (1982). Technological Paradigms and Technological Trajectories. *Research Policy*. Vol.11: 147–162.
- Dosi, G., C. Freeman, R. Nelson, R. Silverberg and L. Soete (Eds.) (1988). *Technical Change and Economic Theory*. London: Pinter.
- Duijn, J.J. van (1979). *De lange golf in de economie*. Assen: Van Gorcum.
- Duijn, J.J. van (1983). *The Long Wave in Economic Life*. London: MacMillan.
- Duijn, J.J. van, and J.G. Lambooy (1982). *Technological innovation and regional economic growth: a meso-economic analysis*. Amsterdam: Faculty of Economics
- Gelderens, S. van (under the pseudonym of J. Fedder) (1913). *Springvloed. De Nieuwe Tijd*. Amsterdam: Fortuyn.

- Gill, I. and H.Kharas (2009). Gravity and Friction in growing East Asia. *Oxford Review of Economic Policy*. Vol. 25: 190–204.
- Hayek, F.A. (1945). The Use of Knowledge in Society. *American Economic Review*. Vol. 35: 519–530.
- Hellyer, M. (ed.) (2003). *The Scientific Revolution*. Oxford: Blackwell Publishing.
- Helpman, E. (2004). *The Mystery of Economic Growth*. Cambridge (Mass): The Belknap Press of Harvard University.
- Jacobs, J. (1984). *Cities and the Wealth of Nations*. New York: Vintage books.
- Kim, S. (2005). Industrialization and Urbanization: did the steam engine contribute to the growth of cities in the US? *Explorations in Economic History*. Vol. 42: 586–598.
- Kleinknecht, A. (1987). *Innovation Patterns in Crisis and Prosperity*. London: Macmillan.
- Kondratieff, N.D. (1926). Die langen Wellen der Konjunktur. *Archiv fur Sozialwissenschaft und Sozialpolitik*, Dezember: 573–609.
- Krugman, P. (1995). *Development, Geography and Economic Theory*. Cambridge (Mass): MIT-Press.
- Lambooy, J.G. (1984). The regional ecology of technological change. In: Lambooy, J.G. (Ed.). *New Spatial Dynamics and Economic Crisis*: 63–77. Tampere: Finnpublishers.
- Lambooy, J.G. (1987). Informatisation and Internationalization. *Revue d'Economie Regionale et Urbaine*, Vol.6: 719–731.
- Lipsey, R.G., K.I. Carlaw and C.T. Bekar (2005). *Economic Transformations; General Purpose technologies and Long Term Economic Growth*. Oxford: Oxford University Press.
- Maddison, A. (1991). *Dynamic Forces in Capitalist Development; a long-run perspective*. Oxford: Oxford University Press.
- Mahhubani, K. (2008). *The New Asian Hemisphere; the irresistible dhift of global power to the East*. New York: Public Affairs.
- Mandel, E. (1975). *Late Capitalism*. London: New Left Books.
- Mensch, G. (1975). *Das Technologische Patt*. Frankfurt: Umschau Verlag.
- Metcalfe, J.S. (1994). Evolutionary Economics and Technology Policy. *The Economic Journal*. Vol. 104: 931–944.
- Metcalfe, J.S., J. Foster and R. Ramlogan, (2006). Adaptive economic growth. *Cambridge Journal of Economics*, Vol. 30: 7–32.
- Mokyr, J. (2002). *The Gifts of Athena*. Princeton: Princeton University Press.
- Nelson, R.N. (2005). *Technology, Institutions, and Economic Growth*. Cambridge (Mass): Harvard University Press.
- Nelson, R.R. and S.G. Winter (1977). In search of a useful theory of innovation. *Research Policy*. Vol. 6: 36–76.
- North, D.C. (1990). *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
- North, D.C. (1994). Economic Performance through Time. *American Economic Review*. Vol. 84: 359–368.
- Pasinetti, L.L. (1981). *Structural Change and Economic Growth*. Cambridge: Cambridge University Press.
- Peneder, M. (2002). *Entrepreneurial Competition and Industrial Location*. Cheltenham: Edward Elgar.
- Perroux, F. (1950). Economic Space: theory and applications. *The Quarterly Journal of Economics*. Vol. 64: 89–104.
- Romer, P.M. (1986). Increasing returns and long-run economic growth. *Journal of Political Economy*. Vol. 94: 1002–1037.
- Rosenberg, N. and M. Trajtenberg (2004). A general purpose technology at work: the Corliss steam engine in the late nineteenth century in the United States. *Journal of Economic History*. Vol. 64: 61–99.
- Rostow, W.W. (1978). *The World Economy*. London: MacMillan.
- Sassen, S. (1991). *The Global City*. Princeton: Princeton University Press.
- Saxenian, A. (2006). *The New Argonauts*. Cambridge (Mass): Harvard University Press.

- Schumpeter, J.A. (1912; 1934). *Theory of Economic Development*. Cambridge (Mass): Harvard University Press.
- Schumpeter, J.A. (1939). *Business Cycles*. New York: McGraw-Hill.
- Schumpeter, J.A. (1943). *Capitalism, Socialism and Democracy*. London: Allen and Unwin.
- Solow, R.M. (2003). Foreword, in: McMahon, G. and L.Squire (eds). *Explaining Growth; a global research project*. Basingstoke: MacMillan.
- Stiglitz, J.E. (2003). *Globalization and its Discontents*. New York: Norton Paperbacks.
- Stiglitz, J.E. (2007). *Making Globalization Work*. New York: Norton Paperbacks.

DIMITRIS KYRIAKOU

SCIENCE AND TECHNOLOGY IN A GLOBALISING CONTEXT

Bernard Shaw used to say that there are two kinds of misfortune in this World: the misfortune of your wishes never coming true and that of their being realized. The cynical aphorism comes to mind upon contemplating the post-cold-war unipolarity, robbing policymakers of some of their soothing analytical constants, and opening a Pandora's box of disconcerting scenarios regarding the future of the victorious paradigm and the consequences of global competition enhancement.

We live in a world marked by intensifying competition; a world which is increasingly shaped by three intertwined processes: rapid S/T change, liberalisation drives, and institutional developments which seal into place, and often provide further impetus for, the changes set in motion by the first two processes. The resulting picture does not allow for comfortable constants, easy analysis, clear directions and orientation for the policymaker.

Globalisation: A road map

The growing realisation of the importance of science and technology and research in a rapidly globalising context, has moved in parallel to the increasing complexity of the environment in which policy-makers have to operate, and the trade-offs they have to grapple with, the incessant change they have to manage—a change modulated to a large extent by rapid technological development.

Policymakers have to navigate the rough waters of the post-Cold War world which has rendered useless many soothing analytical constants. They must handle the management of fast-paced change and provide common unifying visions towards promoting an integrated, global political system, a system which minimises conflict, and the threat thereof, and promotes freedom and prosperity.

This must be carried out in a world in which competition becomes both more intensive, in terms of aggressiveness, and more extensive, in terms of geography, a process which we often implicitly identify with globalisation.

The tightening of competition is a crucial instigator of developments and is closely related with science and technology (S/T) advances; together they have considerable explanatory power, and raise non-trivial questions about future developments.

Competition intensification is driven by three engines. First, the prevalence of the dominant policy paradigm, which generates the standard prescriptions, calling for competition-enhancing (de)regulatory initiatives; second, the S/T advances that continue to reduce those trade and market entry barriers not stipulated by law (such as transportation costs, information costs, cultural

distance, etc.); third, the international legal frameworks, which seal the changes set in motion by the previous two factors, and also provide a guiding framework for further changes.

As a result of these processes, the benefits (and losses) from being ahead (or falling behind) are increasingly larger. The move towards increasingly competitive markets, raises both promises and threats for those products/services which gain a wider audience thanks to new technologies, liberalisation and institutional arrangements. Star products can capture increasingly wider shares of the global markets. Protected niches for less-than-stellar performers become increasingly scarce.

Much has been said and written, and much attention has been devoted to two sorts of prospective analysis of uncertainty generated by technological progress. The first is the possibility that technology may make a certain specific skill either obsolete or not as highly paid as it was previously. Although the historical record disproves fears of massive unemployment due to technology, it would be hard to dismiss fears of difficult transitions in individual, specific cases, where wages may suffer; even if jobs are not lost outright.

The second sort involves globalization and the fear that, not machines per se, but rather competitors in other parts of the world will chip away at jobs or incomes, helped by distance-overcoming technology. Reducing the costs (and time lags) associated with distance allows competition to emerge in activities which were previously relatively sheltered from it.

Less, however, has been written, and less attention has been devoted to a related development, which may have much more pervasive consequences: the emergence of so-called 'star' economies. What this cryptic term translates to, is simply the emergence of economies in which, helped by (de)regulation and technological advances, a small group of 'star' performers, of professionals who are either very good at what they do, or are very good at self-promotion, or both, can secure a very large part of the target clientele.

Examples are legion: the most evident ones would come from the art and entertainment world (from whence the term 'star'). In recent decades the wage scale for performers has become increasingly skewed. Thanks to technology, the audience to which performers cater is acquiring quasi-global dimensions, and hence the best known ones can command astronomical wages. At the same time for the large majority of their colleagues, demand for their services has fallen and their wages have also (especially in relation to their most famous counterparts).

What has already been happening for decades in the art world, thanks to the mass media, can now be projected to emerge in other areas of economic activity, too. The idea of surgeons performing or supervising operations remotely (and hence expanding their clientele) is no longer science fiction, and this applies also to educators, design engineers, architects, writers, etc., within the same linguistic group, or even beyond it, for some professions.

This can clearly have positive implications in that by removing the obstacle of distance it expands consumer choice by making transactions possible with a wider range of potential suppliers. It can also however have other implications, whose outcome is not so clear cut.

First, it is likely to widen gaps in income distribution: within the same profession, fees (and hence incomes) will vary widely, often for the same type of service. Second, although less obviously, though not necessarily less a matter of concern, it may divert attention and valuable resources towards marketing and promotional exercises. This is quite likely in activities in which it is very hard for purchasers to determine the quality of the service or product before they buy it. This is typically the case where asymmetric information is involved, i.e. the seller, or someone similarly trained is inherently better positioned to know more about the product than the layman purchaser.

If the fees a professional is able to command can vary hugely, depending on how many people have a high regard for his or her services, then it may pay to devote time and resources to marketing or promotion. By way of example, most medical operations will be performed equally

well and with the desired results by most accredited surgeons; nevertheless a few ‘well-known’ ones will command very high fees, even for operations that are run-of-the-mill, and which most of their colleagues would perform equally well.

This rush into promotion and marketing by the service-seller can have two problematic corollaries: first, it will divert limited resources (e.g. time) away from activities that can actually enhance the quality of the service but may be more demanding and have a slower and less spectacular payoff (e.g. further study, training research, etc.). Second, as more and more of those service-sellers make this calculation and adopt this strategy, demand will rise for the services of intermediaries (i.e. promoters, marketers, publicists, etc.), making these jobs highly lucrative and attracting talent to them (and away from more “productive” activities). We may end up at an equilibrium in which quality is stagnant, the incomes of the service sellers do not change drastically, as the efforts of the intermediaries involved in promotion wars, cancel each other out, and the only true beneficiaries are the intermediaries themselves (whose services become indispensable, for defensive reasons if for no other reason, i.e. to counter the effect of competitors using them). Whereas the first consequence was of a distributional nature, this last one affects not simply the distribution of income/welfare, but also the overall levels of income/welfare achieved.

Policy must operate in a context which is still looking for a sense of direction and for an economic system, which would combine the fruits of competition and efficiency with those of democracy and inclusion, and avoid the pitfalls that doomed in the 70s its predecessor.

The western economic system, so closely identified with competition, is the result of a ‘softening’ of the liberal capitalism of the XIX century, a ‘softening’ whose roots can be traced to universal suffrage and to the emergence of the warfare state during World War I. With the Great Depression in the role of the midwife, the warfare state gave birth to the welfare state in the thirties. After World War II the economic system launched at the Bretton Woods conference attempted to resolve the tension between, on the one hand domestic autonomy, allowing economic policies necessary to alleviate recessions, and on the other hand international monetary stability, which facilitates economic openness, discouraging competitive devaluation policies.

The compromise reached after WWII, the compromise of ‘embedded liberalism’, achieved its goals as long as the domestic economy was sufficiently insulated from the rest of the world. **Technological and organizational innovations** however led to increasing international flows, undermining the insulation of the domestic economy, as well as the various exchange rate systems that were set up to strike a golden medium between fixed and flexible exchange rate systems, in evermore competitive environments.

Ever since the fall of the Bretton Woods system in the early seventies, liberalization drives have further undermined a state’s insulation from external economic events. The global dimensions which competition attains have dealt a **blow to the state’s narcissistic confidence in its sovereignty**.

Despite, or maybe because of, multiple tensions, we have been seeking a new consensus, a renewed certainty in institutions facing both older dilemmas, dilemmas which were the death knell for the Bretton Woods system, such as the monetary ones, as well as more recently emerged ones—such as environmental sustainability, and unemployment.

Central dilemmas

Regarding the monetary dilemmas, the cause of the collapse of the Bretton Woods system can be traced to the long-run incompatibility between excess US monetary liquidity on the one hand,

and the need, on the other hand, to preserve both confidence in the dollar and stable exchange rates.

The old dilemma of international monetary stability and liquidity is further complicated by the increasing weight of financial market developments. Financial market volatility has occasionally underscored—quite evidently most recently—the degree of increasing interdependence, via financial markets, of world economies.

Talking of financial markets brings to mind Mark Twain's dictum: February is one of the most problematic months for investing in stock markets; the others are March, April, May, June, July, August, September, October, November, December, and January. Mark Twain may have been right, but this is not necessarily the most useful message to extract from financial market rollercoasters. It used to be the case that when the US sneezed Europe got a cold, through the large flows of goods and services between the two; we are now at a new stage in which Russia sneezes and Brazil catches a cold, i.e. indirect 'contagion' is observed between countries, even in the absence of substantial direct economic contact.

At one level the European Monetary Union is a response to the monetary dilemma of maintaining stability and confidence on the one hand as well as sufficient liquidity on the other, without having to entrust someone else (e.g. the US) with the task, and with the corresponding "exorbitant privilege".

The EMU has successfully been established. Note however that establishing the EMU is as important as working with it. Making it to the wedding is important; making the marriage work is equally so. S/T may have an important role to play here. In regional development terms, and in the European context, S/T is one of the few ways, amenable to discretionary policy, through which less favored regions of the EU can catch up with their richer partners, and cushion the EU from cohesion-threatening shocks with different, asymmetric economic effects across the EU economies.

Moreover, S/T is partly responsible as I mentioned in the beginning, for the fast-paced changes that have increased financial flows, reduced competition barriers, and forced rethinking of the world economic system. S/T is also responsible for some of the cleverest, even if controversial ways, proposed to tackle these issues (bit taxes, electronic commerce, etc).

In the context of intensifying competition, the older tradeoffs, such as the monetary ones alluded to above, are joined by newer ones, such as environmental sustainability, and employment generation.

Sustainability and S/T

Competition begets a (unquenchable) thirst for efficiency, which may exacerbate the exhaustion of human and natural factors, as well as distributional conflicts. S/T may be both the progenitor of such risks, as well as their mitigator. The risk of crisis extends to both environmental as well as socioeconomic dimensions pointing to the need for full sustainability, and for conflict-resolving management of change in a world of finite resources. One needs to explore the fate of the factors from which the 'pie' is built (energy, environment, etc.), as well as the process of enlarging the 'pie' (employment, competitiveness, cooperation).

Successful exploitation of S/T results brings two kinds of benefits. In static terms, it allows the production of cheaper, better products; in a dynamic sense it opens up new markets, new avenues of growth, helps shape comparative advantage, and plays a bridging, synthesising role in promoting fully sustainable development. S/T achieves the latter goal by being the engine for growth, helping us do more efficiently what we already do, as well as by exploring and exploiting

the opportunities and constraints at the interface of our multiple objectives. It thus helps us both through identifying social, environmental, etc. problems, and suggesting solutions to them, as well as through promoting growth and thus allowing us the wherewithal, the resources to afford and to implement these solutions. Exclusively emphasizing the preservation of environmental restoration options for future generations means placing sustainable development on only one leg. To firmly root it on the ground we must endow it with a second pillar: growth.

S/T provides the arch linking the two pillars by being the engine of growth, as well as by identifying critical environmental thresholds and enhancing the possibility of substitution across forms of natural and man-made capital. The existence of environmental restoration options is not much consolation if we do not have the resources to exercise them. Hence, under the light shed by S/T, growth and sustainability will either flourish in unison or wither in discord.

Competitiveness and employment

Competition raises efficiency. It should be noted however, that in order for the benefits of a more efficient allocation of resources to be reaped, the resources in question have indeed to be reallocated. Reallocation implies displacement, dislocation, at least until an allocation in tune with competitiveness and efficiency requirements in a larger market has been solidified.

In any case, global competition implies that developed states cannot hope to compete with the developing world in traditional industries. Furthermore, Europe should not want to focus on highly competitive industries, where profits are easily eroded, where it cannot exploit its comparative advantage in human capital. We should be conscious of the role S/T plays in this context, first as a central part of adaptability-enhancing education and human capital formation; second, by generating technical innovation which will enhance overall income, and lead to overall net job-creation, though not necessarily in the same sector as the jobs lost due to technical change.

In summary, competition and the resulting drive for increased efficiency is the cornerstone of our economic edifice, and lies at the heart of the deep-rooted preoccupation with competitiveness and of malaise due to persistent unemployment patterns.

S/T is not only responsible for the enhancement of competition, and the ensuing need for adjustment, it is also indispensable in raising competitiveness, income and employment, not only through reducing costs but also through promoting new products/markets. It is S/T that can forge dynamic comparative advantage in desirable directions. S/T can push the competition envelope in favour of those strong in it; it can also endow workers with the skills leading to well-paid and meaningful jobs. In simple terms, S/T growth is not the problem, it is part of the solution.

The road ahead is tricky and S/T is a sine qua non weapon in our arsenal for facing the perils on the way. At the same time it changes rapidly the context in which decisions are taken, making trustworthy S/T input evermore necessary, trustworthy both in the sense of quality and user-friendly presentation, but also in the sense of being part of the team, sharing the agenda, the preoccupations and goals of the policymakers.

Dealing with rapid S/T change

S/T change challenges our assumptions on what is possible, but also tests our views on what is desirable. The speed of S/T developments also makes it hard to keep any thing constant in

any analysis of the situation. It is enough to remind ourselves of convergence technologies in infotelecoms, of ubiquitous computing, and of the recent developments in molecular biology, the cloning of mammals, and the faster-than-expected mapping and sequencing of the human genome.

Fast change affords great opportunities for those who develop S/T, but also those who know how to translate it and adapt it from the laboratory to the marketplace. This is precisely the requisite strength of the entrepreneurs: identifying (latent) unmet demand, the way to meet it, and having the organisational skills to create the product/service to meet such demand.

Unfortunately these skills cannot address the need of policymakers to understand S/T change, the way it can be harnessed to our needs and the challenges it engenders, the need to make S/T change an ally in managing change. First, and quite obviously because entrepreneurs have their own agenda, and financial bottomline to cater to, and would be too strongly tempted to shape policymakers' views in ways favourable to their specific interests.

Second and perhaps quite surprisingly, history is rife with cases of projections/statements made by extremely successful entrepreneurs (and scientists), which proved far off the mark, to put it mildly. One would hope that policymakers do not form their views on the basis of such input, or at least not such input alone. I cannot resist the temptation to list a few examples of statements making diagnoses/projections which were entirely wrong.

- "I think there is a world market for maybe five computers."—Thomas Watson, chairman of IBM, 1943
 - "There is no reason anyone would want a computer in their home."—Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977
 - "This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us."—Western Union internal memo, 1876.
 - "The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?"—Media mogul David Sarnoff's associates in response to his urgings for investment in the radio in the 1920s.
 - "Heavier-than-air flying machines are impossible."—Lord Kelvin, president, Royal Society, 1895.
- And last but not least:
- "640K ought to be enough memory for anybody."—Bill Gates, 1981

In any case in order to give useful input one needs to step out of the laboratory and/or the firm headquarters, and diffract his wisdom through the policymakers' lens. This is extremely hard to do if you are not sharing the policymakers' lens to begin with, and even harder if you insist on wearing your own lenses.

Finally, it is extremely important to capture the essence of processes/considerations that shape values and preferences, and ultimately determine the ways alternatives are weighed and choices are made. Towards this a reexamination of the 'two cultures' identified by C.P Snow half a century ago, and their 'reconciliation' is worth pursuing, until the twain shall meet again. When it comes to science and humanities, the twain have been apart for the better part of the last two hundred years. Their drifting apart which began at glacial pace with the setting in of the early modern period gradually picked up its pace, and by the time C.P Snow delivered his famous lecture on the 'two cultures' in 1959, he was famously naming and diagnosing a condition which had long become chronic.

This lamenting of the gulf of mutual incomprehension between the two cultures, if not outright hostility and condescension, was appropriate in 1959 and is still relevant now. This gulf

robs thinkers of countless possibilities of cross-fertilisation across disciplines, and causes serious communication problems among them. This is further exacerbated by the time-honoured tradition whereby each discipline puts at the top of its agenda the creation of an internal jargon, largely impenetrable even to those disciplines closest to it.

In the context of policymaking and policy advice the problem manifests itself in the difficulty scientists coming from one side of the cultural divide often have in communicating with policymakers coming from the opposite side.

It is therefore heartening to see that recently there are signs indicating that the twain are meeting again, indeed in quite unlikely ways, e.g. in using fictional devices to write about science. Examples include Imperial College Prof. Maguejejo's "Faster than the speed of light", a novel of and about physics, putting forth, among other things, the claim that the speed of light is not necessarily constant; Berkeley University Prof. Papadimitriou's: "Turing: A novel about computation"; and "The One True Platonic Heaven", a novel about quantum logic by Prof. John Casti affiliated with the Vienna Technical University. Perhaps the most striking example is cognitive scientist Dan Lloyd's presentation of a new theory of human consciousness conveyed in the form of a novel (titled "Radiant Cool") accompanied by a long annex which spells out the theory in less user-friendly, non-literary terms.

This rapprochement does not come out of nowhere. As is often the case, by the time we identify and name a pattern of behaviour, it may be already receding. Soon after the seminal Snow lecture, very well-known scientists started breaking the implicit taboo on scientists writing for lay audiences. Biologists such as Gould, Watson, physicists such as Weinberg and Sagan published essays and books which proved both very popular and highly influential in shaping the ways of thinking of the public and of policymakers. Some of these books became best-sellers, which added economic incentives for this rapprochement.

The bottleneck in extending the trend further has been the scarcity of scientists who can write well—bad writing seems to be rewarded in scientific journals. The less attractive the writing, the pithier the message seems to be the dominant credo. Dismissing good writing skills seems to be a rite of passage for many scientists—which harks back to Snow's cultural divide, with good writing being a 'humanities' skill, looked down upon by those on the other side of the rift. Even exceptionally good and influential writers and scientists, such as Nobel-prize-winning Princeton economist Paul Krugman, indirectly confirm the rule (Krugman credits his attractive and lucid writing to the fact his first degree was in history, not in economics).

The more recent forays of scientists into the humanities is an extension of that trend and takes the rapprochement a step further: not simply popularising science for the lay public, but actually using literature as part of the scientific pursuit itself.

Benefits from bridging this divide will accrue to science and to the pursuit of knowledge, enhancing it, as well as, indirectly its potential for boosting economic growth. There is another dimension of this however, which involves the interaction of policymakers, scientists, the public, and the press as intermediators. The further the rapprochement between the two cultures, the easier communication will be between the above actors. A strengthened mutual respect for the skills and premises of each side, and a renewed emphasis by scientists on the written word as the building block of convincing narratives will make communication with the wordsmiths, the journalists reporting on science smoother. If the twain shall indeed meet, we may be coming full circle to what was standard practice a very long time ago, before the divorce between the two cultures set in. After all often the intellectual forefathers of today's scientists wrote in verse, as reading works by Empedocles or Heraclitus would confirm.

In closing

Co-operation is the critical ingredient in a successful transition towards exploiting S/T as part of the solution and not only the problem, if we are to deal with change effectively. Without co-operation among social/economic actors, the tensions of the transition process will be exacerbated. Sustainability (most obviously social sustainability) will not be achieved without widespread burden-sharing and benefit-reaping. The emphasis on co-operation is an indication of the gripping force of the tension emerging from being faced by a series of trade-offs. Namely, competition enhances efficiency and overall income, but may generate large pockets of unemployment and disturbingly differential gains. Protectionism can constrain employment losses in the short run but also total social welfare in the medium run. Growth pays for environmental restoration but reckless growth may undermine its own backbone, natural and human capital.

S/T figures prominently in any plan to escape these dilemmas/trade-offs. The JRC can provide the requisite reference S/T input, enabling a common platform for policy making, helping us define and frame the great debates, instead of being the mere reflector of the ideas of others. It can raise the credibility of policy at all stages, helping the policymaker to harness S/T and understand its implications, towards resolving the tradeoffs/dilemmas above, directly or indirectly linked with competition. The challenge is to reap co-operatively the fruits of competition efficiency, without falling prey to the forces undermining social and overall sustainability.

Part III:
Dilemmas of The XXI Century

RAOUL WEILER

EUROPE QUO VADIS? NO CHOICE: SUSTAINABLE EUROPE

1. Introduction

Europe quo vadis? Where the European Union is heading to is an overarching question, but the challenges are such that original and not 'out-of-the-box' answers have to be found. The endeavor for reaching sustainable EU-societies appears to be the most promising approach at European and at world level. We will try to give some answers, more radical than the usual out-of-the-box approaches. Even when not considered as immediately executable, nevertheless they are inspiring for further reflection.

The fall of the Wall in Central Europe and the collapse of the philosophical-political system is only twenty years ago. Since, some of the Central European countries have joined the EU, and are integrating the market driven economic system. The very fast development of new technological innovations has surprised society, in particular, the powerful information and communication technologies (ICT). The physical borders of place and time for individuals, governmental institutions and enterprises, have been abolished and opening the way to the information and knowledge societies.

At planetary scale new threats appeared as well, climate change and global warming become major concerns for humankind. The anthropogenic origin of these changes appears difficult to be accepted at the international political levels. The claimed urgency by climate scientists has not yet convinced world leaders to act together at a planetary scale, leaving the 'business as usual' (BAU) practice of the industrial-economic-financial establishments to continue.

2. The Planetary Frame

2.1 Geo-political considerations

From a Bi-polar to a Multi-polar World

The bi-polar world of the post World War II belongs definitely to the past and evolves at high speed to a multi-polar world community: the today's major actors being the BRIC countries (Brazil, Russian Federation, India, China), US, EU and Japan, and others to come. The acronym

was first coined in 2001 by Goldman Sachs¹. At their first Summit in 2009 the BRIC Member States issued a declaration calling for multi-polar world order.

On the political front and in the context of the present financial crises, the G20 Countries² emerged on the international scene and published *Leader's Statement* of their meeting in September 2009³. Other alliances will emerge in the future and resulting in new entities, e.g. South East Asia. The emerging economies ask for a partnership in the geo-political debates and a share in the geo-power structure.

A new world order came into existence after the WWII. The international institutions created just thereafter, are still in use today. Some major steps of this period can be summarized as follows.

1. The created structures after WWII had the objective to prevent in the future generalized conflicts and disruptions, which had their roots in the aftermath of the great depression period : security and peace (UN Security Council), monetary and financial stability (IMF and World Bank), food production (FAO), education and culture (UNESCO), and many more.
2. The decolonization of large regions and populations took place leaving European countries reduced to their home economic size.
3. More closer, technological innovations accelerated very fast, enhancing the building of new world visions. The television, micro-electronics and ICT, changed and still do, the daily live of millions/billions people all over the world. Some Asian countries -Japan, Taiwan and more recently South Korea-joined the expansion and acquired a major role in the manufacturing processes, basically due to large amounts of cheap labor.

Then BRIC countries:

— *Major Countries in Asia*

The number of people in this region is absolutely impressive (in billions 2020)⁴ : China 1,431.2 and India 1,367.2; and Korea S 49.5+N 24.8 and Japan 123.7; in total 1,629.2. Indeed, in terms of economic and geo-power, most China but also India change the international discourse. Other emerging economic powers are entering into the game as well. In Asia, the combination of China, Korea (N+ S)⁵ and Japan has a high potential to play a major economic and geo-political role. However, this possible alliance inherits the historical disruptions, which could slow down a prosperous integration of the people. China faces, most likely, in the coming decades intense social, ecologic disruptions as a result of a too fast economic development and the hierarchical style of governing. The evolution of India occurs at a slower pace, and could follow another pattern than its neighbors. Indeed, its cultural composition and historical evolution are quite different from other parts of Asia. The other countries of South-East Asia will enter the international political arena once the local conflicts and tensions have been digested by the national political constellations.

— *Russian Federation*

The countries of this Federation are still in internal political and economic mutation and remain for some time conditioned by a soviet dominated state philosophy. Attaining political stability will last perhaps another generations or two (one generation being some 25 years).

— *South America.*

The Latin American countries, in particular Brazil and at a less degree Argentina, follow

¹ Goldman Sachs. *Dreaming with BRICS: the path to 2050*. Global Economic Paper #99, 2003

² Brown Gordon. *Supporting Global Growth*. G20 London Summit 2009

³ G20. *Leaders' Statement : the Pittsburgh G20 Summit*. 2009

⁴ UNDP *HDR. Overcoming barriers: Human mobility and development*. UNDP, 2009

⁵ Webb Molly. *South Korea: Mass innovation comes of age*. Demos, 2007

a track of accelerated economic development, their integration in the political world discourse is progressing steadily. The South American continent is not only rich in natural and biological resources, but also in cultural and biological diversity. Their geo-political presence will strongly depend on the visions the political leaders will formulate in the next decades.

In a way of illustration, a shift of power was visible at the latest world event in Copenhagen at the COP15 conference in December 2009. In these negotiations, the geo-power center of the world shifted from the US and the Atlantic towards China and the Pacific with a strong appearance of some BRIC countries. The EU was the great absent in the geo-debates although showing the highest performances in fighting global warming. The scientific results and knowledge gathered mostly by the US and the EU universities and research institutions, was subordinated to a geo-political confrontation and resulting in a (temporary) deadlock.

Table 1.

Country*	Population [billion]		GDP/ca [PPP USD]	GDP [bio-USD]
	2007	2020	2007	2007
EU	0,501	0,505	29.900	16.843
US	0,309	0,346	45.592	13.751
Japan	0,127	0,124	33.632	4.384
China	1,392	1,431	5.383	3.205
India	1,165	1,367	2.753	1.177
Russian Federation	0,142	0,135	14.690	1.290
Brazil	0,190	0,209	9.567	1.313
World	6,671	7,674	9.972	54.584

* UNDP HDR 2009. Data 2007

The Nation State Reflex of the EU Members States

The COP15 Conference in Copenhagen⁶ has clearly demonstrated that the geo-political power balance remains based on the 19th century political concept of the Nation State. The UN institutions, created in the second half of the twentieth century are still built on the legal basis of the Nation State.

The issue of climate change and global warming, however, is no longer a matter of national borders. Indeed, it concerns the status of the eco-system of the entire planet. The entirely new character of the phenomenon and, above all, its huge dimension and extreme complexity, call for a new political methodology for reaching efficient, large scale and urgent actions.

As a first conclusion the following question raises : can there be any chance to reach a planetary policy for mastering the global warming, through an agreement of about 190 States, with a 19th-20th century political philosophy about world affairs? As long as national interests, historical differences in development pace and the correlated waste production prevail, there cannot be a strong and general accepted international agreement. Unless, catastrophic, unexpected world events occur, either at earth system level (floods, droughts, rising sea levels, food scarcity, ...) or socio-economic level (social disruptions in emerging countries, nuclear war in conflict regions,

⁶ UNFCCC-COP15. *Copenhagen Accord*. 2009

economic recession, ...), leading to a new world order. Historical experience supports this conclusion, humankind has not been able, until now, to change course through concerted agreements based on rational or scientific arguments.

2.2 World major issues

Climate Change and Global Warming⁷

In 1988 the IPCC (International Panel on Climate Change) was established, and the UNFCCC (United Nations Framework Convention on Climate Change) in 1992. The Kyoto Protocol was agreed upon in 1997 and became effective only in 2005. The topic of Climate Change is about 25 years on the agenda of world summits and events. The expectations of the 15th conference of the parties—COP15—in Copenhagen that a new protocol would be agreed upon; the new one being the follow up of the Kyoto Protocol of 1997 and expiring in 2012. Geo-political arguments interfered and an agreement could not be reached. Scientific analysis and large amounts of observations of the planet led to the conclusion that anthropogenic activities are bringing the planetary ecosystem under major threats. The consequences of the Global Warming for the eco-sphere—inclusive the human species—are projected to be dramatic, unless quick actions are taken for reducing the concentration of GHG (Green House Gases) in the atmosphere to pre-industrial levels. The difficulty for reaching these GHG concentration lies in the necessity to modify the habits of the populations of the industrial world and correlated to find new economic and industrial models. Further, it is recognized that the effects of global warming will affect all regions in the world, be it in different sizes and ways, and therefore the leaders of the world need to agree on coherent action patterns under the guidance of adequate international instances—new or old ones.

The world demography⁸

The demographic evolution of the planet in the next half century has been widely commented by demographers and international organizations. A substantial increase of the world population will be reached by mid-century: 8,5 billion people. The developing and emerging countries are the most hit by this increase. Unfortunately, three additional phenomena accompany this increase :

- the present economic growth concept enhances the use of natural resources, thus increases of the 'ecological footprint' far beyond planetary limits, and endangers peaceful coexistence between countries and regions;
- the global warming enhances the disruption in food supply in regions with high demographic increase;
- the aging of the population in most parts of the world.

Dramatic global warming impacts, for example the melting of the glaciers in the high mountain chains of the Himalaya, threaten the major river basins in Asia to run out of fresh water in the summer seasons. About half billion of people are living and grow their food are directly concerned and will have a repercussion on the demographic evolution in these regions.

Rising Societal Disruptions

The fast economic growth observed for a couple decades, especially in emerging economies, raises substantial questions about the durable and sustainable character of these economies, in particular, concerning the adaptation and transformation of the social fabric of the populations in the industrialization process and their share in the economic development. The building of

⁷ Weiler Raoul. *The Kyoto Protocol and its Socio-Ethical Aspects*. In: Reading the Kyoto Protocol. Ethical Aspects of the Convention on Climate Change. Eburon, 2005

⁸ Kapitzka Sergey P. *Global Population Blow-up and After: The Demographic Revolution and Information Society*. Global Marshall Plan Initiative, 2006.

a middle class, strongly promoted by political establishments, requires an increasing degree of social participation and security. In other words, the pace of economic growth as we see it, risks to become a source of dramatic social instabilities and disruptions. Correlated to this accelerated economic development are the environmental disruptions with sanitary distortions of the populations. The rather fragmented information we get about the real environmental situation of certain regions in Asia is more than cumbersome. The discourse of eminent politicians used in the seventies and later: 'first economic development and thereafter—if money is available—clean and restore the environment', is again applicable. Apparently, lessons are not learned from history, the priorities remain economic growth and profit, but not the protection of our own living world.

Civilization and the Loss of Cultural Diversity

Lester Brown⁹ of the Earth Policy Institute, Washington D.C. together with many other, warn that without a radical change of our economic, technological and military systems, humankind faces a collapse of its (Western) civilization. This analysis underlines once again the urgency for political action for taking care of the earth's eco-system, of which we are part of.

The cultural dimension of the sustainability concept is a frequent forgotten issue. What will humankind do for the preservation of its cultural heritage and diversity? Languages and cultures disappear everyday, by mid-century it is expected that only about 10% of the present existing 6,000 spoken and written languages with their traditions, beliefs and human values will remain alive. With the disappearance of the languages, cultural entities vanish for ever. The underestimation of the importance of the cultural as well as the biological diversity, represents a dramatic impoverishment for humankind and its ecosystem. The global warming process accelerates the decrease of diversity, and a world without will become a boring place. Their preservation must become major concern for action for all of us.

3. Towards a Sustainable EU

3.1 The EU in Perspective

The European Union

The political construction of the European Union has been a stepwise process, reaching today 27 Member States, built on mutual agreements during more than half a century. The most recent step, as defined in the Treaty of Lisbon (December 2007), should improve the functioning of the institutions, among which two major nominations: *President of the European Council* (heads of States or Governments of the Union member states and the President of the European Commission) and of a *High Representative of the Union for Foreign Affairs and Security Policy*¹⁰. A further geographic extension of the EU with the Balkan States (Croatia, Serbia, Bosnia, Montenegro, ...) and Norway, seems possible in the coming years. The increase of population and GDP of the EU (27) will not be affected very much by these extensions. In Table 2 a short summary of basic numbers about the Union are presented¹¹.

In Table 3, a comprehensive analysis of the above data indicate that quite a large spread in GDP/cap and of the public debt does exist. In order to reach a sustainable EU, these gaps must be reduced significantly, as fast as possible. The national debts are not entirely new for some of

⁹ Brown Lester R. *Plan B 4.0. Mobilizing to save civilization*. W.W. Northon & Company, 2009.

¹⁰ Office Journal of the EU. *Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon*. C 306, 2007

¹¹ Eurostat. *Europe in Figures. Eurostat Yearbook 2009*. European Communities, 2009

Table 2.

Member State*	GDP/ca [PPP €]	Debt** [% of GDP] 2008	Population [mio]	Member State	GDP/ca [PPP €]	Debt** [% of GDP] 2008	Population [mio]
Germany	27.400	65,90	81,76	Austria	29.300	62,60	8,37
France	26.000	67,40	64,71	Bulgaria	9.700	14,10	7,58
UK	27.300	52,00	62,04	Denmark	28.300	33,50	5,55
Italy	23.900	105,80	60,40	Slovakia	16.800	27,70	5,42
Spain	24.200	39,70	46,09	Finland	26.900	34,10	5,35
Poland	14.100	47,20	38,16	Ireland	30.900	44,10	4,45
Romania	11.000	13,60	21,47	Lithuania	12.600	15,60	3,33
Netherlands	31.500	58,20	16,58	Latvia	11.700	19,50	2,25
Greece	23.000	99,20	11,13	Slovenia	20.900	22,50	2,05
Portugal	18.200	66,30	10,64	Estonia	14.400	4,60	1,34
Belgium	27.500	89,80	10,82	Cyprus	23.300	48,40	0,80
Czech Republic	18.800	30,00	10,51	Luxembourg	65.009	13,50	0,50
Hungary	14.900	72,90	10,01	Malta	18.300	63,80	0,42
Sweden	28.200	38,00	9,35				
				Total	24.300	61,50	501,26

* Wikipedia. Data from Eurostat 01.01.2010. ** Eurostat

the States, however with the international financial crisis, upper limits of debts should be imposed to all members. In these matters the political strategy of the EU must be a strong regulation in the benefit of the populations and the Union.

Table 3.

GDP/ca Range* [PPP €]	Number	Debt [% GDP]	Number
>30.000	3	>85	3
25.000–30.000	8	65–85	4
20.000–25.000	5	35–65	9
15.000–20.000	4	15–35	7
10.000–15.000	6	<15	4
<10.000	1		
Total	27	Total	27

In conclusion, the geo-political position of EU is still a project in progress, advancing slowly but steadily, based on strong premises and on a long history and experience. Over the last two centuries, the person as well as the commons have acquired a central place. The neo-liberal economic thinking of the present industrialized societies has shifted these fundamentals into shortsighted objectives of profit.

The EU societies—as the rest world-face challenges at which political answers determine the quality of the life of the people. As will be shown, many issues are already well known and sufficiently described by experts and scientists. The domains we will explore concern essentially:

- 1) socio-economic transition for economic selective growth or 'de-growth' (décroissance);
- 2) the commons goods and the outsourcing of labor activities;
- 3) zero carbon and zero waste perspectives;
- 4) post Copenhagen actions;
- 5) financial and monetary stability;
- 6) embracing scientific and technological innovations;
- 7) reducing the administration and red tape.

Issues on military harmonization within the Union are left out here, due to insufficient available expertise, however it is without doubt a major issue, which has been debated in the past but aborted and should be put on the political agenda again. Obviously this question is strongly linked with the Nation State concept which is still very alive among EU Member States. However, as Lester Brown has tentatively indicated, the world wide money flow to military expenditures compared to the amount needed for sustainable world development is simply staggering. The logical conclusion is that humankind has not yet acquired the maturity to run the planet.

3.2 Elements for a Sustainable Future

3.2.1 Selective growth or 'de-growth': an inconvenient must

The Club of Rome's publication *Limits to Growth*¹² (1972) exists for about 40 years and contributed to a global awareness of planetary limits, but has barely been able to push for substantial political actions. On the contrary economic growth has never been as high in this period as ever before. The recognition of the impact of the global warming phenomenon on the planet's ecosystem and the eventual consequences for humankind are much more recent, and have not been correlated with the Limits to Growth report. The economic and industrial activities driven by a market-consuming economic model, based on unlimited and cheap fossil energy, are now accepted to be at the origin of the global warming of the planet. The Club of Rome's report was inspired by the fear of a lack of mineral resources as the result of very fast economic expansion of the post war period, however; today the situation has reversed, in the sense, that the real limits are waste production and the size of earth sinks. Humankind considered the sinks as infinite in size and to be used indefinitely, for centuries and beyond. These limits are now recognized to exist and their transgression to become a major problem, at the point that, humanity's civilization and/or survival could be endangered.

Recently the concept of economic selective growth or 'de-growth'¹³ has been revived, as an answer to the present accelerating unsustainable economic evolution. Although the paradigm being implicitly announced in the Limits to Growth, it still faces resistance as a new thinking path for this century.

In a paper dealing with the earth's eco-system : *Planetary Boundaries: Exploring the Safe Operating for Humanity* (2009)¹⁴, an excellent analysis is given on the status of the planet and the boundaries of some nine domains in which humans should and can act. The unlimited economic growth paradigm, frequently understood as the business as usual approach (BAU)

¹² Meadows D. et al. *The limits to growth*. Universe Books, 1972

¹³ Weiler Raoul. *De-growth for Earth Survival*. In : Which Forces Are Driving Europe? Millennium III #17/18, European Conference of the National Associations of the Club of Rome, Bucharest, 2009

¹⁴ Rockström Johan et al. *Planetary Boundaries : Exploring the Safe Operating Space for Humanity*. Ecology and Society Vol 14, 2009

and repeatedly mentioned by political leaders, is presented as the best solution for enhancing development is in fact contradiction in terms. Of course economic growth remains an objective for specific regions and populations. However, referring to the footprint¹⁵ concept, the planetary resources have already transgressed upper limits, meaning that humankind is using its 'natural capital' and thus behaves in an unsustainable way. The economic selective growth or 'de-growth' approach is increasingly confirmed by the different analysis on the physical reality of global warming. Apparently, it has not yet penetrated the economic thinking. From a sustainability point of view, the industrial societies should rather think in terms of 'sustainable retreat'¹⁶ in order to evolve to the well-being of the people, rather than in terms of accumulating consumer goods.

3.2.2 The socio-economic EU frame

—*The Commons*

The EU has through its industrial past, essentially in the nineteenth century, in answer to the violent reactions by the exploited working classes, succeeded in building a social, health-care and pension net for its entire populations. The concept of social responsibility and the common goods, has emerged from these confrontations. According to some writers¹⁷, the ultimate condition for reaching democratic societies consists in preserving common goods, we add now to reach sustainable societies. In the last years, a strong tendency appeared by governments for bringing public goods and enterprises to the market, in view of generating higher efficiency and direct profit. The main argument is that the business approach has higher capabilities to manage such enterprises. Consequently, this move has weakened the concept of the commons of the European society under the dominant of neo-liberal market economy concept. Some examples have already shown that these premisses are not systematically verified. A recent example, the Kyoto Protocol proposes Emission Trading, consisting in selling carbon surplus of one countries to another one with too high emission levels, in the end no one has to do any effort for reducing the physical GHG output. In fact it refers to a way of privatizing a commons good, the atmosphere. A carbon stock exchange has been set up for this purpose. Is there something on earth that is more common than the air? We breathe it several times a minute and which institution or business could claim ownership of it?

—*End of labor outsourcing*

The recent financial and the related economical crises have dramatic effects on the labor market world wide. Unemployment is a waste of human resources and neither enterprises nor governments and institutions should contribute to it. In a similar way, one should ask if the outsourcing and de-localization of industrial activities to low-cost regions is a sustainable way to act? At one hand, de-localization envisions either more profit due to lower manufacturing costs or the survival of a business in a higher labor costs countries. From the labor point of view, outsourcing is a definite loss, which the taxpayer compensates—in Europe—through its social net. Thus, de-localization means that the additional social costs, which do not appear in the accounting of the enterprise, but, are de facto still there and appear in the accounting of the country. The result is that the overhead cost for social security and thus the labor cost of a country rise, disadvantaging local companies and hinder new investments. The accounting sum of outsourcing is not made and surprisingly the political establishments are not reacting at all. On the other hand, the receiving countries, mainly in Asia, show high rates of economic growth, which is in part due

¹⁵ WWF. *Living Planet*. 2008

¹⁶ Goodell Jeff. *The Prophet of Climate Change : Lovelock James*. 2007 http://www.rollingstone.com/politics/story/16956300/the_prophet_of_climate_change

¹⁷ von Weizsäcker Ernst et al. *Limits to Privatization. How to avoid too much of a good thing*. Earthscan, 2005; Petrella Riccardo. *Limits to the Competition*. VUB Press, 1994

to artificial imported activity. For them, these activities are in the long range also unsustainable, then originated through decisions processes which escape them entirely or when other regions come up with lower costs again.

The EU market having half a billion of consumers—which is not so small—would be better of to elaborate policies for internal employment and stimulate labor mobility and flexibility inside its own market borders. A new accounting system in which the entire cost of the outsourcing is registered and eventually taxed, is nothing less than a consolidation towards a sustainability society. Thus, such measures are not protectionist in nature, however the credo of the enterprise world today is focused on profit at any price and not sustainability for all the partners and citizens.

3.2.3 Zero Carbon and Zero Waste Implementation

The Zero Carbon & Zero Waste¹⁸ (ZC&ZW) is in fact not a new concept, it has been described in different forms by many others: Factor Four¹⁹; The Factor Ten Institute²⁰; Cradle to Cradle²¹, they all contributed to the concept. The ZC&ZW was quite clearly formulated by Helen Clark²² of New Zealand (now UNDP administrator) as a policy objective to be attained for her country in the next decades.

Indeed, the technological innovation has already accomplished quantum jumps in mastering electric energy storage in transportation. There is no reason to assume that innovation is at its ends, on the contrary it sounds more reasonable to think that new frontiers will be discovered in the next decades. In a very interesting report of the Foundation for the Future²³ about the future of energy—horizon the year 3000—indicates that solar energy will be the relay of all energy humankind will need in the future, as it was millions of years on earth. Cities governments should have stronger commitments and policies for attaining ZC&ZW by 2030, at least for personal mobility. Additional the advantages are not small, reaching zero carbon materializes the long desired independence for fossil energy from politically unstable regions and improves directly the national balance of payments. As to zero waste, life cycle analysis and recycling material resources is practiced since many years, its application should become systematic standard policies.

3.2.4 Post-Copenhagen Actions

The Copenhagen COP15 event has been quite interesting for observing geo-political shifts. Unfortunately, civil society has been quite unhappy and frustrated about the negotiation process. First, the total absence of structural contacts with civil society proved to be an obsolete political approach; second, new ways of governance procedures have to be designed in order to reach solid and fast agreements, in accordance with the degree of urgency. The content of the negotiations is very well understood by civil society actors. Obviously, internal national political divergences play an important role, however the leadership of these countries should realize that the internal differences and difficulties are and mostly time bounded, and therefore should not interfere in the negotiation processes on planetary issues. On top of this difficulties, the political establishments seemed to ignore the urgent character of the planet's situation. The inter-generational dimension

¹⁸ Weiler Raoul. *A zero waste and zero carbon Flanders: strategy or mirage?* In : Creating a Sustainable economy. Investing in the future. EWI-Flemish Government, 2008

¹⁹ von Weizsäcker Ernst et al. *Factor Four: Doubling Wealth, Halving Resource Use*. Earthscan, 1997

²⁰ Schmidt-Bleek Bio. *The Factor Ten Institute. Factor 10 Manifesto*. 2000

²¹ McDonough William, Braungart Michael. *Cradle to Cradle: Remaking the Way We make Things*. North Point Press, 2002

²² Clark Helen. *Berlin Speech: Sustainable Development*. 2007

²³ Foundation for the Future. *Energy Challenges: The next Thousand Years*. 2007

of the present situation must be a political concern as well. This is difficult to accept, the more the longer decisions are adjourned, the more expensive²⁴ the solutions are.

As has been indicated in the introduction, a new geo-political frame has become apparent through the negotiation process. The quasi absence of the EU is very regrettable, however not hopeless. From EU perspective, its sustainability objectives and approaches have not been shattered, but it has now to persevere in the directions taken. However, concerted action at planetary level should be implemented. In the post Copenhagen processes the EU should regain its place in the geo-political decision process.

3.2.5 Monetary and Financial Stability

Since the financial crisis many experts have published an overwhelming amount of analyses and recommendations. The consequences at geo-political level evolves in a decline of the position of the USD in favor of the Chinese currency. Simultaneously massive State interventions for keeping essentially the US financial system alive and preventing a global collapse, has resulted in a temporary 'nationalization' of the financial and banking system. A never seen intervention in the US as well as in Europe. Returning to a BAU situation appears to be most probable exit out of the situation, however definitely the less desired one. Revisiting the Bretton Woods²⁵ agreements (1944) has been suggested several times, with the objective to elaborate a new monetary frame, liberated from the post-War II circumstances. In this respect the decoupling of the USD from the gold standard, unilaterally decided by the US in 1971, ended the Bretton Woods construction. The monetary value of the USD being no longer bound by a standard value under the 'supervision' of an international institution, fluctuated along internal political and market situations.

Attaining a stable and sustainable monetary system, a 'multi-polar' international institution should be designated or created for governing the world monetary system. The past experiences demonstrate that a sole dominant currency does not guarantee sustainable behavior of the major actors. What happened in the past, will repeat itself in the future, unless substantial systemic changes are installed. How this new reference currency should look like, is to be defined and agreed upon during the negotiation process. In any case the new reference point should be exempt, by definition, from 'local' and 'short term' economic fluctuations as well as from 'local' political interests.

Obviously revisiting the Bretton Woods will not be an easy task, then the shift of the 'power' repartition of more than half a century will then be declared officially and neither easily recognized nor accepted. The inherited post-war power situation of World War II will then be abandoned definitely. But it will take some time, unless 'external' events interfere. The EU with the creation of the Euro comes in a situation to sit at the negotiation table, provided it can propose strong alternatives for a new financial and monetary order.

3.2.6 Embracing Technological Innovation

It is generally accepted that technological innovation is a major driver for economic development of industrial societies. Technological innovation with the objective of accelerating sustainable societies is a major challenge for scientists and engineers as well as policy makers. All industry sectors face this challenge, the design and the manufacturing of goods, machinery, housing, consumer products, etc. have to be transformed along some new criteria:

- repair friendly goods instead of throwaway fabric;
- progress in the domain of renewable energy products as well as energy storage for automotive use, has shown already substantial progress, but must be continued;

²⁴ Stern Nicholas. *A Blueprint for a Safer Planet*. The Bodley Head, 2009

²⁵ http://en.wikipedia.org/wiki/United_Nations_Monetary_and_Financial_Conference

- monitoring housing for higher efficiency in energy use and less waste production;
- the earth system sciences and geo-engineering for reducing global warming should be intensified in order to be ready for fast intervention in case of accelerated climate changes;
- health-care and aging of the population require new approaches at the scientific and technology domains;
- adapting education and learning processes at primary and high school level enabling the narrowing the digital gap in particular developing countries;
- and much more.

The question is in which degree the EU can strengthen and enlarge its position in most technology domains? Considerable efforts have been realized in the past, in particular through the Directorate General for Research of the European Commission, however, remains the challenge of more assertive European institutions and entrepreneurship. How the emerging Asian countries will succeed in entering the innovation process is still an open question. In the past, huge expectations from some Asian countries have been projected, e.g. the fourth computer generation, however they have not been materialized.

3.2.7 Reducing the Administration. Red Tape

Overpopulated and inefficient administrations of European societies has been known for decades. Information technology allows dramatic simplification of red tape, and thus reduce the overhead costs, in particular through the elimination of redundant operations. Although spectacular achievements have been reached within the EU, e.g. with the introduction of the Euro, and with the abolishing of the customs barriers, the reduction of the administrative burden appears to be untouchable.

The overhead labor costs are in several countries much too high, resulting in decreasing investments and outsourcing as mentioned above. Rigid administration and often politicized, undermines flexibility and decreases the motivation of the civil servants. In global, too many of them is contra productive and contra efficient.

4. A Tentative SWOT Analysis in view of a Sustainable EU

The future of the EU lies in the ability to build a durable and sustainable society in the next decades. We have enumerated a number of issues, critical in our opinion, to access a durable society. Besides the internal challenges the EU has to address, the external world is evolving at high pace.

A very short but not exhaustive SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) regarding the EU is presented in Table 4. The EU possesses quite a number of strong characteristics favorable for evolving towards a sustainable Union. The weaknesses remain numerous and some quite important e.g. the ability to react quickly and steadily, overcome Nation State reflexes. As an illustration, the present debates about the overcapacity in the automobile industry and the attitude of the national politicians for saving their 'national' employment, proves once again the deep nationalistic roots, present in European societies.

The EU has to take the intellectual leadership in the search for new economic concepts and methods. The all over praised economic growth paradigm has never been sustainable, taking into account the size of the planet and its resources (footprint) and the limits of its sinks (oceans, atmosphere). Instead of speaking of sustainable growth, rather we should envision 'sustainable retreat'.

Table 4.

EU-Sustainability SWOT Analysis

STRENGTHS	WEAKNESSES
Political Stable political and state structures	Inefficient administrations, too many civil servants; overhead leads to high labor costs
Economic High average living standard A large internal market of 0,5 billion inhabitants Euro as solid monetary basis Historical vision on the Commons Economic de-growth concept under discussion	Important spread of GDP/ca among Members States Nation State concept tempers common policies Too high national debts Privatization as accepted policy Economic growth as the unique driving policy
Social Extended social services and health care provisions Stable population numbers	Outsourcing of labor activities to low-cost countries Growing and/or cyclic unemployment; aging of the population becomes a major problem
Environment-Global Warming Zero Waste & Zero Carbon concept Renewable energy facilities increases	Too slow implementation of measures for reducing global warming Fossil energy dependence remains high
Educational Good/Excellent higher education	Too slow technological innovation to market; insufficient flexibility
OPPORTUNITIES	THREATS
Political Consolidating EU political structures (Lisbon)	Nation State Reflex ' <i>Party-cracy</i> ' as a threat to decision processes and democracy.
Economy Building a carbon free economy Consolidating the EURO	Missing sufficient investments Monetary world instability
Socio-Cultural Enhancing participative communities & societies Multicultural society	Overall cost of medicare & retirement systems Societal conflicts due to low immigrants integration
Environment. Global Warming Global warming actions: Dedicated technology developments Zero carbon & Zero waste implementation	Insufficient international political drive
R & D Acceleration of technological innovation	Insufficient seed money for business creation.

Of course there are several opportunities in the present situation, but this was true in the past as well. The inertia of human behavior, often expressed as BAU, could indeed lead to major catastrophes. As an example the absence of concerted actions to reduce global warming could lead to a dramatic set back of our civilization. Remains the unknown factor of resilience of the human species and the eco-system towards these major threats. We know that sophisticated

cultures have collapsed throughout history and it is not proven that the cultural period of modern industrialization can avoid a similar process.

5. Power balance sheet for EU, US and China

In Table 5 a succinct comparison of some major characteristics of EU, US and China have been juxtaposed. Without any doubt the choice of the items if by far not complete and the three countries do not cover the entire geo-political space. The EU has focused itself on stepwise internal structuring, which may be considered as an exceptional and historical performance. However, at the geo-political level, the EU has played as secondary role since WWII. The end of the Cold War in 1989 and the integration of Central European countries in the EU, has increased its potential in the geo-political discourse. The internal consolidation of the EU is still in progress and it will depend in which degree the Members States of the Union will succeed in overcoming their historical Nation State reflexes.

Today, but hopefully not for too long, the US is submerged with the costs and important debt of the two wars it is fighting. The volume military expenditures is so huge that it represents a major impediment to reach a sustainable society and to finance primary needs of large parts of the US society, in particular for education, health-care as well as for pension provisions.

The EU members States have to cope with exorbitant costs for their administration, which hinders the necessary flexibility of the work forces in modern economies, resulting in minimalistic resources for investing in sustainable transformations.

As to China, what we can expect are substantial social disruptions that can take place in the course of their economic development. It would be dangerous to speculate on a stable society. Individual freedom and development of the citizens are basic needs in a society and belong to the sustainability criteria for any people.

We do not know yet in how far the world demographic expansion of the next decades will hinder the process towards sustainable societies. We do not know what the impact of the global warming will have on the earth system and humans communities : sea level rise, deforestation, desertification, ice melting of the Arctic and Antarctic regions and of the high mountain chains in different parts of the world, in particular of the Himalaya. The latter is the source of seven major river basins in Asia, providing about half a billion people with food. We do not know if the prognoses of fossil energy resources—peak oil and peak gas—are correct. If they are, then we have to recognize that the world has entered in an energy transition phase, which will last beyond 2050 and the Global Warming effects, beyond the 21st century. The geo-power balance will be conditioned by the ability of the actors to address the challenges with sustainable solutions.

The evaluation of the items listed in Table 5 does not lead neither to clear conclusions nor to new ones. The overall impression is that the US faces major challenges; that China through its fabulous economic development is not free of social and ecological disruptions, which can affect its geo-power position; and the EU faces to be successful in its internal consolidation in order to be able to keep its progress toward a sustainable European continent.

6. Some Conclusions. Inter-generational Responsibilities

The future of Europe lies clearly in building a sustainable common society. The EU has succeeded, over half a century, building a political ensemble. The work is not finished and must

Table 5.

Tentative evaluation: Power Balance Sheet

	EU	US	China
Economy			
Monetary situation: debt	Medium	Catastrophic	High monetary reserves
Economic growth	Modest	Medium	Very high. Expected source for Societal disruptions
Social			
Labor	Unstable employment Union conservatism	Flexible but market driven	Increasing disruptions
Social welfare	Excellent	Poor	Disruptions-dramatic-uncertain
Aging population	Rising numbers important for costs	Dramatic for many	Fast aging; cost effects unknown
Environment			
Environment	Medium-good	Medium-bad	Catastrophic/health threat, populous disruptions
Global warming Renewable energy	Medium-growing	Poor: strong fossil based	Poor/catastrophic-coal based
Threat Ice melting	Small	Small	Important high mountain chains dramatic fresh water supply
Desertification Deforestation	Little Little	Medium Medium	Considerable-high Unknown
Education			
Education	Excellent in general	Extremes: excellent and important illiteracy	Huge effort to be accomplished
R&D			
Technology innovation	Low-medium	Very high	Uncertain yet
Military			
Defense	Heterogeneous command; weak	Very strong	Unknown to medium

be continued, at all levels : social, economic, environmental and global warming. The highest priorities have to given to systemic approaches and durable solutions.

The transition from the 'old' industrial to the 'new' sustainable societies represents a fundamental mutation process, asking a different economic system and new industrial design and manufacturing processes. The suggested solutions are not inspired by usual 'out-of-the-box' reactions so frequently advanced by international institutions. Historically, Europe has constructed societies in which the commons and the social protection are fundamental values and they must be preserved against the dominant market driven economical practices. Recent financial and monetary disruptions require revisiting the past international agreements, based on post war circumstances. The Nation States reflex of the EU members remains a serious threat for necessary for its

long term policy harmonization. The oncoming economic 'de-growth' concepts appear necessary thinking paths, given the limited size of the planet and of its sinks. Of course the selective growth or 'de-growth' (décroissance) process will vary from state to state or from continent to continent, however, the overall message is that it is unavoidable. Obviously 'zero carbon and zero waste' strategies at community as well as at country level have to be implemented. They are part of what has been called 'sustainable retreat' process, unfortunately it is getting urgent for implementation leaving behind the BAU way of doing. The short SWOT analysis should provide a better understanding of the challenges of the EU and for the search to original solutions.

At the geo-political level, the power balance is shifting from a bi-polar to a multi-polar one. This shift has advantages but inconveniences and calls for revisiting the restructuring international organizations created during the past century. Major issues that require answers at planetary level are: the shrinking of the fossil energy reserves, a monetary reference frame independent of national currencies and guaranteeing long term stability, fresh water availability and correlated food production, and, last but not least, the world demographic evolution with the aging of the populations.

The latest COP15 negotiations in Copenhagen for a new climate change protocol has clearly shown the underlying political motivations of some Asian States. The shift of the geo-power balance from the Atlantic countries towards the Asian countries of the Pacific region, is occurring now, accelerated though the demographic importance and the strong economic development. However, internal social and environmental disruptions are realistic risks able to slow down the evolution.

Finally, humankind is now confronted, in a very conscious way, with its own future. This is a fascinating situation and in front of an inter-generational responsibility. The sustainability concept appeals for this kind of responsibility and was referred to in the UN publication in 1987 *Our common Future*.²⁶ Human species and eco-system must evolve into a stronger eco-centric perspective of the planet. This is a major paradigm shift, we are observing right now, comparable to a new Copernican revolution.

²⁶ WCED. *Our Common Future*. Oxford University Press, 1987

JULIUSZ KOTYŃSKI

THE EUROPEAN ECONOMY, ENLARGEMENT AND THE GLOBAL CHALLENGES OF THE 21ST CENTURY

Abstract

At the real beginning of the 21st century, after a deep global crisis and adoption of The Treaty of Lisbon, the European Union faces new threats and choices that may determine its fate for a few coming decades. Idealistic preference for a peaceful stagnation and defensive, neo-protectionist policies cannot be considered a right strategy for Europe in the epoch of rising global powers, mounting challenges and geostrategic reconfigurations. Despite quite widespread “enlargement fatigue” European nations and their leaders should not reject at this moment some risky, strategic choices that may contribute to strengthening the economic competitiveness and the political and military position of the European Union and the Atlantic Community in the global race towards future. Among them there is the enlargement dilemma, including the question of Turkey’s membership in the EU. The author is convinced that—despite all fears and risks involved—a relatively rapid admission of this large, dynamic economy would constitute an important factor reinforcing the Union, and enabling it to remain a major global player of the new century.

1. On the threshold of centuries

There are about forty years till the mid of the 21st century and a hundred years from the year 1910. Forty years that is a similar time span as from 1910 to 1950 or from 1970 to 2010. The first one of these periods (1910–1950)—appearing now as important but rather distant history—produced the Bolshevik revolution, the Great Depression, Nazism, two disastrous world wars, with use of nuclear arms in 1945, and the post-Yalta division of the world. However, it brought also a dusk of colonialism, the beginnings of integration of (western) Europe and of the efforts aimed at reshaping the global monetary system.

During last forty years that followed the landing of Man on the moon (July 1969) a bulk of the present political class and of the world population was shaped. It was the period free of world wars though abundant with political and military conflicts and confrontations in individual regions, including Europe. It brought also a few world oil crises as well as a lot of regional political, economic and financial turbulences.

In 1989–1990, in the mid of that period, an unexpected political breakthrough happened in Europe, followed by a series of political events having a global and durable impact, such as the breakdown of the Soviet empire, the unification of Germany, political and economic transformations in the countries of Central and Eastern Europe and the entry of a dozen of them to the European

Union. The last twenty years witnessed also a new massive wave of internationalization of global economic and financial relations, fuelled by the ICT revolution and accelerated economic, social and political changes outside Europe.

Ironically, the latest “*big leap*” of China followed the crackdown of the students’ opposition in Tiananmen Square in June 1989 that happened just in the moment of a historic democratic changeover in Poland.

Over the last twenty years, a spectacular rise of new potential global powers of the 21st century has been observed, such as Brazil, Russia and notably India and China, nick-named BRICs by the Goldman Sachs experts¹.

According to a renown US report, “*The likely emergence of China and India as new major global players—similar to the rise of Germany in the 19th century and the United States in the early 20th century—will transform the geopolitical landscape, with impacts potentially as dramatic as those of the previous two centuries...The early 21st century may be seen as the time when some in the developing world, led by China and India, come into their own. ... A combination of sustained high economic growth, expanding military capabilities, active promotion of high technologies, and large populations will be at the root of the expected rapid rise in economic and political power for both countries*”².

That turbulent period has been concluded by a major global financial and economic crisis, the deepest one since the World War II, likely to be followed by significant reconsideration of economic doctrines and far reaching changes in the geostrategic balance of global powers and in their political and economic linkages. This process may last until the half of the century and be associated with gradual changes in the economic, demographic and military positions of principle global actors, in multi-polar and diversified international surroundings. However, the changes could also run very quickly, in a dramatic and irregular way, under the impact of hardly predictable political events and coincidences, as it was many times the case in the past, both in the ancient and in the newest history of the mankind.

Multiple efforts have been undertaken, and several propositions offered, to systematise the newest history and to agree on a “real” date of transition from the 20th to the 21st century, on the basis of major breakthroughs at the threshold of the New Age³. Should the year 2000 be accepted as an adequate milestone, opening the new century and the Third Millennium?

Or rather one of the most significant international events of the last two decades, mentioned above, ought to be pin-pointed as a crucial turning point, opening a new global era, e.g. such as the breakdown of the Eastern bloc and of the Soviet Union followed by swift political and economic transformation of the Central and Eastern Europe.

However, as occurred afterwards, neither the collapse of the bipolar world turned out to become the “end of history”, nor a total victory of the liberal market economy and a democratic political system, as proclaimed Francis Fukuyama⁴, nor the world became unipolar one, dominated continually by the United States as expected Zbigniew Brzezinski⁵; nor flat and Americanised, as pretended Thomas L. Friedman⁶.

¹ Dreaming with BRICs: The Path to 2050, Goldman Sachs, Global Paper No 99, 1st October 2003.

² Mapping the Global Future, Report of the National Intelligence Council’s 2020 Project, December 2004, p. 47.

³ Cf. A. Kukliński, B. Skuza (eds), Turning points in the transformation of the global scene, Polish Association for the Club of Rome, Warsaw 2006; A. Kukliński, The Creation and the Destruction of the Global Order.

⁴ “*What we are witnessing is not just the end of the Cold War, or a passing of a particular period of postwar history, but the end of history as such: that is, the end point of mankind’s ideological evolution and the universalization of Western liberal democracy as the final form of human government*”. F. Fukuyama, *The End of History and the Last Man*, Free Press, 1992.

⁵ Z. Brzezinski, *The Grand Chessboard. American Primacy and its Geostrategic Imperatives*, Basic Books, New York 1997.

⁶ T. L. Friedman, *The World Is Flat: A Brief History of The Twenty-first Century*, 2005; revised edition 2007.

Other events of great significance soon followed—both natural or quite unexpected, of different nature—terrorist attacks on the World Trade Center of September 11, 2001, the breakdown of Yugoslavia and the turmoil in the Balkans, the wars in Iraq and Afghanistan and finally—the global financial and economic crisis that underscored the role of China as a rising global superpower, as well as the bankruptcy of a simplistic neoliberal doctrine, thus closing not only the first decade of the new millennium, but possibly putting the real end to the 20th century and re-opening the debate on the need and shape of a new global political and economic order⁷.

Should any of these events—e.g. the global crisis—be recognised as the most important turning point and the true conclusion of the 20th century? It appears that a general reading of contemporary and past events and key turning points changes with time and that for a complex and objective evaluation of current developments a more distant and wider historical perspective is perhaps needed. Even so, after a couple of decades or even centuries, the interpretation of many fundamental facts, incidents and unsolved questions from the past remains disputable among historians, philosophers, politicians and peoples.

Differences in perception of some important historical events (wars and battles, political reforms, national uprisings, revolutions, “tides of nations”⁸) may persist among nations and civilizations for ages. Such controversies subsist also with regard to turbulent transitions from the 18th to the 19th century, or from the 19th to the 20th one.

Long-term political cycles (if they do exist) do not necessarily coincide with century intervals. For instance, George Friedman claims that the dominant socio-political landscape changes every 50 years⁹. Georg W.F. Hegel (1770–1831), a mentor of Fukuyama (and also of George Friedman who used a citation from this German philosopher as a motto for his latest book), proclaimed history to be at an end in 1806, after the battle of Jena.

According to Fukuyama, “*For as early as this, Hegel saw in Napoleon’s defeat of the Prussian monarchy at the Battle of Jena the victory of the ideals of the French Revolution, and the imminent universalization of the state incorporating the principles of liberty and equality*”. The critics of Fukuyama rightly indicate however that “*to view the armies of Napoleon as engines of liberal democracy is peculiar*”; that Hegel himself was renowned as the “Royal Prussian Court Philosopher” at the University of Berlin¹⁰, and that a decade after the battle of Jena the history of the 19th century made a reverse turn, petrifying for another century a renewed global order established at the Congress of Vienna in 1815, governed by a concert of conservative European powers.

Indeed, the time from 1815 to 1914 was neither a stable, peaceful nor a homogeneous period. Norman Davies sub-divides it into three stages: those of reaction (1815–1848), of reforms (1848–1871) and of rivalry (1871–1914)¹¹. Although then—according to this author—one of the features of the global order was a domination of the ideology of *laissez-faire* and liberal democracy, its practice was in many respects quite different from these ideals and of the Kantian vision of perpetual peace.

Idealistic evaluation of the 19th century as the age of *peace and liberalism*—e.g. by Adam Krzyżanowski (1947)¹²—is perhaps understandable, after the atrocities, fratricides and the turmoil of the first half of the 20th century, but may be questioned and considered biased if viewed from

⁷ Cf. A. Kukliński, *The Creation and Destruction of the Global Order*.

⁸ Cf. K. W. Deutsch, *Tides Among Nations*, Free Press, New York, London 1979.

⁹ G. Friedman, *The Next 100 Years. A Forecast for the 21st Century*, 2009, Copyright © by George Friedman.

¹⁰ “Fukuyama hailed German philosopher G.W.F. Hegel as the supreme “philosopher of freedom.” But Hegel was as much a champion of freedom as Nietzsche was a champion of Christianity”, J. Bovard, *Nonsense on the Inevitability of Democracy*, “Freedom Daily”, May 2005; and *The Future of Freedom Foundation*, <http://www.fff.org>, August 7, 2006.

¹¹ N. Davies, *Europe: A History*, Oxford University Press, 1996.

¹² A. Krzyżanowski, *Wiek XX*, Kraków 1947—quoted after A. Kukliński, *op. cit.*

the angle of the history of Poland or other nations, oppressed or subjugated at that time by powerful European empires.

Various doubts and questions on the *fin de siècle* regard also a long-lasting transition process from the 19th century into a modern era of the 20th century. Had the 19th-century global order been closed by the assassination of Prince Franz Ferdinand in Sarajevo on 28th June 1914 that gave rise to the beginning of the World War I; or rather by conclusion of this war, The Treaty of Versailles and the breakdown of the Austrian-Hungarian, Prussian, Russian and Osman Empires?

Before, during and after the war other significant things also happened on the global and European scene, quite unexpectedly, as the Bolshevik revolution. They coincided with the earlier mentioned events, were consequences of the former; had perhaps common roots or were seemingly quite independent, but materialized just at that time, in suitable circumstances, sometimes after a fairly long gestation period, e.g. emergence of the United States as a major global power; the resurrection of Poland or foundation of new national states in central, northern and southern Europe.

These crucial developments had been preceded by a number of severe international confrontations, civil wars, clashes and revolutions in the second half of the 19th century and at the threshold of the consecutive age, accompanied by a wave of important innovations and a rapid progress of civil and military technologies, accelerated industrialization processes and deep social changes in Europe and elsewhere, provoking and aggravating the economic and political rivalries between old and new global powers in the 1871–1914 period, named “the stage of rivalry” by Norman Davies.

Such events as the secession war in the United States; a rise of German power after the defeat of France in the war with Prussia; the wars of Russia with China and Japan; Boer wars; the revolution of 1905 in Russia; a series of Balkan wars—despite some international or external attempts of peaceful resolution of those conflicts—had prepared ground for a major global military confrontation in the second decade of the 20th century.

A lesson from the past is that the transitory periods embedding historical turning points could be relatively long, tumultuous and abundant with important, hardly predictable events and actions. Their evaluation is supposed to evolve with time and may be subject to lasting controversies. Not only the calendar, but also many recent facts and historical analogies may suggest that the recent twenty years (1990–2010) are likely to represent such a transitory period, introducing us into a new turbulent and erratic 21st century and into the third millennium.

2. A fractal world of the 21st century

A mathematical concept of the fractal world appears to offer a suitable model describing the nature and evolution of the universe and the history of mankind, characterised at the same time by similarities and varieties, repeatedness and unpredictability of development trajectories and their turning points, durability and discontinuities (in time and space) of non-linear trends and cycles of principal random variables, representing various natural, ecological, demographic, economic, financial, social and political events.

The concept of fractal world, as well as the notions of fractal dimensions and fractal similarity of figures and curves, originates in the works of Benoit Mandelbrot (born in Warsaw in 1924) from the University of Yale¹³. It refers to the mathematical theory of chaos, conceived by outstanding

¹³ According to Mandelbrot, his life's work “has been to develop a new mathematical tool to add to man's small survival kit”, called by him “fractal and multifractal geometry. It is the study of roughness, of the irregular and jagged. I coined the name in 1975. Fractal is from *fractus*, past participle of *frangere*, to break, as I was reminded

mathematicians and physicists at the end of 19th and in the first half of the 20th century, including a prominent Polish mathematician Waclaw Sierpiński (1882–1969)¹⁴.

Application of the chaos theory to the analysis of international relations is not quite a new idea. However, contrary to some proponents or critics of this invention, the mathematical category of chaos relates—in my opinion—*not only* to a transitory period, when the changes occur in the irregular, unpredictable and uncertain way (as argues Jean A. Duffy¹⁵).

Such perception of the history and of the future, and notably of the challenges of the new century, complies *inter alia* with main conclusions of another American report, prepared by international experts under the auspices of the National Intelligence Council: *Global Trends 2025: A Transformed World*¹⁶. For a main question raised there: *What Future?* the report answers: **“More Change than Continuity. The rapidly changing international order at a time of growing geopolitical challenges increases the likelihood of discontinuities, shocks, and surprises. No single outcome seems preordained: the Western model of economic liberalism, democracy, and secularism, for example, which many assumed to be inevitable, may lose its lustre—at least in the medium term. In some cases, the surprise element is only a matter of timing: an energy transition, for example, is inevitable; the only questions are when and how abruptly or smoothly such a transition occurs. Other discontinuities are less predictable. Recognizing that what may seem implausible today could become feasible or even likely by 2025, we have looked at a number of single development “shocks.”**

Examples include the global impact of a nuclear arms exchange, a rapid replacement for fossil fuels, and a “democratic” China”.

3. Geostrategic reconfigurations, the enlargement dilemma and the debate on Europe as a global power of the 21st century

In competitive global conditions of the new century the position of aging, conservative Europe is likely to weaken¹⁷. It is notably going to happen if historical rivalries and political, economic, ethnic or ideological and religious conflicts among European nations were going to persist, and if the European Union were not able to continue—after some indispensable period of consolidation—the gradual process of deepening its integration (embarking further political and military components) and the east-southward enlargement upon some emerging European or Eurasian powers, situated at crossroads and peripheries of the continent, such as Turkey and Ukraine (if they were wishing to join and were ripe for the accession).

by one of my sons’ Latin dictionaries. The same root survives in many common words, including fraction and fragment”. B.B. Mandelbrot and R.L. Hudson, *The (mis)Behaviour of Markets. A Fractal View of Risk, Ruin, and Reward*, Profile Books, London 2005, p. 116. See also: B.B. Mandelbrot, *The Fractal Geometry of Nature*, W.H. Freeman & Co., New York 1982.

¹⁴ Cf. J. Kotyński, *Teoria chaosu a metody oceny ryzyka i analizy rynków kapitałowych [The chaos theory and the methods of risk evaluation and analysis of capital markets]*, “Zarządzanie Ryzykiem”, Instytut Zarządzania Ryzykiem WSUiB, no 1, Warszawa 2000, p. 72–90.

¹⁵ J.A. Duffy, *The Application of Chaos Theory to the Career-Plateaus Worker*, “Journal of Employment Counseling”, December 2000, vol. 34, nr 4, s. 231.

¹⁶ *Global Trends 2025: A Transformed World*, Washington DC, November 2008, NIC 2008–03, p. 3

¹⁷ Cf. K. Rybiński, *A Meaningless Europe?*, [in:] *The Future of European Regions*, P. Jakubowska, A. Kukliński, P. Żuber, eds, Ministry of Regional Development, Warsaw 2007. See also G.W. Kolodko, *Wędrujący świat (World on the Move)*, Prószyński i S-ka, Warszawa 2008; *Futurology—The Challenges of the XXI Century*, A. Kukliński, K. Pawłowski (eds), Wyższa Szkoła Biznesu—National Louis University, Nowy Sącz 2008.

However, for various reasons (including the issue of balance of power and its redistribution within the EU and in relations with its neighbours), the latter scenario, constituting a real challenge for present member states, raises serious objections. It appears very risky and hardly imaginable to many European societies and their leaders.

That is unfortunate, because such move—notwithstanding all its weaknesses and threats—could give the Union, now populated by almost a half billion people, a chance to become (to remain?) a major global player, roughly equivalent to the United States and Russia. It could also contribute to strengthening the ailing Atlantic Community, thus balancing the rising power of Asia.

However, the probability of launching such “Alexandrian” long-term project appears rather low in the near time. For its implementation much more will, determination and concord among European leaders would be needed. A general understanding of its aims and a wider public consensus on further enlargement would also be necessary.

Nevertheless, the idea of a greater, stronger and truly united Union should be given more thought and support just at this historical moment, as a possible contribution to reshaping the global order of the 21st century¹⁸. Such vision and strategy would be especially important for enhancing the political power and security of Europe and of the Atlantic Community in the epoch of mounting threats, tectonic quakes and turbulences.

Sometimes, however, the question is being raised whether a politically and militarily stronger Europe, as a global power, is really needed, and whether maintenance of the soft power of democratic, diversified and liberal Europe is not a sufficient guarantee for keeping its leading position in the New World of the 21st century¹⁹.

In this context the ongoing multi-facet debate on “Europe and Power” should be revisited. I would like to refer here to a bilingual tome published under that name in 2008, under the auspices of the French Ministry of Foreign Affairs and the French Presidency of the EU²⁰. I wish to focus on two outstanding contributions to this volume:

- a brilliant analysis of François Heisbourg, Chairman of the Council of the London-based International Institute for Strategic Studies; and
- an essay of Vaira Vike-Freiberga, President of the Republic of Latvia from 1999 to 2007; starting with her arguments concerning the doubts, unwillingness and hesitations related to the dilemma of European power, giving also some reasons for such, quite widespread, attitudes:

“The long-standing European members of the EU seem recently be tiring or out of breath despite the absolutely tremendous advantages they enjoy daily compared with both previous generations and the condition of people in most of the rest of the world. There is a sense of distrust of the European Union, a widespread fear of the future”²¹.

Paradoxically, such feelings are also present in new member states of the EU, among populations and politicians, cynical or unaware that the recent gains and achievements are not given for ever and could be easily lost or turned down.

¹⁸ Cf. J.S. Nye, Jr., *Understanding International Conflicts. An Introduction to Theory and History*, Sixth Edition, Longman 2007—Ch. IX: New International Order?

¹⁹ J.S. Nye, Jr., *Soft Power: The Means to Success in World Politics*, Public Affairs, 2004. See also J. Rifkin, *The European Dream. How Europe’s Vision of the Future Is Quietly Eclipsing the American Dream*, Penguin Group, Inc., 2004.

²⁰ *LEurope et la Puissance/Europe and Power*, Collection Penser l’Europe, Centre d’Analyse et de Prévision, CULTURESFRANCE, Paris, juillet 2008.

²¹ V. Vike-Freiberga, *Europe and Power: Greatness and Kindness*, in: *LEurope et la Puissance*, op. cit., p. 148.

Freiberger warns that: “Without mutual give and take, there will always be voices calling for huge resources, grandiose gestures and “final solutions”, be they in mass deportations, summary executions or “ethnic cleaning”, which Europe saw all too much right to the very end of the last century”²². To the critics of the concept of “Greater Europe” she reminds a realistic and sad truth, “that the “great” always had a better chance of survival than the “good” as a system, simply because the stable and prosperous countries sooner or later fell prey to some or other hungry neighbour; unless they had sustained a sufficiently powerful military capacity to be able to defend themselves. A State’s defensive strength consequently remains a prerequisite for its survival and development.”²³

François Heisbourg starts his essay by presenting the analogy between the notion of power, its forms or dimensions, in physics and international relations:

“It is not by accident that vocabulary of international relations employs analogies taken from the physical world: spheres of influence, bipolar order, multipolar world, orbit. These parallel categories can help forge a better understanding. Assuming, for the sake of argument, that power is to international relations what energy is to the physical world, several things can be stated. First, neither energy nor power is confined to a single form.

There are many manifestations of energy—kinetic energy, inertia, gravity, magnetism, electrical energy, etc. These have a number of equivalents in international relations: coercive power exerted over the others (kinetic energy), cohesive force holding together the nations and the other entities that make up international society (the strong forces of post-Newtonian physics) and influence (attractive forces) over state and non-state actors...

As in the physical world, the forms that power takes are not independent of the nature of the entities that make up the world system...

Finally, the approach to power is not static over time, because the world system changes as a whole and because its constituent elements change²⁴”.

His critical evaluation of the implications and prospects of the eastward and southward enlargement of the EU, representative for many politicians and experts, notably from the old and large EU member states (Germany, France, Italy, UK), is formulated in a very clear and outspoken way:

“The enlargement of the Union into the former Soviet area is a paradox. The sudden spurt in the number of member states made the essentially intergovernmental decision-making process within the Union more complex, with a resulting loss of collective power. In addition, enlargement was the high point of the Union’s ability to project its normative power over a vast geographic area, reshaping it, on a strictly voluntary basis, in its image. This paradox was resolved (at least in part) only belatedly, with the agreement on the Lisbon Treaty. ...

The possible accession of six new Balkan members would raise issues, in principle manageable, of the same type (independently of the very large difficulties posed by the economic catching up they have to do).

On the other hand, the accession of Turkey and Ukraine would seriously alter traditional equilibria. ... Conversely, if enlargement stops short of the Ukrainian

²² Op. cit., p. 150.

²³ Op. cit., p. 152.

²⁴ F. Heisbourg, *The Power of Influence*, in: *LEurope et la Puissance*, op. cit., pp. 116–117.

and Turkish borders, the Union would be prompted (once the Balkan “six” have been brought in) to redirect its transformation efforts to norms and neighbourhood policies.”²⁵

Indeed, the implementation of the scenario of greater Union would inevitably move its centre of political, economic and military interests eastward, involving additional risks and costs, particularly for the old, rich and large EU members. The European cohesion policy, the common agricultural policy as well as the decision-making process of the Union (as pointed out by Heisbourg) could also be endangered. These potential threats restrain the support for the idea of further enlargement also among other present EU members.

Hence, for the time-being, more probable forms of development of European integration are rather linked to diversified and looser forms and concepts of association, enhanced partnership and co-operation, etc. Among the interested (core) countries of the Union, including e.g. the whole or a part of the Euro Area, a deeper integration is conceivable, despite its relatively fragile, at the moment, economic condition and a negative attitude of the remaining member states to any seemingly discriminatory (though legally permissible) solutions, such as “*l’Europe à deux vitesses*” or “*l’Europe à la géométrie variable*”.

The fact is that the fields of interests and influence of particular major member states do not necessarily coincide. Sometimes they are in a perceptible conflict. That regards also the issue and priorities of enlargement (eastward vs. southward, westward or northward, or none?).

In my view, pragmatic but chaotic development of the European integration may actually lead to Europe and peripheries being *decomposed into* some ***overlapping subsets (ellipses) of countries*** rather than to a coherent Europe, or Europe composed of *concentric circles*, as envisaged by Jacques Delors. The overlapping elliptic orbits could even have a few competing gravity centres, instead of a common one.

Apparently such scenario, quite plausible, but associated with a weakening or disintegrating Europe, should not be accepted as an optimal target for the Old Continent in the epoch of rising global threats, conflicts and challenges.

In a stationary and peaceful global environment such choice for Europe, fragmented into several national states, tandems and separate subgroups, promoting their particular interests within a wider but loose regional grouping and basing its attractiveness on idealistic objectives of soft power, subsidiarity and liberal democracy, could be perhaps deemed a best or at least a feasible and relatively durable solution. The above theoretical assumptions on the external environment are however very distant from the hard reality of the 21st century.

Similarly in the field of economics, a high preference for leisure, preserving the trade unions privileges and advanced social and technical regulations and norms, does not provide an adequate basis for sustaining the competitive position of Europe in the global economy, in the epoch of rapid rise and race of nations, mostly endowed with abundant, cheap and highly productive labour engaged in export-oriented sectors²⁶, that are not necessarily ruled by democratic regimes nor are ready to comply with the rules of advanced Western civilization within the inherited or imposed international order.

Hence, because of hard realities and constraints of the external environment and unfavourable internal demographic and economic prospects, notably during and after the period of the recent crisis, and in view of mounting energy and climate change problems, the European Union should rather look for new political and economic solutions and “energizers”, including increased focus

²⁵ Op. cit., pp. 128–129.

²⁶ See e.g. R. Freeman, What Really Ails Europe (and America): The Doubling of the Global Workforce, *The Globalist*, 3 June 2005; and: Human Resource Leapfrogging, *The Globalist*, 5 September 2005.

on education, technical, financial and managerial innovations and productivity as well as on strengthening the traditional factors of the hard power, including modern defence capabilities.

A realistic approach and a quick and dynamic response appears a must for Europe, even if the measures involved were to be costly and unpopular in many European countries. Such recommendations, reconciling the objectives and instruments of both soft and hard power, stem also eventually from the analysis of François Heisbourg and Vaira Vike-Freiberga.

Let me then once again quote main relevant “bottom lines” and recommendations, as highlighted by F. Heisbourg²⁷:

- “The Union will continue to play its role as the Empire of Norms, based on its economic weight, in virtually all the areas in which the EU has jurisdiction—in health, food, environment, financial, and other norms. Whether enlargement continues or stops after the integration of the Balkans, the Union, which accounts for some 20% of the world economy, will be a force to be reckoned with in world affairs in the areas in which it produces economic and societal norms. The comparative advantage of the Union lies and will continue to lie in its ability to do this.
- Conversely, enlargement into geo-strategically sensitive areas (ex: Ukraine) or the pursuit of strong neighbourhood policies aimed at spreading the political and other norms of the European empire (Ukraine at present, the Caucasus tomorrow?) would be hamstrung by the Union’s lack of hard power. With the United States continuing to pursue its own interests and focusing on other regions, Europe will not be able, in matters relating to defence, to continue to travel first class on a second-class ticket. The idea is not for Europe to adopt a martial posture; but Europe will not be able to pursue with impunity policies that are perceived by its neighbours in the Russian and Middle Eastern areas as strongly destabilizing. ...
- ... Will the Europeans ultimately be able to guarantee the security of partners that adopt their norms? The weakness of the response of both NATO and in the European Union to Russian pressure on Estonia in the summer of 2007 suggests that the problem is already occurring. There is no obvious coherence between the normative ambitions of the Europeans and their limited capacity to directly or indirectly, by way of the United States, ensure the security of member states or partners.
- This historic success of the Union is to have created the “Kantian garden” within which peace, security and prosperity go hand in hand. This paradise has an enormous attractive force in the broad periphery of the Union, directly impacting the interests and values of states and also of major non-state actors (international terrorism) in the Eurasian area. Those who see themselves thus challenged will not stand idly by.
- The Union and its member states must “think through” hard power more systematically than before: not in order to build the castle in the air of a “European power” previously considered an end in itself, but rather to endow the Empire of Norms with the resources of national security. Nor is the idea to set up a countervailing power to offset an omnipresent and omnipotent United States; the Americans are now neither”.

Vaira Vike-Freiberga, similarly as François Heisbourg, at the beginning of her essay clarifies some basic notions, including various shades of power:

²⁷ F. Heisbourg, *op. cit.*, pp. 135–136.

“More often than not, the notion of power implies the ability to impose one’s will upon others, whether they like it or not. Power then becomes synonymous with the capacity to lead, change and mould the world to the ambitions of one individual, group, class, country or continent in all—but disregard of different opinions and desires.

*It bears overtones of domination, exploitation and other nasty accusations sometimes levelled against Europe and against which it is keen to defend itself”.*²⁸

She argues that *“the task facing Europe today is not to regain power over the others, but to build a power that can co-exist with them. Not in the negative sense of the old, somewhat spineless co-existence, but in the literal and positive sense of living together without sacrificing anything of yourself and without imposing sacrifices on others.”*²⁹

She rightly points out in the same place that the notion of power

“encompasses two equally important elements... First, you need an agent to formulate and express your voice. Second, you need a capacity to act and achieve you aim. When applied to an entire continent, the concept of power calls primarily for an agent to embody it. ...

If by “Europe” we mean the 27 current members of the European Union, this group of countries clearly needs structures that can formulate and express its collective aims. These structures should be functional enough to properly represent their populations and powerful enough to have the means to achieve their aims”.

Presently however it appears that despite eventual establishment of some formal European structures for this purpose by The Treaty of Lisbon, the president or high representative have not been selected in a fully democratic way nor endowed with such effective powers.

For the time being they can be hardly perceived as representatives of the populations of all the member states and are overshadowed or controlled by leaders of major member states and by the Council. This is probably a result of agreement and deliberate action of the governments of large, economically advanced member states, unwishing to experiment with the power and to cede to and share their authority with any common or supranational presidents or representatives that wouldn’t be in fact able or willing to properly represent their interests.

Let me finish this section with a final quote from the manifesto of Vaira Vike-Freiberga³⁰, presenting her conclusions which I fully endorse³¹:

“All things considered, if we were to put our vision of Europe in a nutshell, it would be a power that combines greatness and goodness without distorting either one. This is entirely possible, provided we believe in and work on it. If we do not achieve it, there is a strong chance we will end having neither one nor the other.

To put it more plainly and tangibly: Europe cannot uphold competition in a globalised economy without becoming more productive and efficient. Refusing to budge in the name of protecting its “social model” or any other political reason will make no difference. Far from it. If Europe were to become less competitive and hence less wealthy, that would be precisely the moment when all its social security safety nets would be most likely to break.”

²⁸ V. Vike-Freiberga, *Europe and Power: Greatness and Kindness*, in: *LEurope et la Puissance*, op. cit., pp. 138–152.

²⁹ Op.cit., p. 143.

³⁰ Op.cit., p. 152.

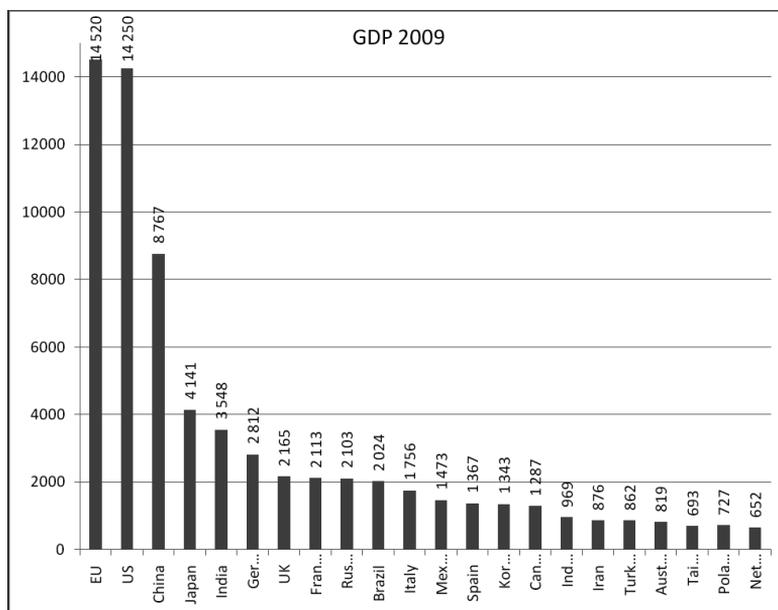
³¹ See J. Kotyński, *Konkurencyjność polskiej gospodarki wobec wyzwań globalnych [Competitiveness of the Polish Economy and the Global Challenges]*, IBRKK, “Studia i Materiały” No 86, Warszawa 2009.

4. Poland and enlarged European Union in a changing and tumultuous world

The future of Poland is closely related to the future development and fate of the European Union.

The EU enlargement of 2004 evidently contributed to acceleration of Poland's development and modernisation of its society and economy, despite all the economic and political lacunae, failures and disappointments of that period. Poland, alike other new member states (NMS), profited a lot of the structural support from the European structural funds.

Despite the ongoing process of economic convergence and relatively high average annual GDP growth rate in the last decade (around 4.7% in 1999–2009), Poland has stayed within the group of least advanced economies among the 27 EU member countries. However, Poland's economy turned out to resist the recent global recession better than many other economies in Europe, witnessing a modest growth (1.7%) as well in 2009. Also due to a medium size of the country, Poland's GDP (in PPP terms) reached some \$bn700 in 2009, i.e. the level similar to that of Taiwan (\$bn 693); lower than those of Iran (\$bn 876), Turkey (\$bn 862) and Australia (\$bn 819), but higher than those of the Netherlands (\$bn 652), Saudi Arabia (\$bn 581) or Argentina (\$bn 558). This result has placed Poland among the first 20 largest world (single) economies³². It is worth noting that according to the same CIA estimates in 2009 the EU was the largest world economy (\$bn 14520), exceeding the United States (\$bn 14250), China (\$bn 8767), Japan (\$bn 4141), India (\$bn 3548), Germany (\$bn 2812), UK (\$bn 2165), France (\$bn 2113), Russia (\$bn 2103) and Brazil (2024), Italy (1756), Mexico (1473), Spain (1367), Korea (1343), Canada (1287), India (969), Iran (876), Turkey (862), Australia (819), Taiwan (693), Poland (727) and Netherlands (652)—see Fig. 1.

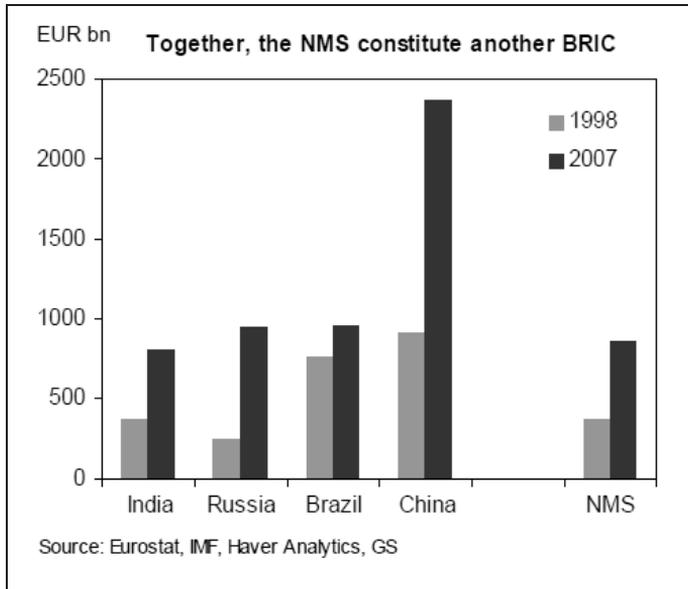


Source: CIA Factbook 2010 and own estimates.

Fig. 1. GDP of major economies in 2009 (\$bn, at PPP—Purchasing Power Parity exchange rates)

³² CIA Factbook 2010, January 2010. Actually, the CIA estimate for Poland's was \$bn 686 in 2009, but the GDP growth rate was underestimated (1.1% instead of 1.7% given by GUS). The use of national growth estimate products the GDP level of some \$bn 727.

According to pre-crisis GDP estimates of Goldman Sachs, in 2007 the joint GDP volume of 12 EU new member states (NMS), was near to that of India, and somewhat lower than that of Russia or Brazil. All these economies have increased considerably their outputs in comparison with 1998 (Fig.2).



Source: New EU Member States: A Fifth BRIC?, Goldman Sachs, “Global Economics Paper” No 173/2008.

Fig. 2. NMS in global output as compared with BRICs, 1998 and 2007 (GDP in \$bn)

The BRICs, notably China and India, managed to improve further their absolute and relative GDP positions during the global crisis, in the 2007–2009 period.

The experts of the Goldman Sachs envisaged in their long-term forecast (2008) that the 12 NMS (including Poland) may join the four BRICs as “A Fifth BRIC of the 21st Century” by 2050, if some relevant conditions regarding improvement of their macroeconomic policies and of the institutional environment are fulfilled in the nearest decade³³.

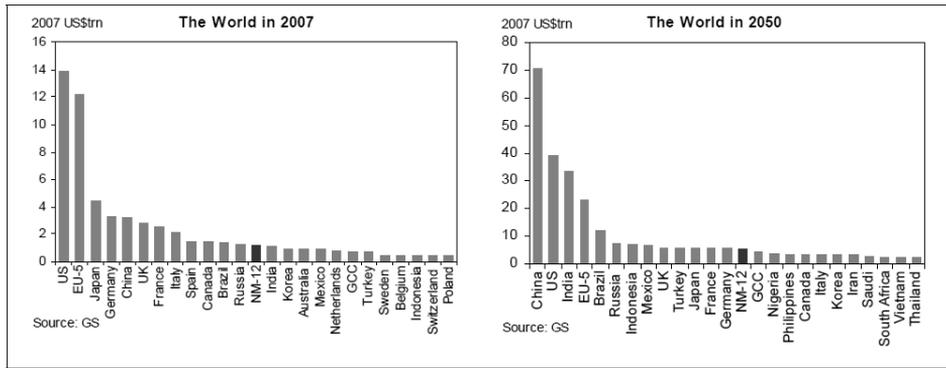
According to this forecast, in 2050 the NMS group may produce the GDP equal to some \$trn 5.3 (compared to \$trn 1.2 in 2007, at 2007 constant prices and exchange rates), approximately equivalent to that of the UK, Turkey, France or Germany, counted separately (Fig. 3).

The average GDP per capita of the NMS is going to increase from \$11.4 to \$65.0 thousand, correspondingly, and the convergence process within the EU is expected to advance (Fig. 4).

The GDP growth rate of the NMS is forecast at about 4% p.a. in 2011–2020. It is going to be much higher than that of old EU member states. At the beginning of 2030s the growth of the first subgroup may still exceed that of the second subgroup, but is going to slow down after 2025.

In the 40s the GDP growth rate in NMS may fall to about 1.5%, below the level envisaged for the EU15 countries. Such dramatic change is to be associated mainly with demographic factors, notably with a systematically falling trend in the number of labour force in the NMS in 2025–2050. The fall down is forecast to be sharper than that for the four BRICs and opposite to the rising tendency in population of the EU15 countries, foreseen for the same sub period (Fig. 5).

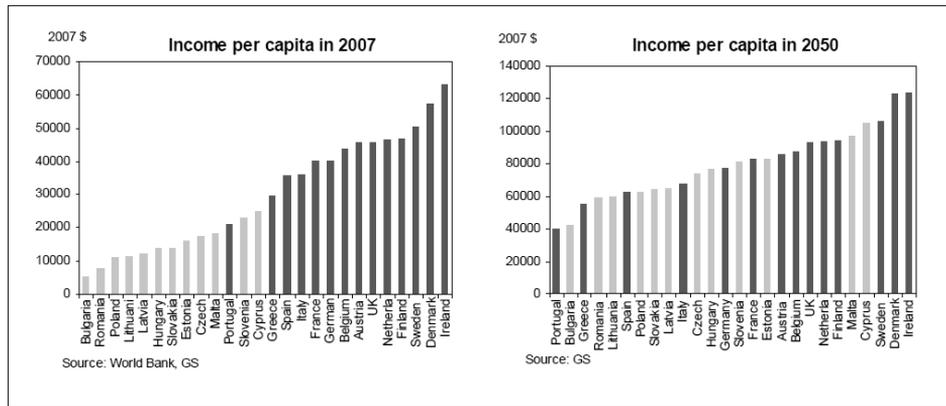
³³ A. Zsoldos, A. Zadornova, New EU Member States: A Fifth BRIC?, Goldman Sachs, “Global Economics Paper” No 173, September 26, 2008.



(GCC = Gulf Council Countries)

Source: New EU Member States: A Fifth BRIC? Goldman Sachs, op. cit.

Fig. 3. Major world economies and country groups in 2007 and 2050, by GDP, according to GS forecast



Note: GDP p.c. of: EU15—black bars; NMS12—grey bars.

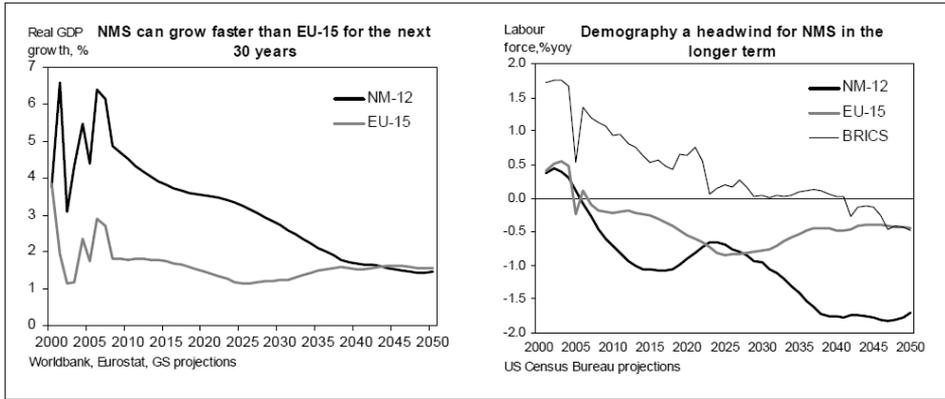
Source: New EU Member States: A Fifth BRIC?, Goldman Sachs, op. cit., p. 14.

Fig. 4. GDP p.c. in the EU member states in 2007 and 2050 (GS forecast)

Finally, in the context of this forecast, I would like to come back to the question of the EU enlargement. Out of many interesting findings and inspirations stemming from the GS study, it is worth to note down that also Turkey has a chance to emerge as a regional power; or “A Sixth BRIC”, of this century. It is supposed to advance to the first ten world major economies as far as the total GDP level is concerned by the year 2050, leaving behind Japan, France and Germany. Turkey as a candidate for membership is characterised by high dynamics of economic growth, a substantial and rising demographic and military potential and strong European aspirations. Now it is populated by 76 million inhabitants, and its population may reach 100 mn by 2050.

This should be a strong signal and argument to the EU nations and politicians to seriously consider its application for membership until it is still attracted by this target, despite all potential threats and fears linked with such risky enlargement.

In his provocative and inspiring book on the next 100 years, George Friedman sees both Poland and Turkey as emerging powers of this century and considers a fabulous scenario of the future global war around a mid of the century, with both countries as principal enemies and



Source: New EU Member States: A Fifth BRIC?, Goldman Sachs, op. cit.

Fig. 5. Prospective growth and convergence of NMS12 with EU15 to be hampered by demography after 2025

leaders of global coalitions³⁴. That is neither a pleasant nor a credible scenario. But the truth is that the enlarged *European Union, with Poland and Turkey* (and perhaps also Ukraine) *onboard, would have a large chance to become indeed a global power of the 21st century* if it were able to keep them, with all its diversity, the political and economic coherence.

³⁴ G. Friedman, *The Next 100 Years. A Forecast for the 21st Century*, Copyright 2009 by George Friedman. Polish edition: G. Friedman, *Prognoza na XXI wiek. Mocarstwo nad Wisłą?*, AMF Plus Group Sp. z o.o., Warszawa 2009.

PAUL DREWE

FALLACIES OF GLOBAL REASONING: MORE INCONVENIENT TRUTHS

'We tend to "tunnel" while looking into the future, making it business as usual, Black Swan-free, when in fact there is nothing usual about the future'

(Nassim Nicholas Taleb, *The Black Swan*,
the impact of the highly improbable)

'One of the reasons I think history is endlessly interesting is that nothing ever had to happen the way it happened. It was never on a track, never preordained.'

(David Mc Cullough)

'Ne t'en fais pas pour ceux-là, ils rêvent.'

(Antoine)

'Das Geschäft mit der Angst dürfte das in Wahrheit älteste Gewerbe der Welt sein.'

(Thea Dorn, *Lust an der Apokalypse*)

A fallacy is 'a plausible reasoning that fails to satisfy the condition of valid argument or correct interference' (Webster's). I am mainly interested in fallacies of global reasoning in today's environmental debate, ever started in 1972 by the old Club of Rome's 'Limits to growth' . Among today's most prominent examples of global reasoning are the Kyoto protocol (including the emissions trading), WWF's Living Planet Report, the Millenium Ecosystem Assessment and the IPCC.

My thesis is that fallacies of global reasoning such as fallacies of disaggregation, average or of misplaced concreteness produce even more 'inconvenient truths'.

A multi-level analysis is called for on macro, meso and micro levels, but—in especial—on the meso level of cities and regions. It is important to be prepared for all relevant eventualities beware negative 'Black Swans', but also looking for positive ones born from serendipity. The tricks we can manage, however modest, may save us from another fallacy, the appeal for fear.

1. Levels of analysis & levels of conclusion

A fallacy, generally speaking, is ‘a plausible reasoning that fails to satisfy the condition of valid argument or correct inference’ (Webster’s). I first learned about fallacies as a methodological concept in sociology (Hannan, 1971) in particular about fallacies of aggregation and disaggregation. They refer to translating ‘back and forth between the macro level, where groups are the unit of analysis, and the micro level where the focus is on individuals’ (Blalock, 1967: 21). I have retained that the level of conclusion should correspond to the level of analysis. It is not correct to jump from a higher level of analysis to a lower level of conclusion (fallacy of disaggregation) or vice versa from a micro level of analysis to a macro level of conclusion (that is, without a multi-level analysis [1]). Take for example prejudice. Having found an aggregate relation between crime rates and a certain ethnic origin, some people may be tempted to conclude that an individual member of the same origin is a criminal. Or, meeting one member of this group, one may conclude that the entire group is criminal.

Sociology deals primarily with groups and individuals as unit of analysis. But, being interested in fallacies of global reasoning, it is useful to distinguish different spatial as well as temporal scales, ranging from the world down to the micro level, say, of neighborhoods via the meso level of regions and cities. Likewise, temporal units of analysis range from the long term down to the short term.

If one studies problems at different spatial and/or temporal levels, ‘conclusion’ not only reads ‘explanation’ or ‘prediction’, but also ‘problem solution’ referring to levels of policy intervention.

Moreover, fallacies of aggregation or disaggregation are not the only erroneous reasonings. Browsing the Internet via Google, one finds a whole list of fallacies some of which, too, may be relevant to our case [2].

2. The old Club of Rome

This is not a treatise on methodology. It is rather about applying the methodological rules to global reasoning. The interest is not (purely) scientific. It is intrinsically political. What better way of starting than looking back at the Club of Rome’s ‘Limits to growth’ (Meadows, 1972).

This MIT study deals with the mutual dependence and interaction of five critical factors: population growth, food production, industrialization, depletion of natural resources, and pollution (at world level, till 2100). The analysis is based on Forrester’s ‘System Dynamics model’, a model typical for the ‘golden age’ of complex modeling. It has been a controversial approach (Lee, 1973) which has not survived the seventies. Relying on the global version of the System Dynamics model, the Club of Rome has put all of its eggs in one methodological basket.

‘Limits to growth’ has a Malthusian ring to it as it includes limits to population growth. To some, ‘limits to growth’ reads ‘limits to economic growth’. A balanced and sustainable development is more complex. According to the European Union, sustainability is about three fundamental goals:

- *economic and social cohesion;*
- *conservation of natural resources and cultural heritage; and*
- *more balanced competitiveness of the European territory.*

(European Commission, 1999:10)

In shorthand, sustainability is a matter of ‘three P’s’, that is People, Planet and Profit (or Prosperity).

'Limits to growth' glosses over social factors or social cohesion for that matter. But even back in 1970 this has been an issue. I recall a goals survey held in Los Angeles. The richer European Americans gave priority to the fight against pollution whereas African Americans, for example, put employment before environment. Today similar differences may exist between industrialized and developing countries.

The Club of Rome sticks to the world level without delving into national or local levels (the latter rather seems to be associated with a short-term perspective). As long as the global level of analysis corresponds to a global level of conclusion or policy intervention, no fallacy is 'committed'. But if rich nations 'consume' more planets than poor nations do [3], a fallacy of disaggregation looms. One may also call this a *fallacy of average*. The same holds for regions and cities. The 'limits to growth' may sooner be reached or even overstepped in some nations, regions or cities [4]. Neither the world nor the nation states are homogeneous when it comes to sustainability or the lack of it.

The old Club of Rome dreamed of a world forum beyond formal intergovernmental negotiations trying to reach a state of worldwide balance. More than thirty years later this dream still has not come true. But after 1972, others have taken over the concern put on the agenda by the Club of Rome. Take the Kyoto protocol, emission rights, humanity's ecological footprint, the living planet index, ecosystem assessment and the like. More about this in the section that follows. However, since the inconvenient truth' of climate change is disseminated (it has certainly helped to 'recycle' Al Gore), The Club of Rome is 'back in business' in Winterthur (not too far from the melting glaciers): <http://www.clubofrome.com>.

The question is whether its 'new path for world development' will fall into the old pitfalls. For the time being, one can only say that the professed intent of the program contains all the right sound bites.

3. Fallacies of global reasoning—selected examples

I have selected a few examples of global reasoning to illustrate the argument, starting with the **Kyoto protocol** (<http://unfccc.int>).

To fight global warming, the industrialized countries have committed themselves to reduce CO₂ emission worldwide by 5% between 1990 and 2012. In addition, individual targets have been set per country.

The percentages, first of all, point to what I call *fallacies of misplaced concreteness* [5]. Has the 5% norm been derived from an equation quantifying a causal relationship between tons of CO₂ emission and degrees centigrade of global warming? This, ideally, specified by source—on order of decreasing importance—energy plants, industry & construction, transport, consumers, agriculture, waste and others. But the relationship can hardly be expected to be a linear one. Working with CO₂ norms also implies fallacies of average (disaggregation) as neither 'the world' nor individual nations are homogeneous. There is also the simple fact that not all of the 190 countries, industrialized or not, have signed the protocol. Take only the US or China, India and Brazil. Moreover, what is the use of fixing targets for large heterogeneous countries such as the US, Canada, Brazil, Russia and so forth? How many regions with an average carbon dioxide emission are there? And isn't it more important to identify extreme CO₂ emission in potential disaster areas? These questions even pertain to small countries such as the Netherlands or Belgium. Finally, national scores are aggregated at world or Kyoto level which is, given the heterogeneity of nation states, a fallacy of aggregation.

Fixing norms, however, makes it easier to measure failure. The CO₂ emission in countries that have signed the Kyoto protocol has increased by 2.3% between 2000 and 2006, but the target has almost been reached between 1990 and 2006—thanks to Russia facing a major industrial crisis. The developed countries as a whole (including Russia), regardless of Kyoto, have even shown a growth rate of 9.9% between the years 1990 and 2006, not counting the emergent economies of China, India and Brazil.

Taking the example of Russia, cynics might argue that an economic crisis is the best way to fight carbon dioxide emission and, hopefully, global warming (by the way, stop breathing also reduces carbon dioxide emission). The economic crisis, on the other hand, may tend to shift of priorities from environmental to economic issues.

In Poznan, new targets have been launched with the EU taking the lead. One should not become fixated on norms as ‘magic numbers’ entail a fallacy of misplaced concreteness. More important is whether one is heading in the right direction of *less* emission, *more* sustainable energy (sun, water, wind, bio) and of *more* energy saving—especially if there is no clear-cut linear causal relation between CO₂ emission and global warming.

To meet the Kyoto targets, a market-based mechanism has been introduced: **emissions trading** (the so-called carbon market) and its two correlates, the clean development mechanism and joint implementation.

A country can trade actual emission units. First of all, excess capacity in one country can be sold to a country that cannot meet its target. Other opportunities of trading are:

- removal units on the basis of land use, land-use change and forestry (for example reforestation),
- emission reduction by a joint implementation project earning emission reduction units from emission-reduction or emission removal projects in other protocol countries (so-called Annex B Parties),
- certified emission reduction generated from a clean development mechanism (CDM) project in developing countries.

(Recently, carbon dioxide capture and storage also qualifies as CDM projects.)

What has been said about the Kyoto protocol, of course, also holds for the emissions rights. The same fallacies hold here, too. The most flagrant fallacy of aggregation, however, is committed in the case of CDM projects adding up the performances of highly heterogeneous units as developing and industrialized countries. What use is, for example, rural electrification (using solar panels or the installation of more energy-efficient boilers in a developing country when the real, urgent problem is how to alleviate pollution in industrialized countries, in particular in extremely vulnerable, potential disaster areas? The clean development mechanism is meant to give industrial countries ‘some flexibility’—by giving them the right to pollute some more...

Another contribution to the current environmental debate has been made by the WWF (<http://www.panda.org>).

The Living Planet Report is built upon two indicators: humanity’s ecological footprint and the living planet index. The first measures ‘the area of biologically productive land and water needed to provide ecological resources and services—food, fibre and timber; land on which to build, and land to absorb carbon dioxide (CO₂) released by burning fossil fuels’. The living planet index, on the other hand, measures biodiversity. It tracks populations of 1313 vertebrate species: terrestrial, marine and freshwater ones.

Both indicators show alarming trends. Since the late 1980s, the ecological footprint exceeds the biocapacity of the earth by 25%; whereas the earth’s biological diversity has decreased by 30% since 1970. If present trends continue, doom looms by the year 2050.

The hidden but untenable assumption of the world and of nations being homogeneous systems leads to fallacies of average and disaggregation. The WWF, however, clearly demonstrates that

some countries are more effective in drawing down the natural capital. The leading countries are the US and the United Emirates—as far as the ecological footprint is concerned. WWF does not deal with regions and cities, but this can be mended by calculating ecological footprints for these lower scales. Biological diversity is a slightly different matter. Although it is technically possible to measure it at local and regional levels, terrestrial, marine and freshwater realms more often than not cross borders, even national ones and even those of larger countries.

Our last example of global reasoning differs from the foregoing ones in a positive sense (at least to some extent). The **Millennium Ecosystem Assessment** (MA in short)—first of all—acknowledges the existence of uncertainties by building scenarios for the years 2000–15, 2015–30, 2030–50 and 2050–2100 (the latter is called a challenge). See Carpenter, Pingali, Bennett & Zurek, 2005 for details.

Major uncertainties exist with regard to, on one hand, governance and economic development (regionalized versus globalized) and, on the other hand, ecosystem services management (reactive versus proactive). Combining 2x2 possibilities one arrives at four global scenarios:

- *Order from Strength*: globalized, with emphasis on economic growth and public goods, i.e. global economic and social policies
- *Global Orchestration*: regionalized, with emphasis on national security and economic growth; protection through boundaries of paramount importance
- *Adapting Mosaic*: regionalized, emphasizing local adaptation and flexible government; benefits and risk of regional management
- *TechnoGarden*: globalized, with emphasis on green technology, improving the provision of ecosystem services.

Global refers to ‘all of Earth’. The regional scale does not go below global regions or countries (plus the aggregates of industrial and developing countries).

The MA scenarios embrace a broader notion of sustainability as they deal with the impact of ecosystem services on human well-being: material well-being, health, social relations, freedom of choice and action, security.

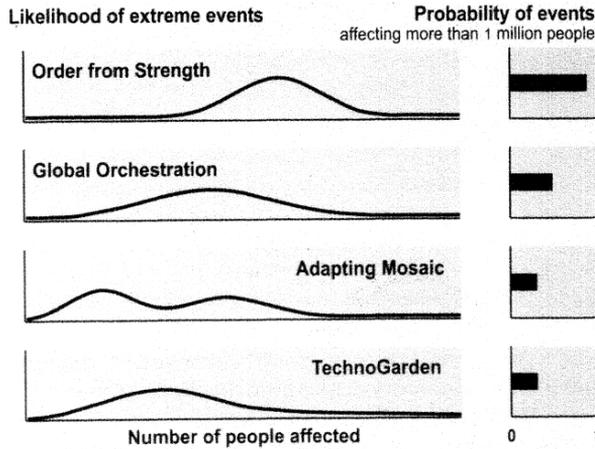
A scenario, according to the MA, is a ‘*plausible* [emphasis mine] and often simplified description of how the future may develop, based on a coherent and internally consistent set of assumptions about key driving forces (e.g. rate of technology change, prices) and relationships. Scenarios are neither predictions nor projections [6] and sometimes may be based on a “narrative storyline”. Scenarios may include projections but are often based on additional information from other sources.

How far goes ‘plausibility’ in avoiding what I call the *fallacy of ignoring uncertainty*? Plausibly, there may be something completely wrong with plausibility. The crucial point here is *non-linearity*, i.e. ‘a sudden (abrupt) discontinuity or change in rate which often forms the basis of thresholds. This may lead to unexpected outcomes or “surprises”’. From small effects that can lead to severe consequences (Taleb) to chaos theory.

The MA scenario builders have tried to identify major surprises under different scenarios in terms of likelihood of extreme events. As figure 1 shows, *Order from Strength* implies the greatest risk. Does this mean that, apart from *Global Orchestration*, the two regionalized scenarios are describing preferable futures?

Surprises testify to ‘the impact of the highly improbable’ or to what Taleb (2008) has coined ‘Black Swans’. Another word for fallacy of ignoring uncertainty is ‘Black Swan blindness’, illustrated by figure 2. There are negative and positive Black Swans.

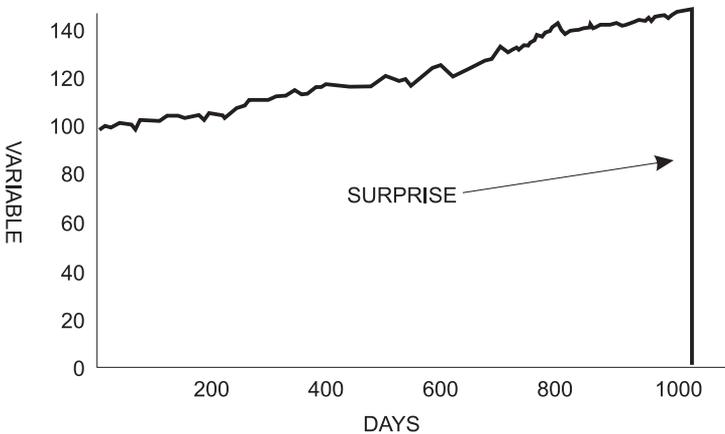
Environmental disasters such as tsunamis, massive flooding, earthquakes and the like affect most clearly the local scale. The risk involved can be clouded by fallacies of average as we came across in the reasoning of ‘Limits to growth, Kyoto (including the emissions trading) or the WWF.



Left column: Magnitude of extreme event (measured as the number of people affected) on the x-axis versus likelihood of events of a given magnitude, on the y-axis. Right column: Length of the bar indicates probability of events that affect more than 1 million people.

(Source: Carpenter, Pingali, Bennett & Zurek (2005): 6)

Fig. 1. Probabilities of extreme events that involve ecosystem services in MA scenarios



A turkey before and after Thanksgiving. The history of a process over a thousand days tells you nothing about what is to happen next. This naive projection of the future from the past can be applied to anything.

(Source: Taleb (2008): 41)

Fig. 2. One thousand and one days of history

Properly monitored at the scale of cities and regions, one can get a better picture of vulnerability, ‘the exposure to contingencies and stress, and the difficulty in coping with them’ (MA) plus the necessity of making eventuality plans. So far for negative Black Swans.

But there are also positive Black Swans or fat tails, in particular technological innovations that may help to prevent disasters affecting ecosystem services (the ecological engineering capacity

and knowledge). One may get the impression from our selected examples of global reasoning that they tend to play down technological change (including the rise of sustainable energies) for fear of sounding less alarming about the future. The MA is an exception to this as shown by the *TechnoGarden* scenario. That technological innovations often come as surprises, is corroborated by research on *serendipity* (Hannan, 2006 ; see also Taleb, 2008: 166–169) [7]. By the way, three of the most important new technologies of today—that is the computer, the Internet and the laser—are the product of inadvertent discoveries...

A word about IPCC, the Intergovernmental Panel on Climate Change: <http://www.ipcc.ch>. There are several reasons for this. The IPCC is dominating the environmental debate. IPCC fuels 'Kyoto' and others with information. It works with scenarios and it provokes controversy. I want to focus on the scenarios, being interested in how uncertainty is handled by IPCC. The Panel in its Fourth Assessment Report has presented two types of scenarios: those describing worlds that make no attempt at preventing global warming and those describing worlds concerned about the environment in 2100. How certain or rather how uncertain are these futures? Major uncertainties are of a qualitative nature. The degree of uncertainty depends on two variables (as shown in table 1):

- the level of agreement or consensus and
- the amount of evidence (theory, observation, models)

Table 1.

Qualitatively defined levels of uncertainty

Level of agreement or consensus ↑	High agreement limited evidence	...	High agreement much evidence

	Low agreement limited evidence	...	Low agreement much evidence
	Amount of evidence (theory, observations, models) →		

[Note that there is also a mid-range category]

(Source: Guidance notes for lead authors of the IPCC Fourth Assessment Report on addressing uncertainties, July 2005, page 3)

Uncertainties in the Fourth Report are thus addressed in a hallmark fashion, evaluating scenarios as finished products. Whereas my personal experience with scenario building in France is that uncertainties are rather the cornerstone of scenario construction. Combinations of uncertainties are the constituting elements of scenarios. See Crozet & Musso (2003) and especially Crozet (2003) for details. Be that as it may, consensus and amount of evidence can be misleading if dissident expert opinions are discarded from 'evidence'. The critics name solar science, geology, hydrology, oceanology and biology, leave alone political science, sociology and historical science: all those disciplines that can help to understand man-made (anthropogenic) climate change. The work of IPCC is polarizing. It divides 'front office talk', focusing on extended peer review, and 'back office talk' of the 'under-critical model' (Hoppe & Huijs, 2003). It seems urgent to subject IPCC's

handling of uncertainties to closer scrutiny [8] checking for fallacies of ignoring uncertainty (or any other fallacies for that matter). Already after a first evaluation two of Taleb's warnings come to mind. First, in choosing the year 2100 as time horizon of the scenarios IPCC runs a serious risk of 'forecast degradation'. Forecasts degrade as the projected period lengthens. Second, as models counts as evidence, one has to take into account that non-linear processes have greater degrees of freedom than linear ones. Hence one runs a great risk of using the wrong model.

4. A plea for a multi-level analysis of environmental issues —by way of conclusion

I have started with sociology distinguishing groups and individuals as units of analysis or macro from micro analysis. Groups can be studied at varying levels of aggregation including entire societies and the in-between meso level of cities and regions.

Similarly, economists use macro, meso and micro levels of analysis and fallacies of aggregation and disaggregation work in a similar way. The parameters of macroeconomic models may be mistaken for explanations of the behavior of individual firms or consumers or the later as representative of macroeconomic phenomena. And meso-level analyses of regions or cities can reveal fallacies of average, ignoring the fact that there are always winners and losers. One could even say that the aggregate that we call national economy is, at least to some extent, a construct whereas the 'real' economy is happening in cities and regions. More promising is the concept of network economy as opposed to the mythical entity of 'the market' (Barabási, 2002). A crucial question at meso level is: 'How do latecomers make it in a world in which only the rich get richer ?'

As to environmental issues, they are clearly dominated by the macro or global level. But there are also meso and micro levels to be considered in order to avoid fallacies of global reasoning. Micro refers to the level at which (sometimes surprising) technological innovations are produced. It has been my point throughout this essay that the meso level analysis of environmental issues—preferably from the angle of three-dimensional sustainability—is a must. We cannot afford fallacies of disaggregation or average but must rather monitor developments especially in critical regions and cities. Take only the polar regions. And it is by no means certain that rising sea levels will affect only developing countries such as Egypt, Bangladesh or Vietnam. London, New York, Hamburg or the Randstad Holland may also be danger zones. Meso-level analysis is not only important for the proper definition of problems, but also for effective ways of dealing with these problems, not discarding technological innovations or positive Black Swans (a typical meso tool for 'maximizing serendipity' is the so-called innovative milieu [9]).

Overemphasizing the global scale and the fallacies this entails, means to underestimate both environmental vulnerability and ways of coping with it. Regional or urban monitoring, too, is a way of bringing some long-term issues closer to home. One organization, say the UN or the EU can hardly cover all cities and regions in depth, but it can assist them in tackling their problems efficiently. This is where the good old principle of subsidiarity comes in: 'the notion of devolving decision making authority to the lowest appropriate [-*competent*-] level' (according to the Millenium Ecosystem Assessment). Note that recently the association of United Cities and Local Government has put 'global' environmental issues on its agenda, in line with my conclusion. See: <http://www.cities-local.governments.org>.

Overemphasizing global reasoning also tends to nourish somehow the illusion that global government is the royal path to our coping with environmental dangers. Remember that the old Club of Rome has already been dreaming about a global, non-governmental governance some 35 years ago.

Finally, fallacies of global reasoning tend to create another fallacy, *the appeal to fear*: gaining compliance through threat. One may doubt whether installing fear is the right strategy. I, for my part, rather opt for maximizing serendipity which is also about the power of positive thinking, I opt for the stance ascribed to Stonewall Jackson: *'We must not take counsel of our fears'*.

Postscript

Since I wrote the first version of this essay, two amazing reports have been published. The first, a study sponsored by the U.S. government, 'established' that global warming tied to carbon dioxide emission *'is largely irreversible for 1,000 years after emissions stop'* (Solomon, 2009). Note that the horizon of global reasoning has shifted to a millennium (will the next step lead us to evolutionary timescales?). What about 'forecast degradation'? The study does not consider geo-engineering to remove carbon dioxide from the atmosphere which according to the World Watch Institute is the hot item for the future (<http://www.worldwatch.or/stateoftheworld>). All of a sudden the 'State of the World, appears less alarming given the prospect of 'clean technology', *the* growth sector of the world economy. In the light of this new look on environmental issues, even more people will feel 'globally' manipulated, i.e. all those who are usually labeled 'climate skeptics' or 'those denying the greenhouse effect'. For more uncomfortable truths see Solomon's book on 'The deniers, the world-renowned scientists who stood up against global warming hysteria, political persecution, and fraud*[10] (Solomon, 2008). I am not an expert in any of the scientific disciplines that deal with global warming. But my scientific training warns me against one-factor theories and simple correlations, against neglecting the limits of predictability by ignoring uncertainties, and against giving up the principle of falsifiability and falsification. Global warming rather seems to be a case for multiple working hypotheses already advocated by Chamberlin in (Chamberlin, 1965): *with this method the dangers of parental affection for a favorite theory can be circumvented.*

Notes

- [1] Jumping levels would only work without any problems if relations at all levels were linear (if emerging properties would not exist) and if individuals in the sample were homogeneous (dispersion matters). Linearity and homogeneity, however, are the exception, not the rule.
- [2] Go to <http://changingminds.org>
- [3] This can be measured by the ecological footprint. More about his later.
- [4] 'Terrorism kills, but the biggest killer remains the environment, responsible for close to 13 million deaths annually' (Taleb, 2008: 80).
- [5] Whitehead defined this fallacy as the mistake of confusing a model with the physical entity that it means to describe. To me it refers to the popular tendency of decision makers to fix 'exact' but rather meaningless targets or 'magic numbers', pertaining to large aggregates. Another example is the 3% target fixed for R&D expenditures as a percentage of GDP in the European Union as a whole.
- [6] A projection is a 'potential future evolution of a quantity or set of quantities, often computed with the aid of a model'. Projections 'involve assumptions concerning, for example, future socio-economic and technological developments that may or may not be realized; they are therefore subject to substantial uncertainty' (I have borrowed the definition from the MA glossary).
- [7] A serendipist—according to Webster's—is 'one who finds valuable or agreeable things not sought for'.
- [8] See in particular Moss & Schneider (2000) and Manning et al (2004).

- [9] See Camagni & Maillat (2006) and, for innovation in general, Drewe (2006). A shorthand notion of innovative milieu is the 'triple helix'. More important than linguistic subtleties is whether a milieu really maximizes serendipity. Among the obstacles to serendipity may be listed bureaucratic tinkering from universities (through output measurements, rankings, citation indices—'I quote you, you quote me'—and the like) or an overemphasis on spatial proximity by local authorities at the expense of virtual proximity as well as on formal instead of informal networks. The essential question is whether the milieu is an environment that allows for experimentation and trial and error and that tolerates failure.
- [10] '* And those who are too fearful to do so'.

References

- Barabási, A.-L. (2002) *Linked, the new science of networks*, Perseus, Cambridge, Mass.
- Blalock, H. M. (1967) *Toward a theory of minority-group relations*, Wiley, New York.
- Carpenter, S.R., Pingali, P. L., Bennett, E.M. & Zurek, M.B. (eds) *Ecosystems and human well-being, volume 2, scenarios*, Island, Washington, Covelo & London.
- Camagni, R. & Maillat, D. (eds) *Milieux innovateurs, théorie et politiques*, Economica Anthropos, Paris.
- Chamberlin, T.C. (1965) The method of multiple working hypotheses, *Science*, vol. 148: 754–759 [reprinted from *Science* (old series), 15, 92 (1890)].
- Crozet, Y. (2003) La construction des scénarios: l'incertitude au coeur de la démarche prospective, in Y. Crozet & P. Musso (eds) *Réseaux, services et territoires—horizon 2020, l'aube datar*, La Tour d'Aigues: 59–81.
- Crozet, Y. & Musso, P. (eds) (2003) *Réseaux, services et territoires—horizon 2020, l'aube datar*, la Tour d'Aigues.
- Drewe, P. (2006) Innovation—more than just a sound bite? in A. Kuklinski, C. Lusinski & K. Pawlowski (eds) *Towards a creative and innovative Europe*, Wyższa Szkoła Biznesu, National Louis University, Nowy Sącz & Warsaw: 37–51,
- European Commission (1999), *European spatial development perspective, ESDP*, Luxembourg.
- Hannan, M. T. (1971) *Aggregation and disaggregation in sociology*, Lexington, Lexington, Mass., Toronto & London.
- Hannan, P.J. (2006) *Serendipity, luck and wisdom in research*, iUniverse, New York, Lincon & Shanghai.
- Hoppe, R. & Huijs, S. (2003) *Werk op de grens tussen wetenschap en beleid: paradoxen en dilemma's* [Working at the frontier of scientific research and policy making: paradoxes and dilemmas], RMNO, The Hague.
- Lee, Jr., D. B. (1973) Requiem for large-scale models, *Journal of the American Institute of Planners*, 99: 163–178.
- Manning, M.R. et al (eds) *IPCC Workshop on describing scientific uncertainties in climate change to support analysis of risk and of options*, Workshop report, Intergovernmental Panel on Climate Change (IPCC), Geneva.
- Meadows, D. (1973) *The limits to growth, a report for the Club of Rome project on the predicament of mankind*, Universe, New York.
- Moss, R. & Schneider, S. (2000) Uncertainties, in R. Pachauri, T. Taniguchi & K. Tanaka (eds) *Guidance papers on the cross cutting issues of the Third Assessment Report of the IPCC*, Intergovernmental Panel on Climate Change, Geneva.
- Solomon, L. (2008) *The deniers*, Richard Vigilante, Minneapolis.
- Solomon, S., Plattner, G.-K., Knutti, R. & Friedlingstein, P. (2009) Irreversible climate change due to carbon dioxide emissions, *Proceedings of the National Academy of Sciences*, vol. 106, no. 6: 1704–1709.
- Taleb, N.N. (2008) *The Black Swan, the impact of the highly improbable*, Penguin, London.

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A MULTIPOLAR WORLD OF SMART CITY-REGIONS

Antoni Kuklinski launched a call for papers about the “ Grand Future of the Atlantic Community as a new Confederation of the European Union and the United States of America. This new Confederation will have the power and imagination to be the leading force in the creation of a new global order of the XXI th Century”. The leading paper of Louis Emmerij “Global Challenges of the Atlantic Community” is starting with this observation: “The rich countries of the Atlantic Community- basically the USA and the European Union—are on the defensive in the face of emerging countries that will be superpowers in their own right in the near future, leading to a multi-polar world that can be harmonious or full of tensions. The ‘uni-polar moment’ has not been taken to create a basis for a harmonious era ahead of us.”

The evolution toward a new multi-polar world is the main thesis of the book of Parag Khanna: “The Second World: Empires and Influence in the New Global Order”¹. Parag Khanna directs the “Global Governance Program” at the New America Foundation in Washington. He is born in India and raised in the United Arab Emirates, Germany and the United States. He travelled during a couple of years for preparing his book, discussing with policy makers and government officials in more than 40 second world countries. He makes a distinction between three dominant empires or rather “centres of gravity”: America, the European Union and China. A sort of second geopolitical tier behind the “Big Three” are Japan and India because they are not superpowers (Japan no longer and India not yet). The “second world” is according to him a group of the world’s most strategic countries around the world with “emerging markets” located between or in the peripheries of the dominant powers. What these countries are doing is what he calls “multi-alignment”, using the advantages and support from all of the superpowers. Therefore he is using the term “geopolitical marketplace” thanks to the multiple powers that they can choose to align with. Among these “Second World” countries some forms of cooperation is emerging. An example is the “Shanghai Cooperation Organisation” or basically China’s answer to NATO. It is a club of likeminded countries with China, Russia, Kazakhstan and with several other “Stans” or oil producing countries. Another example is the South American awakening with the Union of South American Nations. He feels also that a new kind of Arabism is developing after the failures of last decades with Dubai as the capital of Arab civilisation and as a new melting pot for Arabs. Also in East Asia despite rivalries several indigenous self-sustaining forms of co-operations under the name ASEAN’s are emerging.

All this is in contrast with what Charles Krauthammer in the nineties wrote about “a uni-polar world whose centre is a confederated West”. Also the provocative book of George Friedman: “The

¹ Khanna P (2008) *The Second World: Empires and Influence in the New Global Order*, New York..

Next 100 Years: A Forecast for the 21st Century” seems to have a uni-polar view². He states that the U.S. only emerged as the decisive global power after World War II and is based on its Navy and the ability to control both oceans, the Atlantic and the Pacific, which no other power has been able to do. Therefore he is convinced that the 21st Century will be dominated by the U.S. He is also convinced that Japan, Poland and Turkey are becoming important world powers ‘while Islamic extremism and Chinese economic dynamism will eventually fade from relevance’. Also Amy Chua in her book “Day of Empire” does not believe that China and India will be the next superpowers³. The main thesis of her world history of hyper-powers is that relative tolerance is the major explaining variable for their success. Notice also that all these authors mentioned are former immigrants to the United States.

But coming back to Parag Khanna, who wrote again a challenging article in *Der Spiegel Online: Visions of Europe 2030* with as title :”A Postmodern Middle Ages”⁴. He states the following: “In the future, globalisation will further weaken the nation-state. A long transition process toward global governance will be, like the Middle Ages, a time of great insecurity. But Europe’s government structure will prevail, even in the United States. It will buy its way to peace and its model will be copied across the globe”. He continues further: “Europe invented, named and shaped all eras of history—and will continue to do so in the future.” ...”.Europe is pioneering the post nation state regionalism and corresponding post modern governance that is also being adopted around the world....Particularly the city-state, the most prominent medieval political unit, will continue its resurrection⁵....

There is indeed empirical evidence that we are moving toward a multipolar world of smart city-regions which are the cradle of major innovations and progress in the XXIth Century. In the book “Faces of the 21st Century”, my contribution is entitled: “Smart City-Regions: The Cradle of major Innovations and Progress in the 21st Century”⁶. The underlying hypothesis was that the world is moving toward a multi-polar world of smart city-regions.

I was largely inspired by the work of Richard Florida on world mega city regions and by Goldman Sachs’ BRIC concept followed by their concept of the “next eleven”. I neglected somehow the fact that city-regions are largely dependent on the societal context in which they emerge and flourish. Originally this was mainly the nation-state. But gradually globalisation is supporting a multi-polar development of the world.

A world dominated by “smart city-regions”?

Beginning of the XXI Century the world moved from a predominant rural towards a predominant urban world. According to The 2005 Revision of the UN World Urbanisation Prospects, urban dwellers numbered 3.2 billion people or 49% of human mankind. By 2008 indeed, for the first time in human history, almost half of humanity lives in cities. In 2005 the majority of the urban population of almost every country lived in small and medium-sized cities. In 2005, 51,5% of the urban population lived in cities with less than half a million residents.

² Friedman G. (2009) *The Next 100 Years: A Forecast for the 21st Century*, New York.

³ Chua A. (2007) *Day of Empire: How Hyperpowers rise to Global Dominance and Why they Fall*, New-York.

⁴ Khanna P (2009) *A Postmodern Middle Ages*, in *Der Spiegel Online, Visions of Europe in 2030*

⁵ Also Olivier Mongin, Director of the French Review “ESPRIT” supports this viewpoint. In a recent interview in “*La Tribune*” (04/08/2009) on “Visions after crisis—On croyait le monde illimité: c’est une illusion” he explains under “repenser le fonctionnement des territoires” and “la re-territorialisation des politiques” that “the future is played as much on the level of the metropolis as on the level of world coordination”.

⁶ *Faces of the 21st Century*, edited by Anna Gasior-Niemec, Antoni Kuklinski and Wojtek Lamentowicz, GLOBALFUTURES FORUM GFF, 21st Century Institute, Warsaw, 2008, p 122–129.

Last Century witnessed the emergence of mega-cities or cities with more than 10 million inhabitants. Never before had such large population concentrations in cities been observed. Since 1950 the number of mega-cities has risen from 2 to 20 in 2005 accounting for 9% of the world's urban populations, a majority of which are located in developing countries. With 35 million inhabitants in 2005, the metropolitan area of Tokyo was by far the most populous urban agglomeration and capital in the world. After Tokyo, the next largest urban agglomerations are Ciudad de Mexico (Mexico City) and the urban agglomeration of New-York-Newark, with 19 million inhabitants each, followed by Sao Paolo and Mumbai (Bombay) with 18 million people each.

Another method has been used by Richard Florida and his colleagues in order to identify "The Rise of the Mega Region"⁷. A global dataset of night-time light emissions has been used in order to produce an objectively consistent set of mega-regions for the globe. High resolution population data have been used in order to estimate the population of each of these regions. Estimates of the economic activity of each region have been processed based on the light data in combination with published estimates of national GDP. In a similar way estimates of technological and scientific innovation have been made. In this way 40 mega-regions have been identified with economic output of more than \$100 billion that produce 66% of world's economic output and accounts for 85% of global innovation.

The two most important mega-regions according to this method are Greater Tokyo and the Boston-New York-Washington corridor which generate each more than \$2 trillion in LRP (Light-based Regional Product). The top 40 mega-regions in economic activity, which make up about 17,7% of the world's population, produce 66% of economic activity, 85,6% of patented innovations, and 83,3% of the most cited scientists. A marked concentration of economic activity is observed in the mega-regions of the United States and the European Union. In the US, LRP per capita is nearly 30% higher in the mega-regions than in the rest of the country. In the EU, this figure is over 40%. In order to better understand the role the mega-regions play in a world context, maps have been produced for the different continents.

In **North America**, the most important is the Boston-New York-Washington corridor, originally identified in 1957 by Jean Gottman as "Megalopolis of the Northeastern Seaboard"⁸. In 1961 this megalopolis was home to about 32 million people; today it is home to some 54,3 million, more than 18% of all Americans. Generating \$2.2 trillion in LRP, it is larger than all national economies, with the exception of the US and Japan. Its economic output is greater than that of France or the United Kingdom, and more than double the size of India's or Canada's. In this way ten other mega-regions have been identified in North-America.

Also in **Europe**, the real economies are several world-class mega-regions that compose the bulk of the continent's innovation and production, irrespective of state or national boundaries.

The most important is the Amsterdam-Rotterdam, Ruhr-Cologne, Brussels-Antwerp and Lille mega-region with more than 59 million people and producing about \$1.5 trillion in economic output, exceeding Canada's, China's and Italy's production. Next in size is the British mega-region stretching from London through Leeds, Manchester, Liverpool and into Birmingham. This mega-region is home to 50 million people and responsible for \$1.2 trillion in economic output. The Italian mega-region stretching from Milan and Turin to Rome is a leading centre for fashion and industrial design with about 48 million people producing some \$1 trillion in output. It is the third largest mega-region in Europe and the seventh largest in the world. The other mega-regions in Europe are respectively the German mega-region Frankfurt, Mannheim, Stuttgart with 23 million

⁷ Florida R., Gulden T., Mellander C. (2007) *The Rise of the Mega Region*, The Martin Prosperity Institute, Rotman School of Management, University of Toronto.

⁸ Gottman, J. (1957) "Megalopolis, or The Urbanisation of the Northeastern Seaboard", *Economic Geography*, Vol. 33, (7). In 1961 his book "Megalopolis" has been published by Twentieth Century Fund.

people, Greater Paris with about 15 million people and the bi-national Euro-Sunbelt from Barcelona into Marseille and Lyon. Others according to the method of Florida are Vienna-Budapest, Prague, Lisbon, Glasgow-Edinburgh, Madrid and Berlin. In a recent study according to the criteria of the creative class of Richard Florida⁹, Berlin is considered in Germany as being the Top City. Although Baden-Württemberg with Stuttgart, Bavaria with Munich and Hessen with Frankfurt score higher in the field of Technology, Berlin is classified as the first in the field of Talent and Tolerance¹⁰. But before commenting further on Europe, Florida's analysis for other continents is summarised.

In **Asia** a distinction is made between several Japanese and other mega-regions. Four significant mega-regions are distinguished in Japan. Greater Tokyo is home to more than 55 million people and responsible for nearly \$2.5 trillion in economic output, thus being the world's most important mega-region with world class strengths in finance, design and high technology. Another mega-region stretching from Osaka to Nagasaki is home to 36 million people generating \$1.4 in economic output. The two others are the Fuku-Kyushu and the greater Sapporo mega-regions. It is observed that Japan may be becoming one integrated super-mega-region, where already three of Japan's four mega-regions are served by the same high-speed rail system with extensions planned for service to the fourth one Sapporo.

The other mega-regions are Seoul-Busan, Greater Singapore with nearly two million people across the border in Malaysia (Johore Bharu) and the Bangkok mega-region.

There are also already mega-regions in the **emerging economies**, when the threshold of at least \$100 billion in LRP is used. **China** is home to three significant mega-regions. The Hong Kong-Shenzhen mega-region stretching towards Guangdong includes about 45 million people, the Shanghai mega-region is home to 66 million people and the Beijing mega-region is home to 43 million people. It is observed that the wealth disparity between China's urban and rural population is driving now the most massive urbanisation trend in history. **India** is home to only one mega-region meeting the criteria for contiguity and economic output. This is the Delhi-Lahore mega-region. There are two other rapidly expanding urbanising regions: the Bangalore-Madras with 72 million people and the Mumbai-Poona with 62 million people. Having an LRP per capita that may be as much as 10% lower than the rest of the country, they seem however to be an exception to the global mega-region status because of their continuing crowding and poverty associated with third world mega-cities.

But also in other **emerging economies** around the world, mega-regions play an increasingly significant role. In Latin America, Greater Mexico is home to more than 45 million people, in Brazil the mega-region from Sao Paulo to Rio de Janeiro is home to 43 million people and in the Middle East the mega-region that runs from Tel-Aviv to Amman and Beirut is home to 31 million people.

In their concluding remarks, the authors refer to the great paradox of out time: 'at the same moment that technology enables the geographic spread of economic activity, economic activity continues to cluster and concentrate around this mega-regional unit'. In another contribution about "Mega-Regions and Super-creative growth" of "the creative class group" it is concluded that: "the larger the city's population, the greater the innovation and wealth creation per person". They call this phenomenon "super-linear" scaling. The world, it seems, is really spiky after all¹¹.

At the other side, it has become a commonplace to argue that advances in transport and communication technology have allowed the world to become "flat" in the terminology of Thomas Friedman¹². The most promising perspectives in this respect are described in the recent

⁹ Florida R. (2002) *The Rise of the Creative Class*, (2006) *The Flight of the Creative Class*, Amazon.

¹⁰ Berlin tops Germany for "creative class", Spiegel online, October 10, 2007.

¹¹ Richard Florida and The Creative Class Exchange, Mega-regions and super-creative growth, February 01,2007.

¹² Friedman,T. (2005) *The World is Flat*, New York.

book “**BRICs and Beyond**” of the Goldman Sachs Global Economics Department”¹³. They used criteria of macroeconomic stability, political maturity, openness of trade and investment policies, quality of education, legality, internet penetration, etc as main criteria in order to identify in 2001 the five emerging “BRICs” economies (Brazil, Russia, India, China) and more recently in 2005 the Next Eleven (N-11) as having promising outlooks for investment and future growth. The last are a very diverse group of countries with South Korea at the top which is already a developed country with an advanced economy followed by Mexico and Turkey. Korea’s Growth Environment Score (GES) was 6,9 in 2006—the same level as the United States. A second group of newly industrialised countries participating already in the global economy are Indonesia and the Philippines. A third group of newcomers with enormous potential are Egypt, Nigeria, Pakistan, Bangladesh, Iran and Vietnam. Together with Bangladesh, Vietnam has still the lowest income per capita in 2006, but the dynamism of the population and the drive to do it better than the Chinese is so enormous that the highest growth rates are expected here of all emerging economies. Korea’s high GES score ranks higher than all the BRICs as well as the rest of the N-11, but Vietnam scores a relatively high 4,5 and Mexico 4,6.

Jim O’Neil, head of the Global Economic Research Department in his introduction to this book states the following:” In our 2001 paper, we argued that the BRIC economies would make up more than 10% of world GDP by the end of this decade. In fact, as we near the end of 2007, their combined weight is already 15% of the global economy. China is poised to overtake Germany this year to become the third largest economy in the world. Our ‘BRICs dream’, that these countries together could overtake the combined GDP of the G7 by 2035—first articulated in our 2003 Global Economics Paper ‘Dreaming with BRICs: The Path to 2050’—remains a worthy ‘dream’. And Jim O’Neil continues: ‘Nigeria is one country that deserves a special mention, and is certainly a country that has captured my attention. With a population that is three times that of South Africa, Nigeria’s ability to deliver to our ‘dream’ could be vital for the whole African continent. Let’s hope the government’s slogan, “Top 20 by 2020”, materialises, if so, we are in for an exciting second decade of the new millennium’.

Is the global market economy and globalisation in general on the way indeed to make the world more ‘flat’? Daniel Pink describes how the world economy is now moving from the information age to the conceptual age because of abundance, outsourcing worldwide and automation. Creativity becomes the competitive difference worldwide based on assets such as Design, Storytelling, Symphony, Empathy, Play and Meaning¹⁴. The Progress Reports of the UN Millennium Development Goals for 2015 are however less optimistic¹⁵. Goal 1 concerning the eradication of extreme poverty and hunger, indicate that by 2004 more than 41% of the population in Sub-Saharan Africa and about 30% in Southern Asia are still living below \$1 purchasing power parity per day according to World Bank estimates. Also Goal 8 for developing a global partnership for development, looks very idealistic, but not always very operational. The way the European Union is organising its regional development and cohesion policy, even with relative modest means, seems to be more effective.

However there are **very critical and pessimistic opinions** about Europe’s future perspectives. John Naisbitt in his recent book “Mind Set” describes Europe under the title: “Mutually Assured Decline”, because of the social corrections of the free market forces¹⁶. He feels that Europe will become a museum of cultural heritage of the world, visited mainly by rich Americans, Japanese

¹³ BRICs and Beyond (Nov2007), The Goldman Sachs Global Economics Department.

¹⁴ Pink D.H. (2005) A Whole Mind: Moving from the Information Age to the Conceptual Age, New York.

¹⁵ Report of the Secretary-General on the work of the Organisation (2007), Annex 1, Millenium Development Goals, targets and indicators, p 33.

¹⁶ Naisbitt J. (2006) Mind Set, Reset your Thinking and see the Future, Collins.

and Chinese in the future. Rybinski's contribution in the Blue Book on the future of European Regions, has a similar challenging title: "Meaningless Europe?"¹⁷ and is also rather pessimistic if Europe is not able to be a winner in the world war for talent.

Mainly since the publication of Jeremy Rifkin's book: *The European Dream: How Europe's Vision of the Future is quietly eclipsing the American Dream*¹⁸, more **optimistic visions for Europe** have been formulated. The new European dream described by Rifkin " emphasises community relationships over individual autonomy, cultural diversity over assimilation, quality of life over the accumulation of wealth, sustainable development over unlimited material growth, deep play over unrelenting toil, universal human rights and the rights of nature over property rights and global cooperation over the unilateral exercise of power"¹⁹. Mark Leonard praises the "transforming power" of the European Union. in his book "Why Europe will run the 21st Century" (2005). Also Parag Khanna's "Visions of Europe 2030" belong to the more optimistic visions for Europe. Such visions are also described in the **Cohesion-Oriented Scenario of Europe**. Indeed 'Scenarios on the territorial future of Europe' have been developed within the frame of **ESPON** (European Spatial Planning Observation Network)²⁰. Three scenarios on the spatial structure and urban hierarchy in 2030 have been identified: the Trend Scenario, the Competitiveness-Oriented Scenario and the Cohesion-Oriented Scenario for the whole of Europe 29 (including Norway and Switzerland with the 27 EU member countries). This last scenario encompasses different parts of central Europe (with the axis Berlin-Warsaw-Krakov, Prague, Vienna-Bratislava-Budapest) which are not included in the Trend—nor in the Competitiveness-Oriented Scenarios with the till now traditional pentagon of metropolitan areas of the central core of Europe.

Some of the BRIC countries look already for inspiration in the way the European Union is organising its **EU regional and cohesion policy**. An example is the Memorandum of Understanding which EU Commissioner for regional policy Prof. Danuta Hübner was signing on 29 November 2007 with the Brazilian Ministry of National Integration on a structured dialogue in the field of regional policy²¹. Indeed **Brazil** launched beginning of 2007 a new national policy in the field of regional policy including the establishment of a Regional Development Fund at the example of the European Regional Development Fund (ERDF). As described before also Brazil is characterised by important development disparities between a poor northern part and the more developed and urbanised southern part. The disparity between rich and poor regions is 1 to 9 which is similar to the regional disparity in the European Union which is 1 to 7,6 when the GDP per head of the population is compared between Luxemburg and Bulgaria. The Memorandum of Understanding includes technical assistance, strategic planning, evaluation of regional policy, cooperation among regions with exchange of experiences and best practices, etc.

But similar exchange of experiences is starting also with **China**. Although China is more than twice the size of the European Union in surface and population, there are similarities in the spatial and regional development disparities between the strongly urbanising regions of the east coast with Beijing-Shanghai-Guangzhou-Hong-Kong, and the poor rural parts of China. Also China is addressing these regional development disparities and has a partnership with the European Union e.g. for exchange of experiences in this field.

Both in the BRICs and in the Next 11, progress in development is combined with higher **urbanisation rates**. While most of the BRICs are urbanising very rapidly, also the N-11 are

¹⁷ Rybinski K.(2007) "Meaningless Europe" in 'The Future of European Regions', Ministry of Regional Development Poland, Warsaw, Editors: P.Jakubowska, A.Kuklinski and P. Zuber, p 39-52.

¹⁸ Rifkin J. (2004) *The European Dream*, New York.

¹⁹ Hoffmann S (2004) Comments in Foreign Affairs.

²⁰ ESPON Project 3.2 (2007): Scenarios on the territorial future of Europe, www.espon.eu

²¹ A new period of cooperation between DG Regio and Brazil, Inforegio-NEWS, December 2007, nr 163.

already highly urbanised²². In five of these countries, more than half of the population is urban. Some countries, including Korea, Mexico, Iran and Turkey, are roughly at G6 levels. While no N-11 country beats Brazil on this metric, eight of the 11 are more urbanised than China and India. Philippines, Nigeria and Indonesia have seen the largest increase in their share of urban population since 2000. At the opposite end of the spectrum, Vietnam and Bangladesh remain overwhelmingly rural. (some 75%). As the authors state: "Urbanisation in these countries should support economic growth, particularly by underpinning productivity growth, as has already been the case in China and is beginning to materialise in India. Both China and India in the BRIC countries and Bangladesh, Vietnam and Pakistan in the N-11 have a scope for a significant increase in urbanisation over the next 25 years". The last three countries have also already cities of ten million and more inhabitants. This is the case with the capitals Dacca in Bangladesh and Ho Chi Minh City (former Saigon) in Vietnam, which have both about ten million inhabitants in their metropolitan area. This is the case also with the commercial and financial capital of Pakistan Karachi with more than 12 million inhabitants. Both in Pakistan with Islamabad and in Nigeria with Abudja, new Capital Cities have been planned and built at the example of Brasilia in Brazil in order to relieve congestion from their mega-city regions.

Parag Khanna in his book 'The Second World' describes Turkey as marching between East and West. He states: "Turkey's importance begins in Bulgaria. With a population shrinking toward five million, Bulgaria is an EU member...becoming a suburb of the huge city of Istanbul—an amalgamation that could be referred to as "Istanbulgaria"—which is already the major commercial hub dominating the region between Budapest and Baku." Indeed Istanbul's large metropolitan area with a population approaching unofficially twenty million inhabitants has a unique position at the Bosphorus as the gateway connecting Europe and Asia.

Towards Smarter City-Regions?

Everywhere mega-city-regions are dominating the emerging economies in the world.

But also everywhere their costs of concentration and congestion are a major concern. Therefore a **"Smart Growth" movement** started in the USA middle of the nineties as an alternative to "Urban Sprawl" by favouring more "Compact Cities and Communities"²³. Other titles for this movement are **"The New Urbanism"**, **Transit Oriented Development (TOD)** and others. One of the most famous examples with a lot of "smart growth" ingredients is the recent development plan for a greener New York (PlaNYC 2030) at the initiative of Mayor Michael R. Bloomberg. This plan is considered now as a model for sustainable and livable cities in the 21st century. The American "smart growth" movement inspired also the EU where several trans-national and interregional cooperation projects in the field of smart growth and smart economic growth are carried out or are in progress²⁴. An interesting example of a regional development strategy in the larger urban context of London inspired largely by smart growth objectives, is "The Regional Economic Strategy" (RES) for the South-East of England²⁵. Three major objectives, which are respectively

²² Sandra Lawson, David Heacock and Anna Stupnytska in *Beyond the BRICs: A Look at the Next 11*, p 161.

²³ Baeyens H. (2008) SMART REGIONS, Continuity and Innovation in the Practice of Knowledge Creation, in the book dedicated to Prof. Kuklinski on the Advancement of Social Sciences, edited by J. Niznik, A. Gąsior-Niemiec, Warsaw.

²⁴ The author was involved in the Interreg IIB "Smart Economic Growth" (SEG) project (2005–2008) of Surrey (lead partner), Buckinghamshire, SEEDA in the UK, Region of Frankfurt and University of Darmstadt in Germany, the Province of Utrecht in the Netherlands and the Province of Vlaams-Brabant in Belgium.

²⁵ SEEDA (2006) "The Regional Economic Strategy" RES 2006–2016—A Framework for Sustainable Prosperity-Gulford (www.seeda.co.uk/res)

'Global Competitiveness', 'Sustainable Prosperity' and 'Smart Growth', determine the strategy for the South-East Region which is a region of about 8 million inhabitants around London.

Smart City-Regions combine both a concentration of congestion and environmental problems and the brains and talent in order to generate the innovation for solving such problems. An interesting example in this respect is the competition in the automotive industry for producing intelligent personal transportation in urban areas. General Motors is sponsoring the Smart Cities group at the MIT Media Laboratory, for developing a clean, compact, energy-efficient City Car prototype, which can also efficiently solve the 'last mile' problem, inherent in and for public transport²⁶. In an interview concerning the "Car of Tomorrow", the senior Vice President for Research and Development of Toyota Mr Miyadera, who is also head of Research and Development in Europe in Zaventem near Brussels, provides a broad overview of the alternative energy sources for the car of the future, the 'smart' cars in view of safer driving of seniors, the automatic car transport thanks to "car to car" and "car to infrastructure" communication, but which will need the cooperation of the public authorities in the mega-city-regions, etc. Also the "Accident Avoidance Technology" is already advanced in such a way that car to infrastructure communication will be possible in the near future. This will be quicker feasible in Japan than in Europe, unless the EU can convince the member countries to converge gradually towards a common 'car to infrastructure' system²⁷. If the automatic transport of cars could be realised and accidents are no more possible, this could have a considerable influence on the conception of the car. Steel would no more be needed, plastic and even paper could replace steel as protection against wind, rain and snow, with drastic positive impacts on the environment because of lighter materials and less energy consumption. It could have also a considerable impact on the spatial planning conception of our future mega-city-regions.

A recent report of the Spatial Planning Office in the Netherlands on the 'Randstad in International Perspective' refers to the fact that in the metropolitan regions of North-Western Europe, the realisation of the High Speed Train network (HST) with considerable impact on the revolutionary diminished time distance, has been possible in a relative short period despite national, regional and metropolitan institutional barriers between and within the participating countries of Belgium, Germany, the Netherlands, France and the United Kingdom²⁸. Institutional barriers can be taken away if the urgency for creating smarter city-regions is high. Nicos Komninos refers to the architecture of intelligent cities where human, collective and artificial intelligence are combined and integrated in order to enhance knowledge and innovation²⁹. According to Richard Florida, creativity is the motor of city development with sometimes spectacular architecture as the magnet³⁰. Charles Landry is launching his recent book "The Art of City Making" with the following message: "The vision for 21st century cities must be to be the most imaginative cities for the world rather than in the world. This one change of word-from *in* to *for*—gives city-making an ethical foundation and value base. It helps cities become places of solidarity where the relations between the individual, the group, outsiders to the city and the planet are in better alignment"³¹. It broadens the scope of what a 'smart' or an 'intelligent' city-region in the future might be:

²⁶ Intelligent cities (2007) Inaugural Lecture of the UOC (Universitat Oberta de Catalunya) 2007–2008 Academic Year by William J. Mitchell, Professor of Architecture and Media Arts and Sciences at MIT, UOC papers, Journal of the Knowledge Society (<http://uocpapers.uoc.edu>).

²⁷ Miyadera K. (2008) Interview in "De Morgen" 19–20 January 2008 on "The Car of Tomorrow" at the occasion of the Car Exposition in Brussels.

²⁸ Bestuur en Ruimte (2008): De Randstad in Internationaal Perspectief, Ruimtelijk Planbureau, Den Haag.

²⁹ Komninos N. (2008): Intelligent Cities and Globalisation of Innovation Networks, Routledge.

³⁰ Florida R. o.c. (2002) and (2006)

³¹ Landry C. (2006) The Art of City Making, Comedia, London.

not only the motor of economic competitiveness and sustainable prosperity, but also the cradle of tolerance, social innovation and equity and cultural creativity.

Thanks to the visionary initiative of President Sarkozy an international consultation for the "Grand Paris 2050" has been launched in 2007. Ten pluri-disciplinary teams from France and from other European countries have been invited to formulate their ideas for the post Kyoto Paris Region in 2050. A very rich and inspiring variety of ideas is the result³². On some issues all ten teams have the same opinion such as to limit the agglomeration to the existing built-up area even if the 'schéma directeur de la region Ile-de-France' foresees the need to construct 1,5 million new housing units before 2030. They all look for "smart growth" solutions in using the existing built-up area in more compact and intense ways such as by strategies of mutation and recycling and by building "ecovilles verticales" (Jean Nouvel-France), by creating ecological corridors in planning with nature and using the potential of the main river basins Seine-Marne-Oise or by creating 400km² green roofs (Richard Rogers-UK), etc.. Also the absence of inter-modality in the Paris Region is generally recognized and referring to the 'Transport Oriented Development' of the 'Smart Growth' movement in the US the question raises if also a kind of Atlantic Dialogue on major city-regions with the examples of Paris and New York could be mutually inspiring?

Towards World Governance?

Louis Emmerij in his introductory contribution to this book, enumerates "Ten Global Challenges for the Next Decade-and Beyond". The second is "Global Governance for a Multi-polar World". He refers to the period after World War II when "the Marshall Plan came in place of a truly Global Plan that was launched by the United Nations around 1950 and that was an important opportunity missed."

The Canadian initiative for a Democratic World Government through a Global Referendum with the book of Jim Stark: "Rescue Plan for Planet Earth" (2008) starts with a quote of Albert Einstein: "**There is no salvation for civilisation, or even for the human race, other than the creation of a world government**". A famous columnist (Financial Times) commenting on world governance is Gideon Rachman. He wrote a column with as title: "**And now for a world government**" in the Guardian December 8 /2008. The European Union has already set up a continental government for 27 countries which could be a model. He sees three reasons for thinking that the European model might go global. First there is global warming, the global financial crisis and the 'global war on terror', all problems of international nature facing national governments. Secondly the transport and ICT revolutions have shrunk the world, so that for the first time in human history some form of world government is now possible. The third reason is the actual change in the political atmosphere. Even countries such as China and the US that are traditionally fierce guardians of national sovereignty admit that the financial crisis and climate change are pushing national governments towards global solutions. A more recent column of October 5, 2009 with as title: "Europe's plot to take over the world" is a comment on the G20 in Pittsburgh. Gideon Rachman refers to Jean Monnet, the founding father of the EU, who believed that "European unity was not an end in itself, but only a stage on the way to the organised world of tomorrow." Although—according to him—Europeans were grossly overrepresented in Pittsburgh, he concludes that "the G20 now has some achievements and a burgeoning sense of solidarity between the members of this new, most exclusive, club. Who knows what comes next?"

³² Grand Paris, Les scenarios des dix architectes (2009), Le Moniteur des Travaux Publics et du Batiment, Aménagement et Urbanisme, Paris, Extraits des no 5499, 5500 et 5501.

But in this respect Antoni Kuklinski is launching a new contribution on “The geostrategic reconfigurations of the global scene”. In exploring some realistic answers and comments on this thought –provoking contribution and mainly on the six geostrategic configurations, I consulted one of the manifold Brussels-based think-thanks and found a recent article of the Royal Institute for International Relations EGMONT on the need for a European Grand Strategy in a Multi-polar World³³. Their conclusion is that “the G20 constitutes at this time the best available forum to discuss effectively global challenges and ways to solve them due to its composition (all countries of significant importance are represented)”. But they conclude that “if the EU really wants to step from being a global actor—defined by global presence—to being a global power—defined by global influence—it needs a global strategy. It needs a **grand strategy**.” And they conclude with a pleasant comparison: “avoid the trap of mere reactivity which has defined EU foreign policy so far.....while the EU is playing ping-pong, the others are playing chess. With Van Rompuy and Ashton, Europe was offered a new King and a new Queen. So let’s play chess!”.

Finally responding Antoni Kuklinski’s initial question on the “Atlantic Community”, I would be very much in favour in combining the world wide military power of the US with the wisdom to install some kind of ‘global governance’, inspired by the EU efforts—using again Parag Khanna’s formulation—of “rebuilding European Union member states from the inside out by means of the “*acquis communautaire*” or the 35 chapters of the *Lex Europea*”.

In any case could the way how the EU is organising its **cohesion and regional policy** also be a source of inspiration for future world governance in order to assist the poorest parts of the world in reaching the Millennium Goals. A more effective and efficient coordination of all types and sources of development aid could profit from the experiences of the EU cohesion policy by means of decentralised responsibilities in the member countries of the European Union in order to combat socio-economic disparities. Such a type of cohesion policy could be organised gradually at a world-wide level in combination with financial and climate change measures.

The Italian expert Fabrizio Barca obtained from Commissioner Danuta Hubner the mission to prepare an agenda for a reformed cohesion policy³⁴. In his presentation at the Conference for the 5th Anniversary of Poland’s Accession to the EU, Fabrizio Barca states the following: “We should be grateful to the Polish Regions and the Polish Government for celebrating Poland’s accession to the EU by opening up a debate on what role cohesion policy could play in the years ahead as a policy for development. We should turn cohesion policy into a **place-based development policy**—not a redistribution of funds”³⁵. The original formulation of “harmonious development” in the Treaty of Rome and the actual cohesion policy might in such a way undergo a fundamental reform by the two main pillars of the proposed reform: a concentration on core priorities based on a European Strategic Development Framework.

Might this also inspire the announced Grand European Strategy.

³³ Renard T.& Biscop S.(2010): A Need for Strategy in a Multipolar World: Recommendations to the EU after Lisbon, EGMONT Institute, Security Policy Brief, January, Brussels.

³⁴ Barca F. (2009) An Agenda for a Reformed Cohesion Policy—A place-based approach to meeting European Union challenges and expectations, Independent Report prepared at the request of Danuta Hubner, Commissioner for Regional Policy.

³⁵ Barca F. (2009) The Union and Cohesion Policy—Thoughts for Tomorrow, Transcript of the presentation at the Conference for the 5th Anniversary of Poland’s Accession to the EU, Brussels, November 4.

JAROSŁAW SADŁOCHA

NATO—A COLLECTIVE CHALLENGE OF THE TRANSATLANTIC SAFETY

The North Atlantic Treaty, established over sixty years ago has been the most powerful military alliance and one of the most effective international organizations ever since. Despite the criticism towards the NATO's actions or even its initial existence in the globalised 21st century, one must admit it's got real potential capable of being used immediately at any time. Moreover, the NATO has been able to function on two separate geopolitical surfaces.

One of them was the two-block, Cold War system, at the time of which the Treaty was established aiming at defending western countries and values. The moment the system failed the NATO introduced changes into its operation strategies and the tools used. It adjusted to the new world order in which the bonds between countries were getting even closer and yet in which ethnical and religious antagonisms tended to appear. While there was no closely defined opponent in its surrounding, the NATO still played the role of the guardian of the Transatlantic zone's safety, being responsible not only for the safety of the member countries, but also of the neighbouring ones.

What is more, the Treaty increased the number of its members, allowing new Central-Eastern European countries to enter and expanding the geopolitical sphere of its interest. What is characteristic of the international relations is its dynamics, difficult to be adjusted to by big organizations; the NATO seems to be a great example illustrating this phenomenon. Currently the Treaty is facing the necessity to adjust its structures to the new international reality, so much different from the one of the 90-ies of the 20th century. However, before new conditions and the prognosed scenarios for the future functioning of the NATO are described, it is worth to think about the factors which contributed to the Treaty's achievements to date. The most important factors constituting the basis of the NATO's functioning are the Transatlantic bonds and the leadership of the United States of America in the Organization. Both these categories are correlated and dependent on each other. Without the military potential of the United States the NATO would lose its straight majority of the operational ability. However, without the political, economical and to some extent the military support of the European countries, the NATO would lose its reliability in the international arena.

It is hard to define the Transatlantic Bond in a few words. Putting it in a nutshell, one can say it is a set of common values and interests shared by all of the member countries of the NATO. Of course it does not mean that all the interests of the member countries of the Organization are the same. The aims of the United States and the aims of such countries like e.g. Belgium or the Netherlands differ in many ways. Americans also perceive the safety matter differently than their European allies, paying much attention to the military matters, usually based on unilateral

operations. European countries pay much more attention to economical and social matters, choosing methods of multilateral operations oriented on diplomatic operations and peaceful problem solving. However, despite the fact that “Americans are from Mars and Europeans from Venus¹”, as Robert Kagan once said, we must not forget the value of the common civilizational root. It gains a special meaning when the socio-cultural worldview of the western countries correlates with such countries like China, India, Islamic countries etc. According to Zbigniew Brzeziński, the real potential of the NATO is related to the fact that the alliance connects the military and the economical power of the United States with the political and economical power of Europe². These two elements combined together make an institution of a global meaning.

At the time of the Cold War the NATO constituted the most important guarantee of safety of the Western European in the face of danger from the former Soviet Union, constituting a separate political block with the Warsaw Pact countries and in some sense a separate civilizational block.

After the Cold War ended, many observers of the international relations claimed that since there was no danger in the East, Europe needed an active engagement of the United States into its safety and defense policy. If this had been the case, the existence of the NATO would have been pointless. At the same time the dynamic development of the European Integration Process took place in the 90-ies in the 20th century and, on the other hand, the engagement of the United States in other parts of the world became stronger. However, despite all these essential overvaluations, the European Union turned out to be unable to act on its own in the areas overwhelmed with military operations, proving it in the Persian Gulf or in the Balkans. At the same time the United States needed various kinds of support from the European countries in order to perform operations exceeding the NATO territories. This is why it was established in the NATO's strategies in 1991 and in 1999 that the North Atlantic Treaty remains the most important consultation and cooperation forum in all matters concerning the safety and defense of its members. At the same time the United States supported the development of the European foreign, safety and defense policy³. Creating European Safety and Defense Policy, despite the initial reluctance towards the American side, was eventually considered to be a complementation of NATO's operating in the matters of defense policy in Europe. They were not to duplicate their functions and to encourage European countries to active engagement and taking more responsibility in case of dangers in the neighbouring areas and in the ones considered to be strategic for the Union⁴. The operations of the member countries of the European Union were not aiming at creating a common European army, but focused on developing the ability of reacting to crisis.

A serious crisis in Transatlantic relations in terms of the defense policy took place at the time of George W. Bush's term of office. His administration's unilateral conception of the foreign policy led to deterioration in terms of relations with European countries. Despite the fact that after the attack on the World Trade Centre in 2001 the whole world declared its unity with Americans, in 2003, at the time of war in Iraq the US policy and potential engagement of NATO in this military operation and the Stabilization Mission faced resolute resistance of such countries like e.g. France or Germany.

The North Atlantic Treaty was used instrumentally (the Tool Box concept⁵) or was omitted, just like in the case of the plans of National Missile Defense which would be independent on the

¹ R. Kagan, *Potęga i Raj, Ameryka i Europa w nowym porządku świata*, Warszawa 2003, s.11-12.

² Z. Brzeziński, *An Agenda for NATO. Toward a Global Security Web*, “Foreign Affairs”, September-October 2009.

³ S.R. Sloan, *The United States and European Defence*, “Challiot Papers”, nr.39, Paryż 2000, s.3.

⁴ J. Borawski, TD Young, *NATO after 2000. The future of Euro-Atlantic Alliance*, Connecticut-London 2001, s.37.

⁵ (The Tool Box concept maintains that NATO is like a box with tools, used by the USA when it is needed, convenient and in accordance with its own particular interest)

strategic plans of the Alliance. This sort of operations faced negative perception of the position of the USA in NATO—not as a leader as such, but as a hegemonic one. However, the United States noticed the partly negative consequences of marginalizing NATO. The operation in Afghanistan in 2001, initially performed by individual countries, since 2006 has been fully controlled by NATO as part of the ISAF (International Security Assistance Force⁶) stabilization mission.

The UN forces' operation based on the UN mandate is definitely differently perceived than else the individual mission of the United States. However, establishing the character of NATO between the USA and the European countries still continues and will play a very important role in the future of the organization. The European Union's countries, which are members of the NATO prefer traditional defense of the Transatlantic territories as a part of the alliance. Americans, on the other hand, until the NATO summit in Budapest (2008) propagated the role of the NATO as a "global policeman" which would intervene in case of crisis in the whole world and would cooperate with distant countries such as Australia, South Korea, Israel or Egypt.

The interior affairs covered above should be correlated with the new tendencies and the phenomena taking place nowadays. The most important one of them is the globalization and its consequences appearing in the field of defense and politics. Firstly, thanks to the liberalization of trade, opening up frontiers and the dynamic development of communication, the access to weapons of mass destructions is much easier not only for the small countries, but also for extremist, terrorist and political groups. At the same time it is hard to predict the new dangers and what we need to do that are new abilities of preventing them. The role of the dangers of nonmilitary forms such as the energetic, teleinformatic, ecological and economical safety becomes more important. The increasing correlation between countries makes that dangers in even the most distant parts of the world may influence the safety of the NATO member countries.

The most important military mission of the alliance currently is the ISAF mission in Afghanistan. To some extent it illustrates the new kind of challenges NATO must face. The opponents of the alliance dispose of irregular and dispersed forces. In order to fight them the mobile units are necessary. However, taking into consideration the huge area of Afghanistan, we should not underestimate the conventional contribution into NATO's forces potential. In order to fight the Talebans several thousands of stationing soldiers, ready to fight are needed.

This uncovers the next two challenges the NATO member countries must face. One of them is the legitimacy of such a mission involving the countries not concerning the alliance, such as Afghanistan, which is not a result of the altruistic will of becoming a global policeman, but is an element of the collective defense of the alliance. In the 21st century the term "collective defense" does not only refer to the frontier defense and the internal safety, but also concerns protection of the safety policy. War with terrorism is one of them.

Declaratively, NATO members fully support the preventive war with terrorism, in which it is more effective to fight the enemy on its own territory and prevent them from other potential attacks. Despite all this, the ISAF mission in Afghanistan is facing serious problems. One of them is the engagement of allies, which is not sufficient. The main burden of war lies with Americans who constitute up to 50% of the NATO contingent; their contribution to sending forces to Afghanistan (partly from Iraq) will increase⁷. Seeing the military contribution as necessary evil by some member countries lowers the potential of the alliance and illustrates the abandoning of the allied duties. Certainly the disproportions in the financial investments when in to comes

⁶ In 2001, when The ISAF Operation came to existence, it encompassed only the capital city of Afghanistan (Kabul). However, The UN mandate was expanded on the basis of the UN Security Council's Resolution nr 1510 issued on 13th October 2003, enabling gradual introduction of operations into other provinces, aiming at taking control over the whole country. To learn more: http://www.do.wp.mil.pl/plik/Media/metarialy_do_pobrania/ISAF_X_material_informacyjny.pdf

⁷ P. Pacuła, *NATO przyszłości—wyzwania duże i większe*, "Bezpieczeństwo Narodowe", nr: 11/2009, Warszawa 2009, s.44.

to the military sphere between the United States and the European allies have always existed, but the redefinition took place after the Cold War ended. Europeans cut off their expenses on safety drastically. Even the bloody events in the Balkans were not seen as a sign to increase the resources in the defense budget⁸. In 1985–1989 the percentage of GDP on the defense of the European NATO members amounted to 3.1%; in 2008 it decreased and amounted to 1.7%. In comparison with Americans, in 1985–1989—that is at the end of the Cold War they devoted 6% of GDP and in 2008—4%; it was over twice as big percentage as of any of the European countries⁹.

The characteristics of the current military operations such as the ISAF mission proves that it is impossible to succeed with only the use of proper resources devoted to military purposes. The alliance must build a local safety net which would be effective enough to take control over the whole country with several years. Because of lack of funds the ISAF mission cannot be sustained eternally. However, in order to lead to destabilization of Afghanistan not only trainings of local armies and police are necessary, but also serious investments in education, infrastructure and economy. It is also essential to put the drug business in Afghanistan to an end, as it supports partisan forces and criminal organizations¹⁰. Such operations must be realized in a long-term perspective, but it is the only way to bring back the stabilization of Afghanistan.

The hierarchy of countries in terms of international relations has also changed. Despite the supremacy of the United States, both economical and military one, has also changed; such countries as China, India, Russia, Brazil or Japan have now much higher aspirations. The extension of the NATO to the east and its further prospects (e.g. Ukraine or Georgia issue) may lead to a serious geopolitical conflict with Russia or the dynamically developing Republic of China. The seriousness of the conflicts will depend on the kind of aspirations and the possibilities of the NATO and the countries mentioned above.

The proliferation of the weapon of mass destruction also remains a serious problem. It is one of the NATO members' and e.g. Russia's interest to prepare a treaty and decrease the nuclear arsenal (mostly for financial reasons). The question of potential gaining a wholesome nuclear weapon by South Korea or Iran remains essential. Destabilized Pakistan crowns the dehierarchized image of the world.

Currently the North Atlantic Alliance is facing the necessity to define a new strategic conception. One of the most important issues that require redefining are: establishing the range and the area of the operation performed, the spectrum of the mission, building new potential, mutual relations in political and military measurement, character of membership and potential possibilities of expanding the Alliance. What also requires redefining is the Article 5 of the Washington Treaty, ensuring protection for an attacked NATO member country by the remaining ones and establishing a new strategy towards other important international relations.

Traditional functioning of the Alliance limited to scaring off, protecting the member countries and sustaining the Transatlantic bond. The moment the NATO took the role of a "global policeman" the expedition operations became essential. However, currently that trend may change. According to M. Madej, the assertiveness of Russian policy towards some member countries and the NATO's partners and increasing difficulties of performing out of area operations lead to that, pointing the limits of the Alliance's possibilities to fulfill the global functions and to the dependence of the effectiveness of its operations on cooperation with other countries and organizations (e.g. Russia, European Union)¹¹. This would not mean resignation of global activity of the NATO, but rather

⁸ Ł. Kudlicki, *When I'm sixty-four, czyli NATO (nieodległej) przyszłości*, "Bezpieczeństwo Narodowe", nr. 11/2009, Warszawa 2009, s.24.

⁹ *Financial and Economic Data Relating to NATO Defence*, <http://www.nato.int/docu/pr/2009/p09-009.pdf>.

¹⁰ R. E. Rupp, *NATO after 9/11. An Alliance In Continuing Decline*, New York 2006, s.173.

¹¹ M. Madej, *NATO przed szczytem jubileuszowym w Strasburgu/Kehl—główne wyzwania*, "Biuletyn PISM", 12.03.2009, s.1.

emphasizing the meaning of traditional allied duties. After the events in Georgia especially the middle-east European countries need clear declarations of safety going beyond the Article 5 of the Washington Treaty. According to R. Kuźniar what is essential is the constant actualization of contingency planning and introducing the safety infrastructure into all the allied countries and those which entered the NATO after the Cold War ended¹².

Including asymmetrical dangers to the catalogue of issues concerning the Article 5 of the Treaty is a separate problem. What also remains a problem requiring consideration is cyberterrorism, cutting off deliveries of energy resources, climate changes and the economical crisis, which should be seen a sign to use collective defense. From the point of view of the member countries it is the dangers of nonmilitary character that are more probable than a conventional attack. However, on the other hand, current possibilities of effective NATO's operating seem to be slight. They might be limited to protecting sea trade routs and energy resources or functioning as a coordination and training center in case of teleinformatic danger. What is more, expanding the catalogue of dangers may cause dispersing its resources and weakening the abilities to perform up to date commitments¹³. Currently the European Union disposes with considerably higher potential than the NATO when it comes to the energetic, economical and ecological safety. In the future the cooperation of those two organizations will be required in terms of nonmilitary dangers. At the same time the NATO should develop its own tools (treated as mutual with the EU, since both organizations should have access to them) without duplicating the European Union's functions in order to fight new dangers.

The cooperation of the NATO and the European Union should also concern the issue of relations with Russia. Russia constitutes a very important partner from the point of view of seeing the economical relation with the western European countries and the NATO's needs (logistics questions connected with the mission in Afghanistan). However, any imperial tendencies of Russia threatening the safety of the NATO member countries should be definitely fought. From the point of view of the NATO and the EU it would be most beneficial to include Russia in the world safety net; however, this cannot do any harm to the member countries or the ones considering entering the organizations, that is Ukraine and Georgia. If Russia does not give up the perception of the eastern Europe as a zone of its own influences, it will be very hard to redefine the relations with this country. It is also unacceptable to make the impression that the member countries give in to Russia in the question of expanding the NATO to the east. It would not only be in contradiction with the geopolitical point of view, but it would also undermine the credibility of the NATO. When it comes to the European member countries the NATO must acquire the open door policy, which is implied by the Washington Treaty and the spirit of the Alliance of the free and democratic nations of our part of the world. Of course both Ukraine and Georgia will not be ready to enter the NATO in the close future. That is why it is essential to support them financially and offer consultations in terms of vital issues.

Perhaps in the long-term perspective Russia will see the NATO as a real partner, especially when the military power of China increases. For the time being, the member countries of both the NATO and the EU must remember about sustaining the unity when it comes to relations with such countries like Russia which perceive others from the point of view of their own power. It concerns not only Russia, but all the current regional empires. That is why strengthening of the Transatlantic bonds is crucial when it comes to the future of the NATO member countries.

¹² R. Kuźniar, *O przyszłości NATO*, http://www.boell.pl/downloads/Przyszlosc_NATO_Kuzniar.pdf.

¹³ M. Madej, *op. cit.*, s.2.

**ULRIC FAYL VON HENTALLER
GILBERT FAYL**

THE RIGHT QUESTIONS GLOBAL ROUND TABLE

National and local politics is more intertwined with global politics than ever before. The dichotomy is increasing between the global dimension of politics and local, national and regional interests. It causes major challenges to political leaders and timely access to credible and relevant information is becoming imperative.

Solutions to issues, challenges and problems start with the right information and the right questions. The right questions are necessary to get deep inside the core of issues and thus to arrive at the right results.

Political leaders have often ready, routine answers. Many politicians display short-term opportunism and make unrealistic, if not naive promises. They operate with a short-term time horizon and the date of the expiration of their mandate hangs above their heads like a Damocles sword.

Short-term opportunistic approach is unacceptable. It undermines credible democratic system and results in public loss of confidence in the political establishment when the time arrives to deliver on the promises.

In the absence of discerning debate with the public and adequate societal involvement “Yes, we can” could well turn out in the real world to “No, we couldn’t”.

In international context short-term opportunism could have disturbing consequences and its butterfly effect lead to global economic problems and political friction. Consequences are in fact amplified in the modern interconnected world.

The authors suggest that in the evolving global village there is a need for innovative mechanisms where the voice of civil society can be more effectively heard. Even on matters reaching beyond any single country and the current generation. Such schemes would enhance the democratic credibility and long-term—and global value of direction given—and decisions taken by political leaders.

The “Global Round Table” is such an innovative initiative. It is a non-political meeting point that offers the possibility to strengthen the discourse between civil society / political-, business and other societal leaders. Social responsibility towards individuals and current- and future generations and societies is central in these discussions and deliberations. The issues have relevance beyond narrow national focus and interests and the short-term. The outcome is offered directly to political-, business- and other societal leaders, as well as to relevant educational establishments and societal actors.

Lessons from History

In 1961 Nikita Sergeyevich Khrushchev, First Secretary of the Communist Party of the then Soviet Union, announced his objective to surpass the United States in per capita production within twenty years. Thirty years later the Soviet Union dissolved itself. The paradigm failed and objective was missed.

Also in 1961 John F. Kennedy, President of the USA, announced the goal for landing a man on the Moon: *“No single space project in this period will be more impressive to mankind, or more important ... and none will be so difficult or expensive to accomplish.”* The objective was achieved through realistic strategy when men landed on the Moon on July 20, 1969, almost six years after JFK's death. The paradigm shift was successful in mobilizing society, research and the economy. The eventual success of the undertaking was secondary. Kennedy said it best himself: *“We choose /to/ do the other things, not because they are easy, but because they are hard.”*

In 2000, political leaders of the European Union (EU) adopted the Lisbon Strategic Goal for the next decade to become the most competitive and dynamic knowledge-based economy in the world by the year 2010. Five years later the strategy was refocused; the initial objectives remain in the distant horizon. Nevertheless, it has started a process that can hopefully only be beneficial for the entire EU and possibly beyond. By now, the process has become more important than the initial objectives.

If history has taught us anything, it is that humanity needs long-term vision and realistic and implementable strategy, not short-term political opportunism.

According to Stanley Crossick, a recognised international political analyst and Founding Chairman of the Brussel-based European Policy Center: *“Being strategic is a matter of mental approach to things. Certainly we can be more strategic. The serious difficulty is that strategy doesn't normally come from the people in government. It comes from the people who are going to be in government, it comes from think-tanks and the academic community... In Europe there is no /such/ underpinning of the political process. By this kind of thinking, there is no strategic thinking at any level...”*¹

Sony Kapoor, a former investment banker who established an international think-tank to reform the financial system, is equally outspoken: *“Politicians often do not have a long enough horizon to address fundamental questions, for example, about the role of finance. The proposals out there are a patchwork of reactive responses which merely try address problems specific to this recent crisis. Politicians want to be seen to be doing something to assuage public anger... At the pan-EU level Poul Nyrup Rasmussen /former Danish Prime Minister/ came close to a discussion on a paradigm shift last year but since then no, not many politicians I can think of. Sarkozy /French President/ has made some noises about rethinking capitalism. Merkel /German Chancellor/ has talked about sustainability, Obama /US President/ has upped the rhetoric against banks and Brown /UK Prime Minister/ is belatedly talking about the financial system needing to serve society but it is difficult to see that any of them have the right vision.”*²

Political determination certainly demands respect. But highflying declarations are not enough. Unrealistic and over-ambitious objectives are misleading and result in public loss of confidence in the political establishment when the time arrives to redeem the promises.

Political leaders can be short-sighted and opportunistic, and thus make mistakes. In the absence of a discerning debate with public and societal involvement, buzzwords get their own life and remain hanging in the political arena and its gravitational pools. At least until new buzzwords emerge.

¹ <http://www.euractiv.com/en/foreign-affairs/crossick-europe-should-dust-its-founding-fathers-ideals>

² <http://www.euractiv.com/en/financial-services/sony-kapoor-politicians-are-missing-big-picture>

In this process the wisdom of *democracy*: (“demos” viz. people and “kratos” viz. rule) appears by hook or by crook to have sunk into oblivion and been forgotten.

In today’s interconnected world, this could be a particularly damaging in international affairs.

In the Middle of a Mess

Since the end of WWII, directly resulting from its dramatic historical experiences, Europe has found it necessary to follow the route of tolerance in order to ensure peaceful co-existence and a prosperous future for its citizens.

Consequently, Europe has chosen to show marked restraint and moderation in the international context and it has therefore been necessary for Europe to accept the global and regional dominance of other major players, in particular the United States.

Not burdened by similar constraints as Europe, the United States managed to use globalisation to its advantage and succeeded in drawing Europe and others into its “global adventures”. This happened both financially and politically, in both cases with positive and negative consequences.

However, the world is in transformation and becoming more and more multi-polar; the geo-strategic landscape is changing. The United States is not any longer the dominant world player as was initially the case after the collapse of Soviet Union. After agreement on the Lisbon Treaty, the European Union has now the opportunity and potential to increase its international role. Russia is on the way to regain some of the power and global influence of the former Soviet Union. Countries like China, India and Brazil are emerging as major economic players. Others like Iran and Venezuela, who possess important resources of raw materials and/or conventional energy, could increase their bargaining power in the international context.

On the other hand, countries in the Middle-East with rich oil resources are torn between traditional systems and new ideological-religious forces. They still have to find their place in- and role on the 21st Century’s international scene. Latin America and Africa complete the quick *tour d’horizon*: it will take time before become noticeable global players, although both have great development potential.

The dramatic population growth in most of the Developing World and the demographic trends and resulting ageing population in the Developed World have increased the migration from the former to the latter. Time will show how and whether sustainable symbiotic relationships between different ethnic- and religious groups or *parallel societies* besides each other could, should and will develop. It however, remains a particularly sensitive issue for Europe.

Globalisation and the recent economic crises through failure of leadership have released forces that could change the substance of capitalism, as we know it today. A similar worldwide crisis has not been seen for the last some eighty years. There are many people who hope to fix the crisis, including finance leaders themselves. The dilemma is that many finance leaders with questionable moral- and ethical standards are those who have caused the current crisis.

Simultaneously with the above development, criminal individuals and networks have adjusted much faster to the global changes of 1990s than governments and business. As a result of Internet explosion and technological development, the worldwide black market is booming. Counterfeiting, illicit manufacturing and trade, money laundering, drugs trafficking “without borders” and terrorism are just some of the examples.

Common sense suggests that a sound global financial system needs to be in place as soon as possible. In turn, issues associated with personal- and global security, declining state of the environment, shortage of conventional energy resources and raw materials (incl. water), demographic development, and global market access are first among the major issues that can be

expected to dominate the global agenda in the longer term. At the local level, job and job-creation will remain central in the vocabulary of political leaders.

Clearly, we are facing a multitude of complex issues, self-made or through no fault of our own. And in the globalised world, most of them—if not all—have international dimension.

All in all, it can be expected that a multitude of parameters—some of them highly uncertain—and their complex interactions will determine the future balance of global economic- and political power:

If it has not already been done, we have to address the issues globally and holistically and with a long-term perspective in this critical time we are experiencing. This can only be done if we change our mindset and learn to think imaginatively and out of the “conventional box”. Only then can we begin to arrest the decline of the state of the world—ecologically, economically, morally and socially.

Discerning debate with public and adequate societal involvement are necessary more than ever before to get deep inside the core of issues. Civil society must have a say directly and help to identify the *right questions*. This is not only practical and useful, but also necessary to ensure the democratic credibility and long-term- and global value of direction given- and decisions taken by political leaders.

Imperfect Information

Choices must be made consciously on the basis of best available information.

Consciousness means: “*the realization that one has impact upon ones surroundings and that others are similarly aware of you*” and “*a sense of one’s personal or collective identity, including the attitudes, beliefs, and sensitivities held by or considered characteristic of an individual or group*”.

This means that humans are compelled to impact their environment—if for no other reason, then to reassert their own existence. It forces the individual as well as the group to make choices. Even the choice “not to act” is a choice. This is often forgotten.

When choices are made, they do so in order to achieve a specific outcome given a specific current situation. Unfortunately, our information is imperfect—it is the old question of causality and current reality. We do not know if we have all the relevant information and how our knowledge of it influences our choice of path. This paradox was probable best described by (the Austrian physicist Erwin) Schrödinger’s famous feline thought experiment ³.

Not only are we not sure how we get to the desired result, yet we must act and live with the consequences. So we act upon our perception of reality rather than reality itself. Yet we must live with the results of the changed reality.

However, being aware of this information deficit allows us to adjust and modify our choices and approaches and achieve a more favourable outcome. A good example is the Russian chemist and inventor Dmitri Ivanovich Mendeleev who developed the periodic table of chemical elements some 150 years ago. He realised that he had partial information and that his insight was limited. He took account of this in his work and later scientists have been able to compliment his work. In fact his work helped guide generations of scientists of where to look for the missing elements.

³ http://en.wikipedia.org/wiki/Schr%C3%B6dinger's_cat

Need for Untraditional Approaches

A *butterfly effect*⁴ or severe knock-on effect is noticeable and unavoidable in the globalised world. Just an example is the recent US financial crisis that has propagated globally. In this and similar situations, innovative civil society initiatives can be helpful in building networks beyond national borders, exchanging ideas and finding innovative solutions.

Such initiatives could also be helpful when recognising early signals of undesirable developments, i.e. trace “deviation from expectation”. This would allow more time for appropriate intervention and thus help to minimise or even eliminate potentially damaging impact on people and environment.

We need to keep measuring and re-evaluating the impact that our choices have upon the likelihood of us reaching our desired objective. This must be done dynamically and immediately to adjust and tweak our approach. Economic actors and business people have been doing this for some time now—it is called “Total Quality Management” and its usefulness beyond question⁵.

The Danish philosopher Søren Kierkegaard⁶ made the point most appropriately when he stated that there was no shame in making mistakes as long as one recognised them and corrected them.

This is the context in that the **Global Round Table** has been initiated⁷.

Its aim is to improve the level and quality of the information available to economic- and political decision makers. This is its strength, mandate and limitation—to make it possible to make choices or changes that will have the desired impacts upon society.

Its chief objective is to address in a direct dialogue between relevant non-political actors current issues of socio-economic importance and related best practices, and make known the findings. The issues addressed have relevance beyond narrow national focus and interests and short-term.

The Global Round Table brings together: economic actors, academia, policy makers and civil society (including the young generation) from countries in Europe and beyond. It is a non-political meeting point for exchanges across generation-, national- and cultural boundaries. Its basic philosophy is that in a democratic society political- and other societal leaders must maintain close contact with non-political stakeholders and ensure the conditions for receiving input from them. This process must be without interference by political- and other bureaucratic structures.

Social responsibility towards individuals and current- and future generations and societies is central in discussions and deliberations. Recommendations are “implementable” and “achievable” avoiding unrealistic and over-ambitious objectives.

The discourse provides valuable field- and hands-on experience with direct involvement of young and more experienced generations. The issues discussed may relate to: (i) education / education policies such as higher education and industry relations or entrepreneurship; (ii) research / research policies such as optimal use of talented young people; (iii) broader issues such as

⁴ The phrase refers to the idea that a butterfly’s wings might create tiny changes in the atmosphere that may ultimately alter the path of a tornado or delay, accelerate or eventually prevent the occurrence of a tornado in a certain location. The flapping wing represents a small change in the initial condition of the system, which causes a chain of events leading to large-scale alterations of events. Had the butterfly not flapped its wings, the trajectory of the system might have been vastly different. While the butterfly does not cause the tornado, the flap of its wings is an essential part of the initial conditions resulting in a tornado. (http://nl.wikipedia.org/wiki/The_Butterfly_Effect).

⁵ When change is fast and unpredictable, business could also employ other sophisticated methods, eg. “Strategic Agility”: continuously adjust and adapt strategic direction in core business, as a function of strategic ambitions and changing circumstances, in order to create new product, services, new business models and innovative ways—<http://www.strategicagility.com/>.

⁶ <http://plato.stanford.edu/entries/kierkegaard/>.

⁷ The authors conceived the idea, elaborated the concept and co-ordinate the annual events.

relations between Europe and its competitors; or (iv) other global issues of importance for Europe and beyond.

The key feature of the round-table is that it stresses the importance of intensive interactive dialogue. The discussions focus on prior agreed key issues, challenges and problems without any lecture or paper presentation, i.e. without tedious monologs.

The indisputable integrity, impartiality and quality of moderators and participants together with their passionate and “reflexive” contributions are the guarantors for high-quality and focused debates and innovative solutions thereof.

Participation is on invitation. For each event some 30 carefully identified individuals are invited from Europe and beyond.

At each event, the participants issue a Memorandum with focused messages and recommendations. This, together with the key points of discussions, becomes part of multi-media material (DVD, etc.).

The multiplication effect of the initiative is unique. The outcomes of the events are offered internationally to political-, business- and academic leaders, as well as to universities, relevant educational establishments and societal actors.

In addition to providing valuable input to policy formulation, the DVD is well suited as supporting educational material at university- and high-school courses. It helps to better understand and appreciate the importance of interdisciplinary issues, as well as cultural, ethical and consensual values. Moreover, the findings and messages that crystallise during the round-table discussions help young people to better understand their responsibilities towards society. At the same time, these outcomes provide valuable input to societal leaders and help them to learn about the young generations’ concern about their own future.

Previous round-table events have among others focused on:

- Inter-generational dialogue in Europe (2005);
- Awareness and challenges for young entrepreneurs in Europe (2006);
- Educational reform to address economic skills mismatch in Europe (2007)—moderated by Esko Aho, former Prime Minister of Finland;
- Intercultural business dialogue to promote responsible sustainable growth in Europe, India, China and the USA (2008)—co-moderated by Dr. Erhard Busek, former Vice Chancellor of Austria; and Prof. Goverdhan Mehta, President, International Council for Science, ICSU;
- Current unprecedented global challenges that require novel approaches and broad co-operation (2009)—opened by Prof. Jerzy Buzek, President of the European Parliament, and co-moderated by Dr. Erhard Busek, former Vice Chancellor of Austria; Prof. Norbert Kroó, Vice-President, Hungarian Academy of Sciences; and Prof. Karen Siune, Director, The Danish Centre for Studies in Research and Research Policy.

The Global Round Table is Unique

The innovative feature and usefulness of the “Global Round Table” are recognised and valued⁸.

Eminent individuals have expressed supportive recognition of the initiative. They include László Sólyom, President of Hungary; Ferenc Mádl, former President of Hungary; Bill Clinton,

⁸ As an example, the following was the acknowledgement of the office of then European Commissioner Jan Figel, responsible for Education, Training, Culture and Youth at the European Commission, to outcome of 2007 Budapest Round Table: “...thank you for sending the memorandum on “Match Skills with Needs” We acknowledged the receipt of this important contribution to the /EU’s/ New Skills to New Jobs initiative and would like to inform you that we have sent this to the services of the Directorate General for Education and Culture for information and appropriate follow-up...”

former US President; Ulla Burchardt, Chair of the Committee on Education, Research and Technology Assessment of the German Bundestag; and Terry Davis, Council of Europe's Secretary General.

The Hungarian National Commission for UNESCO provides moral support to the initiative and the German Konrad-Adenauer-Stiftung is partner.

It is the hope of the authors that the Global Round Table initiative will provide inspiration to other civil society initiatives where stakeholders will discuss global issues with importance for the future of mankind and make their findings known.

The authors' experience is that to be able to *get deep inside the core of issues*, also from the perspective of ordinary people, intensive discussions must be conducted without imposed opinion by active politicians or other form of political interference. Moreover, to achieve *best usefulness of discussions*, the findings must be formulated in a concise and easily understandable way, and the recommendations must be "implementable" avoiding unrealistic promises. Finally, findings and recommendations must be *directly transmitted* to relevant political leaders, key policy-makers and other societal actors. Interference by heavy bureaucratic structures must be minimised.

The authors wish to express their sincere hope that elected- and nominated leaders will continue to recognise the outcome of Global Round Table as a useful supplement to the various measures that help them to leave-up to their social- and political responsibilities towards the society.

Finally, the authors wish to stress that the initiative does not intend to replace any institutionally established- or voluntary discourse nor compete with them. Just the contrary, the hope of the authors is that the initiative will serve as inspiration for others concerned with the future of mankind.

The main challenge remains: how to ensure continuity and sustainability of political leaders / civil society discourse in today's globalised world with ever increasing complexity of issues, challenges and problems.

Part IV:

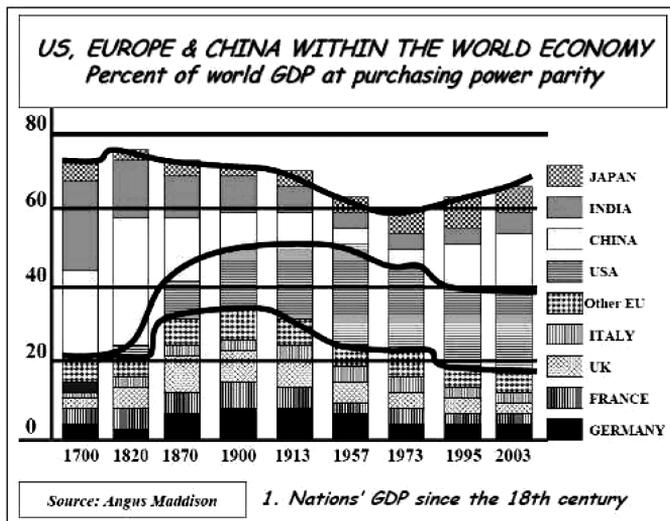
The Rising Stars of BRIC

JEAN-MARIE ROUSSEAU

THE UNCERTAIN PROMISE OF A GLOBAL CHINESE SUPERPOWER: Meanwhile... All Quiet on the European Front¹!

For a long time, China has been a sleeping giant. As the Chinese themselves say, it was kept in a coma by several colonial powers. At times, it has been considering itself a mere developing country that was wronged by the imperialists and was therefore entitled to a great degree of support. At other times and up to now, China sees itself as a superpower that is well on its way to restoring the glory of the ancient empires. Nowadays, China's spectacular expansion has sparked a torrent of speculation about the future of the international system, the world economy and global energy security.

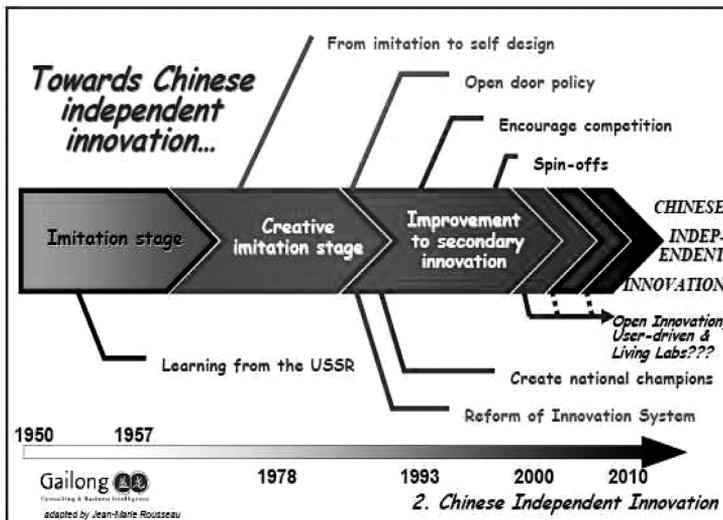
Meanwhile, on both banks of the *Atlantic Ocean*, European with American countries have the feeling to dream about a possible return to a golden age and still are hesitating on the means of the recovery.



¹ «All Quiet on the Western Front» (German: Im Westen nichts Neues) is a novel by Erich Maria Remarque, a German veteran of WWI. In 1930, the book was adapted into an Oscar-winning film of the same name, directed by Lewis Milestone.

In comparison to about ten years ago, the world's most populated country has realised it will have to live with the international institutions, norms and regulations for the time being if it is to avoid finding itself isolated yet again. China now wishes to take on the role of a friendly giant, and a quiet force on the international scene. It has gradually succeeded in acquiring a more constructive reputation with regards to global issues. Moreover, China has slowly but surely transformed itself into a highly skilled and cunning participant in the diplomatic game. What is more, Beijing has adopted a far more helpful attitude in the search for solutions to global security issues... When it comes to the management of the global system and the resulting costs, the country continues to pass the buck onto the Western superpowers, despite its eagerness to point a moralising finger at these powers at any given opportunity. There is no doubt that Chinese foreign policy is now marked by dynamism and involvement in the outside world.

Actually, China is still facing economic, social and environmental challenges on an unprecedented scale, while yet turning the world's largest technocracy, that is, a country ruled by scientists and engineers who believe in the power of technology to deliver social and economic progress.



Thus, the question is how China—with or without Europe—is experimenting and suffering from the myth of a postmodern world.

We also should wonder whether Europe still might consider being a global actor, according to this entrance within the eye of the Dragon... China does not neglect Europe, while demonstrating that it is now a partner who will not be convenient, but who gives no sign of closure to the world. a good piece of news, if Europeans turn, too, realists. Anyway, considering China's rising economic power, Europe should believe that its future will partly be determined by the doings of the world's most heavily promising powerful country.

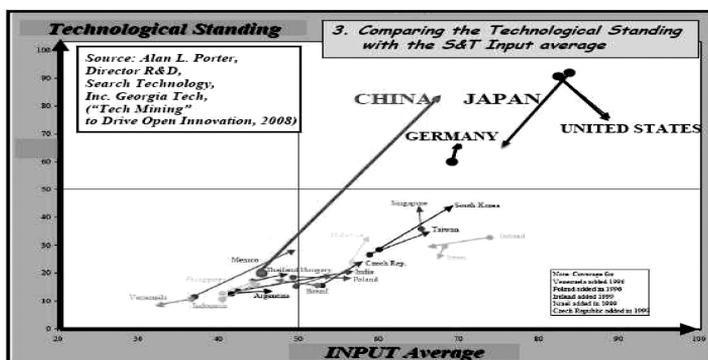
I— The Irresistible Rise of China: Is it Bad News at the Worst Possible Time?

Since the beginning of the reforms by Deng Xiaoping in 1979, China passed from a planned economy, without international exchanges, to a dynamic market economy—the growth was higher

than 10% from 1996 to 2009—very efficiently boosted by private businesses and massive direct foreign investments (83,7 billion US\$ in 2007). If the world Crisis involved a relative deceleration of the Chinese economy since the end of 2008, it however did not damage the bases of the economy. China, by contrast with all the other economies, yet started recovering as soon as the second quarter of 2009. As a visible result at the end of 2009, China's economy should be ranked second in the world, thus exceeding Japan.

By far the most populated country in the world, with 1328 million inhabitants, prior to India (1129 million) and the United States (301 million), China counts 20 cities of more than 5 million inhabitants, 150 of more than one million, while about 15 to 25 million rural peoples per year are migrating. A middle-class is emerging within the cities, made up of 70 million households—approximately 200 million people—having an income from 75 to 100.000 RMB Yuan per year. This middle-class is itself very heterogeneous and uneven, as the first 10 per cent gaining are twice as much as the second one.

Nevertheless, as the other advanced countries, China is now accessing to global markets with a rapid pace of technological changes. The constantly improvement of its knowledge becomes a critical determinant for international competitiveness. China yet understood that its competitive advantage “*must come from the ability to create and then commercialise new products and process, shifting the technology frontier as fast as their rivals can catch up.*”² Gradually, its ability to innovate has thus become accepted as a crucial prerequisite of enterprise development, and concepts such as ‘innovation policy’ and ‘innovation systems’ are increasingly mobilising the attention of its policy makers.



In China, past experiences are constantly interacting with the present and this process has resulted in an obsession with modernity and growth, although preventing itself from jeopardising internal stability. China's provinces and cities are keen to contribute to the drive towards innovation and several of China's companies have emerged as able innovators, but we still can wonder whether China yet become a nation of innovators. While its government hopes so and has a plan to make itself an innovative society by 2020, increased innovation sounds now vital to move up the technological ladder, and then produce high-value products and position Chinese companies competitively in the global market.

In a survey conducted by the *Economist Intelligence Unit*³ in November 2008, China's companies were asked how they were innovating and what factors managers rank as important

² *The Economic Performance of Regions* (2003), *Convergence, Clusters and Economic Performance* (2006), with Mercedes Delgado and Scott Stern, present a comprehensive statistical examination of U.S. regional performance using.

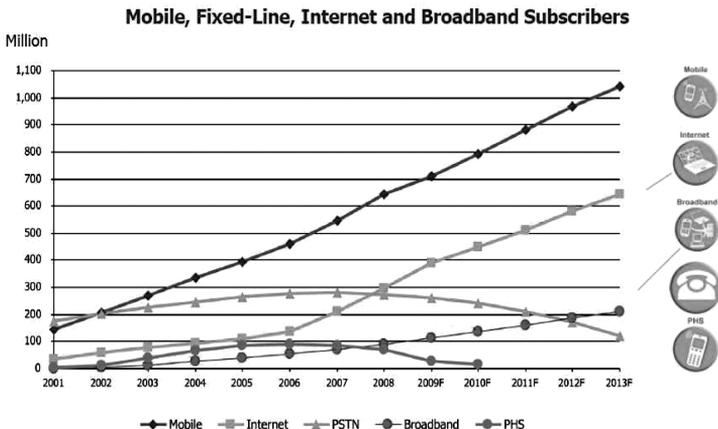
³ “Unlocking innovation in China” is a report from *Economist Intelligence Unit Limited 2009* (Lina Tornquist, edited by Katherine Dorr Abreu), based on a survey of 181 senior executives in China, in-depth interviews with senior executives from Chinese companies and desk research, and that was sponsored by *CISCO System*.

for innovation. New but yet widespread relevant concepts and practices such as *Open innovation*, *usage's communities* and so on, ease a company recognising that it is not the sole repository of ideas and that sharing is fruitful. China's companies also may try harder to strengthen their interactions with their partners and suppliers as a catalyst for generating new ideas, but, according to this survey, such an interaction can be held back by a lack of trust... just fearing their partners might reverse-engineer or pirate their products. Nevertheless, although the survey suggests that China may not be too far a nation of innovators off, the new innovation models, combining regional policy, living labs and user-driven innovation, don't yet occur for the benefit of SMEs.

Nevertheless, although this uncertain promise, China is now taking its place at the top table in shaping global standards instead of erecting walls: even if indigenous innovation is not fully successful, China's influence will rise anyway due to shift to Asia in critical mass of subscribers, vendors, innovation, and intellectual property generation.

As a matter of fact, according to *BDA* think-tank⁴, Chinese mobiles' market will pass from more than 700 million today to more than one billion by 2013, including about 200 million *3G*. *Internet*, which is related to 330 million persons today, would be concerning about 600 million by 2013, including more than 300 million mobile *Internet* users. *Telecom* revenues in China in 2008 totaled 120 billion US\$, still far behind US market (US\$ 500 billion), but by the way, there remains substantial room for growth. *3G Capex* will generate over US\$ 40 billion in spending within the coming two-three years, while Chinese companies prepare themselves to gain a substantial edge for the *4G* technology within the next potential market.

Globalising at a very fast pace, *Huawei* and *ZTE*, the Chinese Telecom champions, generate most of their revenues overseas, squeezing margins of the Big three Europeans, that is, *Ericsson*, *Nokia Siemens Networks* and *Alcatel-Lucent*. *Huawei* probably surpassed *Alcatel-Lucent* and *Nokia Siemens Networks* by 2009. China has a huge *Internet* market, and new usage patterns such as online shopping still have substantial growth potential.



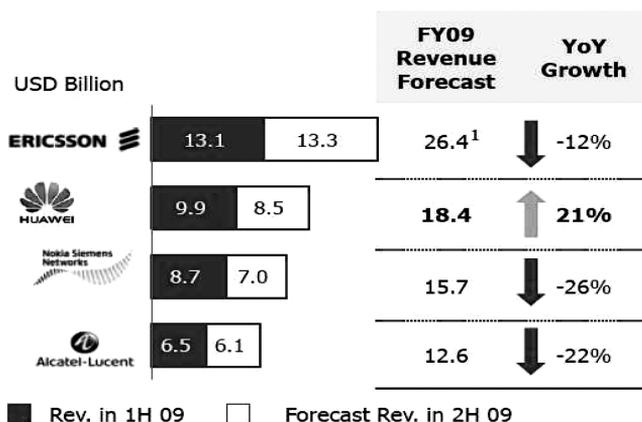
4. IT and telecom subscribers in China -

Source: MIIT, CNNIC, BDA⁵

False prophets are not useful with their too much extrapolated forecasts and hypothetical predictions of our future, when the real revelations will allow us to currently understand and discern significant trends and signs of our present time.

⁴ "China's ICTMarket Overview" from Duncan Clark, Chairman, *BDA China Limited* (www.bdaconnect.com)

⁵ Fixed Lined Sub: 341 million; Mobile Sub: 641 million; Internet 298 million; Broad band: 80%.



5. Vendors' revenue from Telecom Carriers in 1H & full Year 2009 in China⁶ – Source BDA

Speaking about world competition in this field of ICT and Telecom, Chinese outsourcing vendors compared to Indians, are generally more competitive. Duncan Clark with *BDA China Limited* remind us that the billing rate of China's companies is generally 50% to 67% of their Indian counterpart, while their wage inflation rate is 3–8% per annum against 10–15% in India; employee attrition rate in China is around 15–20%, when it is more than 30% in India; China has almost eight times more engineering students than India.

... But, these Chinese vendors would be lagging behind and be less competitive than the Indian ones in English proficiency, technology and scale and brand awareness (source: *Equity report, BDA interviews and analysis*). We should however comment this analysis, so that in a long run, the lack of English proficiency might not remain a big concern while Chinese will not be obliged to fit shrinking western markets for ever. Ample supply of high quality engineers enables China to catch up with its India counterpart in the short term and, as the market is quite fragmented, there is great potential for *Mergers & Acquisitions* and organic growth in terms of branding.

Referring to the new 'portmanteau' word "*Chindia*", we will notice that the implication of the growth of both China and India together in general, and their economies in particular, doesn't really matter. The credit of coining this now popular term goes to Jairam Ramesh, an Indian politician, while China and India are geographically proximate, and both regarded as among the fastest growing major economies in the world. Actually, the economic strengths of these two countries are neither complementary, nor really relevant for a balanced benchmark, since China is not only incomparably perceived as the strongest hardware and manufacturing economy but also is becoming the highest world competitor in all the software and immaterial goods and services.

Similarly, when Jim O'Neill⁷ coined in 2001 the term *BRIC*⁸ as pillars of the 21st century economy, he had never properly visited three of the four countries—the exception being China—and just was fascinated by the size and the apparent promising similarities of these four countries. According to Charles Dumas⁹, a London-based economist, "*BRIC is really just marketing—it's*

⁶ Note 1 from BDA: *Ericsson's* forecast revenue in 2H09 includes revenue from the now acquired *Nortel* wireless business, which is estimated at USD 3 billion. Year on year growth rate in 1H 2009 was -12%; Note 2: BDA estimates *Huawei's* revenue in 1H 2009 based on reported contract revenue of USD 15.7 billion.

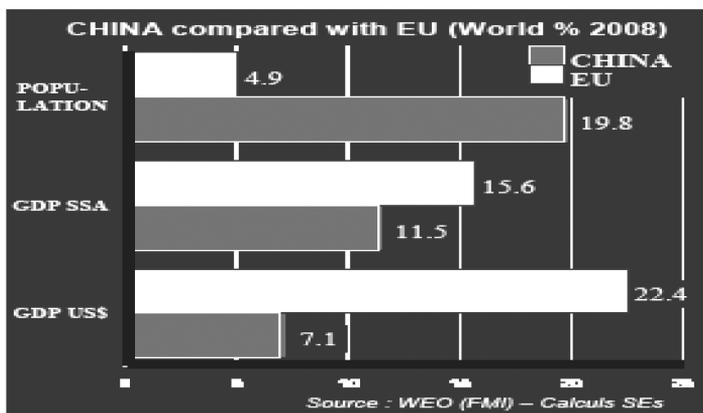
⁷ Jim O'Neill is Chief economist for *Goldman Sachs*.

⁸ *BRIC* stands for Brazil, Russia, India and China

⁹ Charles Dumas is Chief economist for *Lombard Street Research* who recently (2008) wrote and published a very brilliant book about China: *China and America—A time of Reckoning*. *Lombard Street Research (LSR)* is a macroeconomic forecasting consultancy, which concentrates on providing information to the corporate/financial services segment of the research market, as well as hosts a series of seminars in many major financial centres.

nonsense?”, as the idea that these countries will keep growing inexorably into the future could not really keep realistic. As reminds us the newspaper *Financial Times* (January 16–17, 2010), others are more cynical, arguing that *Goldman Sachs* has used the concept to extend its global power and thus turbo-charge its profit-making machine. But, more seriously in practical terms, O’Neill was just suggesting that economists had to look more closely at how non-western economies could wield more power in the future. Nevertheless, the four seemed too much disparate, separated geographically and culturally and they had neither acted as a bloc in any way, nor conceived of themselves as a unit.

Actually, “*Economically, financially and politically, China overshadows and will continue to overshadow the other BRICs,*” analysts at *Deutsche Bank* argued. On its side, *Goldman Sachs* now predicts that China’s economy will become as big as the US’s by 2027—almost a decade sooner than first thought. We must admit that China solely has succeeded in becoming the world’s favourite investment market. In addition, since the 1990s, China should play a more active role in foreign markets as well, thus sustaining economic growth in the long run.



6. Benchmarking figures of benchmarking data between China and the EU - 2008

As a result, the open door policy has been complemented with a strategy designed to encourage Chinese investors and support them in expanding their horizons. Meanwhile, current figures don’t demonstrate that the continent China yet successfully caught up Europe in terms of economical performances...

II— Shuffling the Cards and Beating a New European Agenda

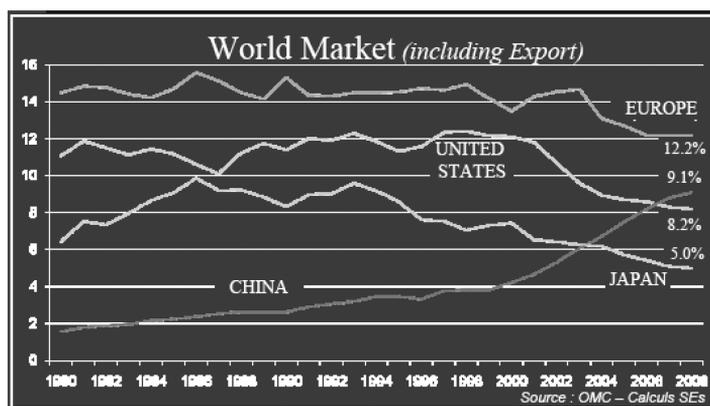
The low growth and economic stagnation experienced in this decade, and more recently aggravated by the Crisis, by a number of EU member states, illustrate that nations and regions cannot simply rely on favourable macroeconomic framework conditions to ensure competitiveness and growth. Instead, regions all over the world must seek to combine macroeconomic assets with designing and implementing effective meso-economic policies, and thus implementing and promoting *framework conditions for innovation*.

This means that in order to compete successfully in the global market, and grow at a pace that will enable to bring GDP per capita levels to a sustainable level, regions must strengthen the ability of their enterprises to innovate, and then be internationally competitive and to grow, while enhancing their research and academic institutions, not only to achieve a critical mass of

high quality research, but also create an appropriate entrepreneurial climate in this academic context. Such a policy would lead to create a legal framework with respect to valorisation, that is, commercialisation and industrialisation of their knowledge production, as well as clearing incentives to enhance knowledge institutions for actively irrigating the local fabric of SMEs, while increasing their absorptive capacity and any transfer opportunities.

Few years ago however, Vice Premier Zeng Peiyan stated that with the aim of sustaining growth, his country has to adhere to a technological and scientific go-out policy and “*integrate advanced technology with absorption, digestion and innovation.*” China succeeded to plug into European expertise in several of these fields. In terms of technology transfer, EU countries already are China’s biggest supplier of technologies and equipment. While technological progress is crucial to make economic growth sustainable, China pursues a leap-frog strategy, since by purchasing high-tech goods of the shelf it does not have to pass through the development process itself.

The Chinese government is nevertheless chasing more and more actively for technologic development and knowledge, as a main factor of growth and wealth.



7. World Market (China, United States, Japan and Europe) in terms of percentage

China is eager to see Europe participate in its development of computer technology, space exploration, alternative energy, human sciences, etc. Already, Europe is by far China’s most important supplier of new technologies and advanced goods, in contrast to the US, which adamantly refuses to exchange knowledge with China. The relations between the EU and China are clearly prospering. Both sides, China and Europe, seem to believe that they are heading towards a win-win situation, not only in the field of economics and trade, but also increasingly so in the realm of international politics. In fact, China is gaining ground in all segments of economy: not only in its traditional manufacturing stronghold, but also in scientific development, telecommunication, etc. Recent researches from *UNCTAD* revealed that China is leaving European states far behind as the most attractive prospective R&D location. Although Chinese leaders have never openly declared a desire to develop China into a superpower, there are indications that this could ultimately be intended to. China never ceased to proclaim its intention of keeping on an acceleration of its economic development in the 21st century.

Yet a growing level of irritation has been caused by China’s skyrocketing economic activity. In particular by its indefatigable quest for lucrative markets and its seemingly insatiable hunger for energy sources. Foreign delegations also continue to travel to Beijing in large numbers to present their assets in the most attractive light possible. This shows that expectations are high

of China as a new and major investor. Nowadays these delegations are mostly looking for new opportunities to invest Chinese capital abroad by contrast with the 1980s and the early 1990s when most Chinese business missions had the aim of attracting foreign capital. In order to give Chinese companies recognition outside of the homeland, the *Ministry of Commerce* has launched a project which should help 40% of Chinese exporters to build their own brand, while Beijing has founded a number of specialised institutions to financially support Chinese business abroad. The *Exim Bank* was especially set up in 1994 to fuel the foreign ambitions of Chinese firms and to pump money into them. From 1994 to 2005 the bank spent no less than 80 billion dollars on loans and credit. The *Exim Bank* was, in fact, specifically designed to provide foreign partners, mostly governments, with the necessary currency to purchase Chinese goods. These funds usually come in the shape of interest-free or low-interest loans. The *Chinese Development Bank*, under the jurisdiction of the *State Council*, is also an important creditor, providing for instance *Huawei* with loan of 10 billion dollar, amongst others.

Meanwhile, we all might ask ourselves: what news in Europe? Why does everything sound quiet on the European front? Are the European just concerned by the installation of a new Commissioners 'team'? Nevertheless, it is noticeable that at this critical juncture in the EU's development, nine leading Brussels-based think tanks¹⁰, in cooperation with *Agence Europe*, have initiated an annual forum to deal with this Union's emerging politico-strategic agenda. With ratification of the new *Treaty* behind it, the European Union would be "under pressure to return to the serious business of governing." Many issues should urge to be considered as major concerns such as incipient societal and global challenges including climate policy, migration, the economic crisis and global governance.

Twenty years ago, while China was attempting to confirm and boosting its aggressive trade position, a largely peaceful revolution swept Europe and brought down communism across much of the continent. It started in Poland, with the victory of the *Solidarity* movement, and reached its symbolic climax in the fall of the *Berlin Wall*. By late December 1989, the communist monopoly of power was over, although a wave of nostalgia in eastern Germany ten years later.

Nowadays, many countries, including China, have clearly pinned their hopes on a strong and enlarged European Union, but everybody knows very well where the important decisions are taken: not in Brussels, but in Berlin, London and Paris. The European trade deficit is less dramatic than the US's trade gap. In absolute terms, the American trade deficit is twice as wide as the European one, but the EU is also more capable of absorbing its own shortfall because its total exports exceed those of the US. Recent events and data are a reminder of such dynamics. The export of goods and services accounts for an average of 49 percent of European GNP, as opposed to the US, Japan and Korea, where these figures only amount to 14, 10 and 29 percent respectively.

However, as European nations wish to take advantage of the Chinese growth miracle as much as others, they are under enormous pressure to make sure that their companies do not miss out on their slice of the Chinese market. Up to now, China has been remaining dependent of the European market; Europe's economic influence wanes because other countries are increasingly fine-tuning their policies in accordance with their expectations vis-à-vis China. An important diplomatic lever is lost in the process. The last vestige of European power seems about to give way as well: soft power, or rather, the art of seduction. China fuels this enthusiasm by approaching countries separately and presenting them with lucrative contracts. As China is not

¹⁰ *The Bertelsmann Stiftung*, the *Brussels European and Global Economic Laboratory* (Bruegel), the *Centre For European Studies* (CEPS), the *Egmont Institute*, the *European Policy Centre* (EPC), the *Institut français des relations internationales* (IFRI), *Madariaga—College of Europe Foundation*, the *Stiftung Wissenschaft und Politik* (SWP) and *Friends of Europe—Les Amis de l'Europe*.

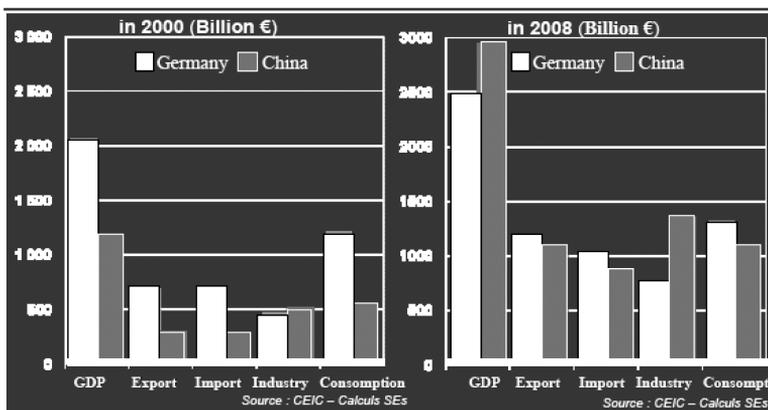
blind to the endless quarrelling within the EU institutions, it still prefers to discuss the most important questions with individual member states. So far, Europe has mostly complied with China's expectations. Trade between the EU and China is growing year after year, and a mature understanding is likely to be developed in diplomatic terms as well.

On the other hand, Europe seems convinced that it has the weight to steer China's development in a favourable direction. Interdependence and institutional integration are two important explanations for Europe's moderate stance vis-à-vis China's economic competition. Finally, even though its hard power waned, Europe is still convinced that it could point China in the "right" direction. During the last decade, European investments have been increasing with an average annual rate of 17.6 percent. Exports to China have been five-folding. With regard to the protection of intellectual property Beijing vowed to combat piracy and already took several measures. Is it the reason why Europe does not try to floor the dragon, neither to cage it, but to discipline it? As China is on its way to become an all around super power, Europe wants to appease its ambitions through conditional engagement.

At one end of the scale, there are countries that view the competition from China as a threat to their national economy. This includes Italy, Poland, Portugal and Spain, in the first instance. Employment opportunities in these countries mostly depend on labour-intensive manufacturing, but labour costs are too high to challenge mass production in the East. Given these countries' negative trade balance, each container of textile or shoes exports actually counts. At the other end, stand the Scandinavian countries, as their industries are at the moment at the European cutting edge, which means they do not feel the heat from the Chinese competition.

German exports rebounded further late last year, but Europe's largest economy is still expected to cede its title, as world's export champion, to China. While the rise of China's status as a major economic partner, trade patterns of bilateral trade between Germany and China moved closer. China now has gone from being a beneficiary of German financial aid to a position of economic partner and investor in Germany.

Worrying signs have actually emerged that the pace of recovery is slowing in Germany. The Berlin economics ministry reported by mid-January 2010 that industrial orders from outside the 'euro zone' fell by 3.2 per cent in November, extending a 1.5 per cent fall in the previous month. Germany's recovery has failed to keep pace, however, with developments in China, where 2009 exports are widely expected by economists to have higher than in Germany.



8. Comparing Economical performance of Germany and China in 2000 and 2008

Although Europe is certainly feeling the pinch of Chinese competition¹¹, possible counter-measures are blocked by the importance of trade, heavy technological negotiations and diverging national interests.

When answering to an enquiry of *The Times* which asked: “*What’s wrong with the world?*” G. K. Chesterton¹² sent back this laconic and magnificent letter:
“Dear Sirs, I am Sincerely yours, G. K. Chesterton”

III— Europe: from a World’s Model to the Risk of Peripheral Relegation

In the early 1980s, China was only listed as number thirtieth of the EU’s trade partners. Currently, China is the second largest trading partner of the EU, whereas the EU is the largest trading partner of China. The economic and trade cooperation between China and the EU are mutual complementary and beneficial. Endowed with rich material resources, cheap labour and a big market, China is attractive to the EU. On the other hand, the EU is one of China’s important sources of direct foreign investment and high technology. This economic interdependence paved the way for the development of political relations. In order to strengthen one’s own international influence and maintain one’s own interest, the two need to cooperate with each other in international politics.

China and the European Union share a lot of common views, interests and objectives in international policies, both worrying about unrestrained US power in the world, and both paying great interest to international organisations, and therefore deeming multilateralism of great value.

Beijing is taking up more and more space within various multilateral organisations and is setting up diplomatic activities everywhere on the globe. It no longer considers itself as an outsider that should crawl back into its shell and steer well clear of a global political system dominated by the West. On the contrary, exactly the opposite is now transpiring; Chinese leaders are overly talking about the need for sharing out global responsibilities among the superpowers—and China is a major member of the club.

We understand very well how China wants to remain the “world’s workshop”, if not the new “world’s lab”, while developing its internal capacities with 20% of the world’s population. Premier Wen Jiabao really wants to play a role within the world Crisis, and then proposes to do it through the reform of the international institutions: “*We think that it is imperative that we begin at first a reform of the international financial institutions, including the IMF. And through this reform, we have to increase our rights to vote, our representation and the voice of emerging countries.*”

China is not the only country that tries to get decent jobs for its people, but global employment barely rises. Neither is China unique in trying to get its share of the world’s natural reserves, but global reserves are increasingly under strain. China is not the only investment market, but again, global foreign direct investments have been on the wane for almost a decade.

What are the Chinese intentions for the future? The answer is clear: “*Stop dancing! That is the end of the party*”. Here is really a very sensitive issue. Chinese have very important foreign reserves and these reserves must be well managed. Buying foreign *Treasury* bonds is one of the

¹¹ The last three charts are drawn from a PPT presentation, namely “*La Chine en 2020 — Perspectives et implications pour l’économie nationale*”, of Hubert Testard, Economics Counselor Minister within the French Embassy in Beijing.

¹² Gilbert Keith Chesterton (29 May 1874 – 14 June 1936) was one of the most influential English writers of the 20th century. His prolific and diverse output included philosophy, ontology, poetry, journalism, biography..

ways. They think that they have to consider their own needs and also maintaining the safety and the value of their reserves. Naturally in these perspectives, adds Premier Wen Jiabao, “*We wish the recovery and the come back of America in the economy. We believe that maintaining stable financial markets implies to restore the trust of markets, to overcome the financial crisis and to facilitate the restoration of the international markets*”. According to Axel Merk, American administrator, here is a major risk: it is indeed difficult today to ignore the threats on the exchange rate of the dollar, due to billion engaged without counterpart by the American state to save its banks, boost the economy, and help the deeply in debt consumers.

Eventually, while “*continuing to support the dollar, it will seriously weaken its own position; it just faces the same difficulties within the next fifteen years. China will meet huge difficulties for stabilising its economy while bringing two billion dollars of reserves.*” Translating it with transparency should lead to assert that: “*the United States adopted the attitude that the other countries have to support the dollar since it is in their interest*”. But, there is a limit in what can make the other countries: “*it is much more effective for China to use it to help the transition of its economy for the future than to stimulate the economy of the United States.*” This is a conclusion that Chinese Premier would not deny. No way for unfortunate investments via sovereign funds in weak western financial institutions.

Helping first the Chinese people to spend and consume instead of saving, is not a surprising matter: “*We think that consumer spending is vital in the economic development*”. China is aware of the urgency and the internal difficulties which impose to change its language and behaviour in front of the rest of the world. Premier Wen Jiabao points out the internal contradictions in Washington: If President Obama insured President Hu Jintao that he is “*willing cooperation*”, we nevertheless notice simultaneously different voices inside the United States.

Premier Wen Jiabao does not see “*China saving the capitalism of itself*” commented the *Financial Times*. Although the *European Union* became the first customer of China, this remark is first and foremost directed towards the *United States*. The US naturally, whose the dependence on China, holder of the biggest part of the American debt in front of Japan, is worrisome for the American Treasury. Premier Wen Jiabao careless reminds it: “*I think that the reason of the financial crisis is due to the imbalance of certain economies. They doubled for a long time their deficits and kept a high level of consumption on the basis of a massive debt... I think that it is to confusing truth while rejecting the disapproval on those who lent the money*”. The remark is right, even if nobody obliged at all Beijing to hoard *Treasury* bonds emitted in profusion by the American *Federal Reserve*.

In the US, passing through the past year 2009, we could observe that the President Obama's travails reflected the scale of his challenge: an economy brought to its knees by the collapse of the banking system, a political system whose checks and balances are biased toward inaction, and a noxious atmosphere. The challenge of forging a partnership of near-equals with China, a tetchy power outwardly confident, while unsurprisingly, China's leaders worried about their trillion-dollar investment in US treasuries lectured the Obama's administration on responsible economic management.

Meanwhile, Europe continues to encourage China to change its ways by positive measures such as trade agreements and technological cooperation. Yet sanctions have been imposed at times. In response to accusations of dumping, quotas were introduced on goods such as textile, plastics and a number of chemical substances. Each year, an average of 24 new measures is implemented, but, according to former European Commissioner Pascal Lamy, the impact of these measures only accounts for 0.5 percent of total Chinese exports for Europe. Europe wishes to forge a tighter link and strengthen its influence on the back of this economic interdependence. Furthermore, Europe also not ceased to regard itself as the model China would aspire to, but it

does not consider China's expansion as a threat to its safety, and run a magnanimous economic cooperation. Why does Europe seem less worried about China relative growth? A first reason could relate to Europe's concern with short-term gains...

As an intermediate purpose, envisaging a future world with many poles, Beijing wants to see a European Union that figures together with China in a synergetic relationship among these poles. However, it is more and more difficult to coordinate the interests of such a large amount of state members, and therefore, the European Union is obliged to run a tortuous road towards the dream of becoming a pole in the world. Meanwhile, following the EU's extended integration and growing influence in world politics, the EU-US relations are undergoing conspicuous changes. The US is unwilling to see a more influential EU on the world political arena. Instead, the US openly insists the EU to prolong its subscription to a US-led uni-polar world. Whereas the Europeans expressed on many occasions their ambition to be a pole in the emerging international political structure, this might only be a form of narcissist wishful thinking.

However, the recent history of relations between China and Europe shows that the sun is setting on the *Old Continent*. Europe's comparative power risks dwindling rapidly in the strategic chess game between Beijing and Washington. The economic dimension of European power pales before Asia's spectacular rise.

Russia, the only common neighbour between China and Europe, is another knotty issue. Even though the Kremlin remains suspicious about China's growth, it is obvious that Moscow feels more at ease while dealing with China than with Europe, while commercial ties are intensifying. Hitherto, it appears that Moscow is eager cajoling Beijing to trim its uneasy reliance on Europe as the dominant political and economic partner.

Besides, China cannot be held responsible for the relocation of economic and political power. This process has been continuing for many decades, long before China decided to harvest the fruits of globalisation. China is not the cause of Europe's power loss, but an actor with an extraordinary size that succeeds to bend and aggregate existing flows to its own advantage. Eventually, Europe's attempts to mould China to its own perceived model are a failure, whatever it concerns economics, democracy or diplomacy. China's inertia towards European proselytism is not going to change soon. On the contrary, China is determined to write its own story. It does not need a ghost writer.

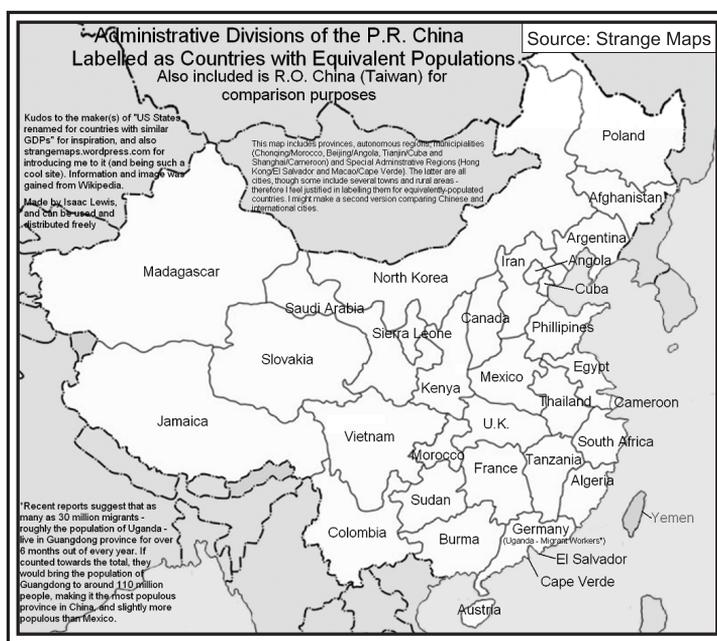
On Monday January 11, 2010, has gone on display at the *Library of Congress* in Washington DC the *Matteo Ricci's 1602 map*¹³. This very interesting historic document, created by the Jesuit missionary Matteo Ricci¹⁴, is the first Chinese map to show the Americas, with China at its centre. The first secretary for cultural affairs at the Chinese embassy in the US, Ti Ban Zhang, said in a statement that the map represents "*the momentous first meeting of East and West*". "*Ricci was a very smart missionary. He put China right at the centre of this new universe, this new globe, to underscore its importance,*" he added.

In terms of conclusion, it would be significant and potentially relevant to make maps speak today and know how China considers Europe in the world chessboard. Thus, let's look at three cartographic representations:

¹³ This map is nicknamed the "*Impossible Black Tulip of Cartography*" due to the difficulty to find it. It measures about four meters by 1.5 meters and is printed on six rolls of rice paper. It was the first time that this map was being shown publicly in North America.

¹⁴ Matteo Ricci was among the first Westerners to live in what is now Beijing in the early 1600s and gained celebrity for introducing Western science to China. He created the map in 1602 at the request of Emperor Wanli, who wanted to help Chinese scholars and explorers advance in knowledge. Ricci could speak Chinese as well as read and write classical Chinese, the literary language of scholars and officials. Added to this he was known for his appreciation of Chinese culture.

The first one is relative to the demographic weight of the Chinese provinces compared to certain States in the world, including some well-known European States such as Austria, France, Germany, Poland, Slovakia and the UK, among a series of other States...



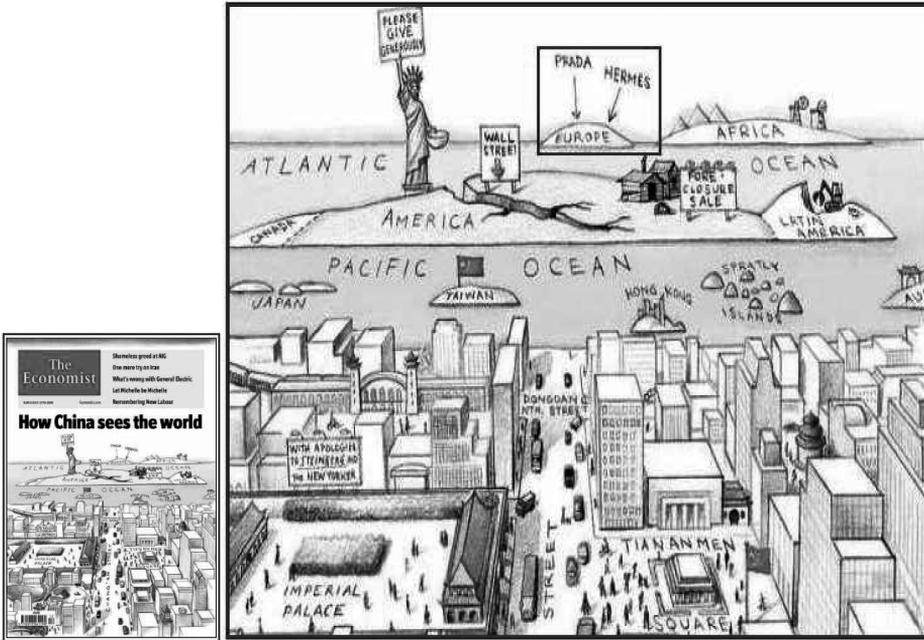
The second map intends to capture the imagination and then might become an icon, since this cover of *The Economist*¹⁵, entitled *How China Sees the World*, focuses on China's rise as a world power, seemingly underlining the decline of the West. With a point of view issued from the China's capital, Beijing, important places are named, including the *Forbidden City*, which was the location of the Chinese imperial court for five centuries, and *Chang'an Street*, a major avenue running close to *Tiananmen Square*, the *Great Hall of the People*, the *National Museum of China*, the *Central Railway Station* and other important buildings. In the ocean immediately beyond the city are a few islands of particular interest to China, such as: Japan, the old rival, whose rapid modernisation preceded China's, but now eclipsed and reduced to a few harmless islands; Taiwan, similarly superseded by China's massive economic progress, but still relevant as the rival claimant to be China's 'legitimate' government; Hong Kong, the former British crown colony that was handed back to China in 1997 and Spratly Islands: a sprawling archipelago of over 600 islets, atolls and reefs in the South China Sea, with a location of strategic interest for China.

Across a narrow representation of the Pacific Ocean lies the continent apparently most on China's mind—America—and especially, apart from a tiny slice labeled Canada and a small appendage being dug up for minerals called South America, and then the US as a crumbling empire, with the *Statue of Liberty* clutching a begging bowl and holding up a sign saying: *Please give generously...* Wall Street is a fault almost splitting the US in two.

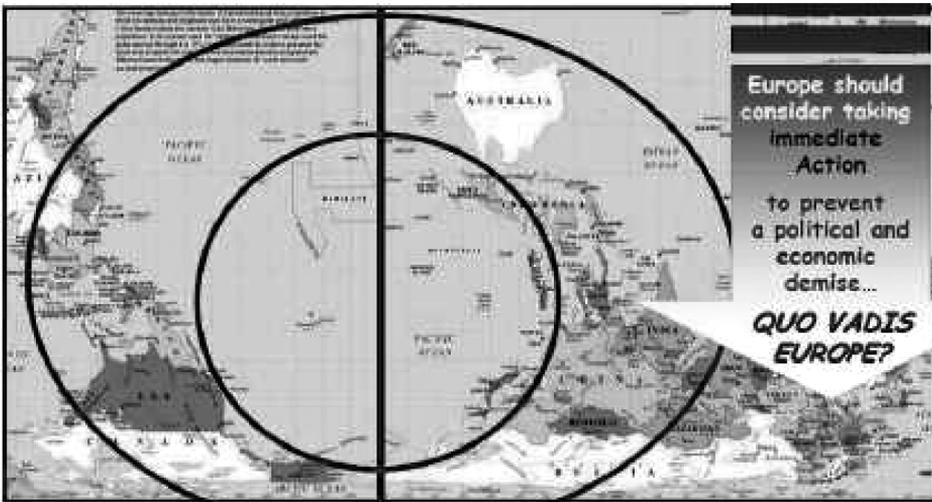
Further, Europe is eventually close to Africa, which is providing China with access to much-needed raw materials for its burgeoning industry. Europe is much smaller and more irrelevant than America, in the ocean beyond it. All that distinguishes the *Old Continent* are *Prada* and

¹⁵ *The Economist*, March 21st-27th 2009.

Hermes, two brands of luxury fashion accessories, and presumably very popular with the wealthy Chinese elite—suggesting that Europe is only interesting to China as a glorified shopping mall.



With the third map, we eventually observe that China, which is no more at the centre of the world, could see Europe as a useful friend and a valuable adviser, but not as a world player within the first or the second circle of influence and relationships. Thus, we, all European citizens, would have to consider whether our overprotected economies don't seriously risk continuing to slow while our political influence is becoming more and more negligible. As some economists and politicians now argue, it is sure that our standard of living will remain comfortable for a long time, but, little by little, our position could risk becoming peripheral on the world scene.



Indeed, there is a strong interdependence between economies at global level. Faced with these challenges, the European Union urges to reinforce its competitiveness as well as its political position. The following proverbs might be instructive in this respect and help us understand why China meditated quite well and now concretely try harder to meet its commitment by applying the first one, while Europe, still hesitating between diverging interests and imitations of idealistic models, risks to drown itself in the mists of the future.



“Teach a man to fish and you feed him for a lifetime”

授人以鱼不如授人以渔

“The crow that mimics a cormorant is drowned”

乌鸦模仿鸬鹚一定会被淹死

R. P. MISRA

BRIDGING THE WIDENING DEVELOPMENT GAP A Case Study of Uttar Pradesh, India

With nearly 1.20 billion people, India is the second largest country in the world in terms of population, the first being China; it stands seventh in area and first in arable land. It is now a trillion dollar economy and stands fourth in the world after the USA, China and Japan (World Bank rating) in GDP (PPP). In terms of economic growth, it is far ahead of most of the countries of the world, both developed and developing barring China, recent economic meltdown the world over notwithstanding. It is the largest democracy of the world and the only country in Asia which was born democratic and has remained so ever since 1947.

Historically Indian civilization is second to none. The Vedas composed as early as 5000 BC are the oldest books of the world, and the knowledge and wisdom contained therein is yet to be surpassed by any other civilization. It is cradle of three great religions of the world: Hinduism (Sanatan dharma), Jainism, and Buddhism and has welcomed followers of other religions such as Zoroastrian, Islam and Christianity. While the rest of the world was engaged in war for dominance over others, India under the dynamic leadership of Ashoka the great in ancient times and Mahatma Gandhi in modern times preached and practiced truth and nonviolence to unite humanity into a common bond. The country has the unique distinction of securing its freedom from colonial stranglehold nonviolently.

These achievements notwithstanding, post-independence India is plagued by number of problems that do not befit its history, geography and culture. Economically, it is far behind many countries of the world; culturally, it has slid back and forgotten its way; technologically, it is still in the early stages of development. In ancient as well as medieval times, the wealth of India lured many invaders. Alexander invaded India in 327 BC; in medieval times, came Mohammad bin Qasim in 711, Mahmud of Ghazni in 1024, Mohammad Ghori in 1125, and Zahiruddin Mohammad Babur in 1526. Cultural history of India witnessed many ups and downs as rituals overshadowed the spiritual heights. India lost its way technologically too. The great days when its achievements in such fields as philosophy, linguistics, astronomy, physics and mathematics were unmatched were gone and India entered the twentieth century in rags. The Mughals in sixteenth century did try to reverse the trends the downhill slide with some remarkable successes but the cultural and political stability never returned. The resurgent Portuguese, Dutch, French and English fought among themselves to occupy the country in eighteenth century; the British succeeded and kept the country in colonial bondage for about two centuries. The Muslims occupied India and became Indians; the British occupied India and made it a colony of their empire. Muslim rulers were only cultural aliens; the British were cultural, social, political and economic aliens; they used the

resources of India to create the largest empire the world had ever seen, and when they left, they left it bleeding and emasculated.

India began its journey as a new and independent nation in 1947 leaving an oppressive colonial history of two centuries behind. At the time of independence, it was so run down socio-politically, economically and technologically that despite its continuing efforts to get over the past, it still has the largest number of poor, and illiterates in the world; the phenomenal economic growth it experienced in recent decades is unevenly distributed over space. Rural India, where more than 70 per cent of the people live, has not gained much from economic resurgence. Land degradation, air and water pollution, and loss of biodiversity have made its future insecure. The problems lie in not only the colonial past but also the development policies it pursued since 1947.

This paper focuses on one of the major problems India faces today, i.e. poverty in the midst of plenty as evident from growing regional disparities in development. Uttar Pradesh (UP), the most populated state of the country has been selected for in-depth analysis to demonstrate the shortcomings of the development policies pursued in the past. The paper ends with the suggestion, that India should return to Mahatma Gandhi's sarvodaya model of development to solve its current and emerging problems and also to help other countries of the world—both developed and developing—to move towards a style development that is inclusive not only in terms of distributive justice but also in terms of all pervading love, peace, harmony.

India on the Move

The story of economic development in India began with the launching of its first five-year plan (1950–51). The newly independent India modeled its polity on western democratic principles, but the economy on Soviet model. New initiative in agriculture, industry, infrastructure and science and technology led the country to near self-sufficiency in food by 1970, but it failed on two major fronts: economic growth stagnated at 3–4 per cent per annum and the benefits of development reached only the top 20 per cent of the population. The spatial disparities in development, less obvious earlier because agriculture, the main source of sustenance was ubiquitously spread over space, increased. Manufacturing, the main driving force was urban centric and the states which were more urbanized benefited more than those which were less urbanized. For the same reason, the rural-urban divide also widened.

Critics label India of 1951–81 as a lumbering elephant. They, however, ignore the insurmountable problems it faced during its first three decades. It had to feed a growing population of 360 million (1950); it had to rehabilitate millions of refugees from Pakistan (sequel to partition of the country); it had to develop the necessary infrastructure for economic and social development; it had to defend itself against unfriendly neighbours like China and Pakistan; it had to keep a country with diverse geography, languages, sub-cultures, and levels of development united, and above all, it had to carry the load of soviet style socialism on its back and keep indigenous private entrepreneurs waiting.

The turning point in economic growth came around early 1990s when the structural rigidities started breaking down and economy overstepped the Hindu Rate of Growth (3–5 percent) during 1980s. It stood at 4.9 percent in 1985 but the average for 1980s was down to 4.4 percent particularly because because the trade deficit during 1980 was increased. With breaking apart of the USSR, India got the opportunity to break the shackles of the socialist economy in 1990s. And since then, its GDP at constant prices has grown remarkably fast to touch 9 percent in 2006–07 (table 1).

Table 1.

**GDP Growth rate (in %) at Constant Prices
(1980–2009)**

Year	Growth Rate	Year	Growth Rate
1980	3.60	2005	9.20
1985	4.90	2006	9.80
1990	5.60	2007	9.40
1995	7.60	2008	7.40
2000	5.70	2009	6.90

Source: IMF—2009 World Economic Outlook

Economic growth prospects during the second decade of the 21st century look brighter, the global melt down during 2008–09 notwithstanding. According to Goldsmith Sachs, India's GDP at current prices is likely to overtake France and Italy by 2020, Russia, Germany and UK by 2025, and Japan by 2035. By that time, it will be the third largest economy of the world, the first two being the USA and China.

While the economy from conventional standards has done well in recent years and the prospects in the second decade of this century are hopeful, the feel good scenario is accompanied by a number of anomalies which, unless tackled promptly and on war-footing, would slow down economic growth. These are:

1. Poverty in the midst of plenty;
2. Widening regional development gaps;
3. Continuing poor quality of life of people;
4. Weakening democratic fabric; and
5. Growing lawlessness and violence.

In this paper we would discuss the first two of these problems.

Poverty in the Midst of Plenty

India has inherited the legacy of poverty in the midst of plenty from its colonial past. One third of the world's poor i.e. around 350 million people, live in India. Incidentally, India had 350 million people at the time of its independence in 1947. According to the criterion used by the Planning Commission of India, 51.3 percent of the population of India was below the poverty line in 1977–1978; it declined to 36 percent in 1993–1994, and to 27.5 percent in 2004–2005. In other words, the number of poor declined from 321 million in 1973–74, to 240 million in 1999–2000. The percentages were derived from the 61st round of National Sample Survey (NSS). All those whose monthly consumption expenditure was below Rs. 356.35 per capita in rural areas and Rs. 538.60 in urban areas were considered below the poverty line. 75 percent of the poor live in rural areas most of them are daily wagers, self-employed householders, and landless labourers. The poorest 20 percent share only 8.1 percent of the national income, while the richest 20 percent take 46.10 percent, and the richest 10 percent account for 33.50 percent.

There are controversies over the above official figures. Some claim that at least one third of the people are below the poverty line. Quite a few studies show that the number of people below the poverty line (in percent) increased immediately after the reforms (i.e. 1992–94) and then

led to a significant decline in recent years. According to the World Bank, 60 percent of India's population in 2004–05 was below the international poverty line of \$1.25 (PPP) per day. In nominal terms, it amounted to Rs. 21.6 a day in urban areas and Rs. 14.3 in rural areas. It was down to 42 percent in 1980.

Among the factors responsible for endemic poverty in India are: colonial past, high pressure of population on natural resources, iniquitous social system and low priority accorded to human development. Economic policies pursued by the government especially since 1990s, have speeded up GDP growth but the inequities continued to widen: 30 million people have been added to the pool of malnourished including 46 percent of the children. Progress on the educational and health fronts is not in tune with the growing aspirations of the people. While the economy is growing, employment opportunities are declining especially for the unskilled and semi-skilled workers.

More than 70 percent of the people of India live in villages and majority (85–90 percent) of them depend on agriculture. Since the contribution of agriculture to the GDP has secularly declined from 54 percent in 1951 to 32 percent in 1990–91, and down to 17.1 percent in 2008–09, the share of national income going to the rural areas has decreased (table 2). National economic growth has thus benefited the urbanites more than the rural people and that too only the top quintile of the population; the bottom quintile has benefited least, if at all. Considering that the agricultural sector had negative GDP growth in 2004–05, and only 4.5 and 2.9 percent respectively in 2007–08 and 2008–09, the problems of unemployment, low income and poverty in rural areas and urban slums deserve far more attention by policy makers. Lower disposable income and higher consumer price inflation is making the life of the people worse than what it was earlier.

Table 2.

India: Sectoral Composition of Real GDP

Sector	1950s	1960s	1970s	1980s	1990s	2000– –01 P	2001– –02	2002– –03	2006– –07	2008– –09
Agriculture and Allied Activities	56.1	47.8	42.8	36.4	29.1	23.8	23.9	22.1	18.6	17.1
Industry	11.7	15.1	16.9	19.5	21.9	22.0	21.5	21.8	27.6	25.9
Services	32.6	37.3	40.3	44.0	49.0	54.1	54.6	56.1	53.8	57.0
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Reserve Bank of India (2009)

To boost agricultural production, the annual plan outlay for agriculture and allied activities was enhanced from Rs. 8,544 crore in 2007–08 to Rs. 10,074 crore in 2008–09 (17.9 per cent). Similarly, the targets for credit and National Food Security Mission during 2008–09 were increased to Rs. 2,80,000 and Rs. 993 crore respectively. The Eleventh Five Year Plan (2007–12) has allocated Rs. 25,000 crores for RKVY, i.e. National Agricultural Development Programme (Rashtriya Krishi Vikas Yojana). Of this amount, Rs. 3153 crore was earmarked for 2008–09. The gross capital formation in agriculture, as a proportion of agriculture GDP (at constant 1999–2000 prices) has improved from 11.1 percent in 2003–04 to 13.4 percent in 2006–07.

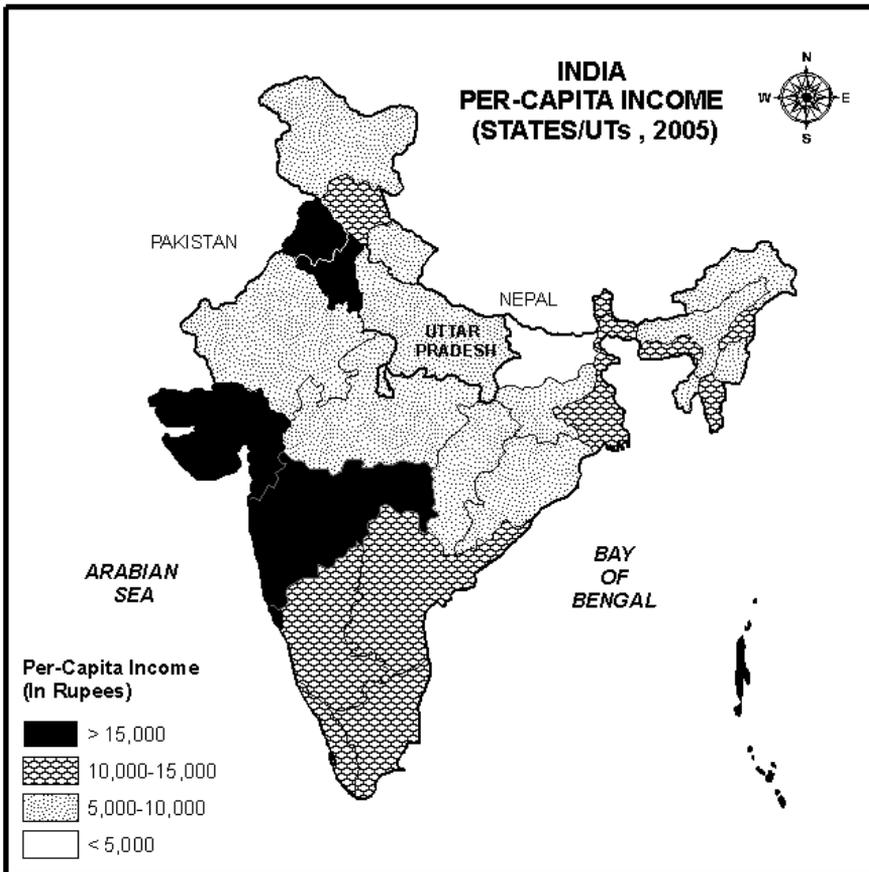
None of these measures, however, have changed much the rural scene. In fact, the village republics of Gandhi's dreams are completely lost in the wilderness of GDP growth and globalization. Distress migration from villages to cities has speeded up. The highly publicized National Rural Employment Guarantee Scheme has had only marginal effect on rural employment. The problem does not lie in the intensions of the government and availability of funds. It lies in the implementation of the schemes. The governance system is now weak and corrupt to handle the

problem. Much of the funds allocated for rural development are leaked out; they do not reach the targeted population.

Widening Regional Development Gaps

Income disparities

Disparities in economic and social development among and within states of the Union have been narrowed but not substantially enough to instill hope in the emerging future. These and other spatial inequities were not given the attention they deserved in the hope that national economic growth will trickle down to regions and sections of population which have not benefited from development for one reason or the other. It did not happen even when economic growth accelerated in early nineties. The on-going economic reforms since 1991 with stabilization and deregulation policies as the driving forces appear to have further aggravated the problem.



Source: Central Statistical Organization (CSO), New Delhi.

Fig. 1. India-Inter State Income Disparities

Table 3.

**India: Number and Percent of People 'Below Poverty Line' (BPL) in States & UTs—2004-05
(Based on URP-Consumption)**

Sl. No	States/Union Territories	Rural		Urban		India	
		Millions of Persons	Percent of Total	Millions of Persons	Percent of Total	Millions of Persons	Percent of Total
1	Andhra Pradesh	6.47	11.2	6.14	28.0	12.61	15.8
2	Arunachal Pradesh	0.19	22.3	0.009	3.3	0.20	17.6
3	Assam	5.45	22.3	0.12	3.3	5.57	19.7
4	Bihar	33.67	42.1	3.24	34.6	36.91	41.4
5	Chhattisgarh	7.15	40.8	1.94	41.2	9.09	40.9
6	Delhi	0.06	6.9	2.23	15.2	2.29	14.7
7	Goa	0.036	5.4	0.16	21.3	0.20	13.8
8	Gujarat	6.34	19.1	2.71	13.0	9.06	16.8
9	Haryana	2.14	13.6	1.06	15.1	3.21	14.0
10	Himachal Pradesh	0.61	10.7	0.02	3.4	0.63	10.0
11	Jammu & Kashmir	0.36	4.6	0.21	7.9	0.58	5.4
12	Jharkhand	10.31	46.3	1.32	20.2	11.63	40.3
13	Karnataka	7.50	20.8	6.38	32.6	13.88	25.0
14	Kerala	3.24	13.2	1.71	20.2	4.96	15.0
15	Madhya Pradesh	17.56	36.9	7.40	42.1	24.96	38.3
16	Maharashtra	17.11	29.6	14.62	32.2	31.73	30.7
17	Manipur	0.37	22.3	0.02	3.3	0.39	17.3
18	Meghalaya	0.43	22.3	0.016	3.3	0.45	18.5
19	Mizoram	0.10	22.3	0.016	3.3	0.12	12.6
20	Nagaland	0.38	22.3	0.012	3.3	0.40	19.0
21	Orissa	15.17	46.8	2.67	44.3	17.85	46.4
22	Punjab	1.51	9.1	0.65	7.1	2.16	8.4
23	Rajasthan	8.73	18.7	4.75	32.9	13.48	22.1
24	Sikkim	.11	22.3	0.002	3.3	.11	20.1
25	Tamil Nadu	7.65	22.8	6.91	22.2	14.56	22.5
26	Tripura	.61	22.3	0.020	3.3	0.64	18.9
27	Uttar Pradesh	47.30	33.4	11.70	30.6	59.00	32.8
28	Uttarakhand	2.71	40.8	0.88	36.5	3.59	39.6
29	West Bengal	17.32	28.6	0.35	14.8	20.84	24.7
30	A & N Islands	0.06	22.9	0.032	22.2	0.09	22.6
31	Chandigarh	0.008	7.1	0.067	7.1	0.07	7.1
32	Dadra & N. Haveli	0.068	39.8	0.015	19.1	0.08	33.2
33	Daman & Diu	0.007	5.4	0.014	21.2	0.02	10.5
34	Lakshadweep	0.006	13.3	0.006	20.2	0.01	16.0
35	Pondicherry	0.078	22.9	0.159	22.2	0.02	22.4
	All-India	220.93	28.3	80.79	25.7	301.72	27.5

URP = Uniform Recall Period in which the consumer expenditure data are collected from 30-day recall period. Source: Planning Commission, Government of India.

A recent World Bank Report on India (Sustaining Reform, Reducing Poverty, 2003) as also the UNDP Human Development Report, 2003 have expressed grave concern over the widening inter-state disparities and the growing urban-rural divide. The Report confirms that development

has been uneven and poverty is concentrated in the slow growing states of Uttar Pradesh, Bihar, Madhya Pradesh and Orissa (Figure 1 and Table 3). The report adds: "Accelerating growth and poverty reduction in India cannot be achieved without also accelerating growth in India's lagging states."

The spatial disparities apparent from table 3 have been there even during 1980s and 1990s. While the western and southern states have improved their performance, the growth rates of northern states—UP, Bihar, Jharkhand, Orissa, MP and Chhattisgarh—have remained low during 1980s and 1990s. Maharashtra, Goa and Gujarat were able to step up their annual economic growth rate from 5.7 percent in the 1980s to 6.6 percent in the 1990s, as against 5.6 percent in the 1980s to 4.5 percent in northern states. Growth rates of Gujarat and Maharashtra were 8.6 percent and 7.1 percent respectively in 1990s and 3.1 percent and 3.6 percent respectively in 1980s. Growth rate of SDP during 1980s and 1990s increased from 3.5 to 4.9 percent in Tamil Nadu, 2.2 to 4.5 percent in Kerala; 3.3 to 3.5 percent in Karnataka; 2.4 to 5 percent in West Bengal. During the same periods, the annual growth rate of SDP declined from 3.3 to 2.8 percent in Punjab, 3.9 to 2.7 per cent in ; 2.6 to 1.2 per cent in Uttar Pradesh; a to 3.5 per cent in Rajasthan, and from 4 to 3.1 per cent in Delhi.

More than half of India's poor live in just four states. Over two-thirds of poor live in rural areas and depend largely on agriculture. The highest incidence of poverty is found among people of scheduled castes and scheduled tribes, who face social barriers that exclude them from new opportunities. If the development policy being pursued today does not undergo drastic changes, it will not only continue to pull down the overall growth rate of Indian economy, but also lead to serious social strife in the country. The time has come for the policy-makers to view the emerging scenario with a sense of urgency and initiate the process of inclusive growth forthwith.

Disparities in Human Developments

The income disparities discussed above are re-enforced by disparities in human development. The last Census of India (2001) revealed disturbing inter-state disparities in population growth rates, literacy levels and sex ratio. States recording high population growth during the decade 1991–2001 have poor record of HDI. Bihar recorded population growth of 23.3 and 28.3 percent during 1980s and 1990s. UP, the most populous state in the country, almost matched Bihar's performance in this regard- its population grew by 23.38 percent during 1981 and 28.3 per cent during 1991–2001. And Rajasthan maintained its 1980s' high rate (28.33 percent during 1990s too (28.44 percent). In contrast, Kerala's population growth during 1991–2001 was 9.42 percent, followed by Tamil Nadu (11.9 percent), Andhra Pradesh (13.86 percent), Goa (14.89 percent), and Karnataka (17.25 percent).

States with lower rates of population growth have recorded higher rates of literacy. Kerala maintains its lead with 90.92 percent literacy, followed by Mizoram (88.49 percent), Lakshadweep (87.52 per cent), Goa (82.32 percent), and Maharashtra (77.27 percent). Bihar on the hand recorded the lowest literacy rate of 47.53 percent with female literacy of only 33.57 percent. The other States with low literacy Rates are: Jharkhand (54.13 percent), J&K (54.46 percent), Arunachal Pradesh (54.74 percent), UP (57.36 percent), Orissa (63.61 percent), Meghalaya (61.31 percent), and Andhra Pradesh (61.11 percent). In general, the southern States, which have done better than the northern and eastern states in respect of economic growth and per capita income, have also done better in respect of population control, literacy and sex ratio (table 4). Kerala is the only state which ranks seventh in per capita SGDP but first in terms of HDI. This is because Kerala has good educational and health facilities.

Table 4.

India: Human Development Ranking of States

State	1981	1991	2001	Per Capita SGDP
Andhra Pradesh	9	9	10	8
Assam	14	14	14	12
Bihar	15	15	15	15
Gujarat	4	4	6	4
Haryana	5	5	5	3
Karnatak	6	7	7	6
Kerala	1	1	1	7
Madhya Pradesh	13	12	12	11
Maharashtra	3	4	4	2
Orissa	10	11	11	14
Punjab	2	2	2	1
Rajasthan	11	10	9	10
Tamil nadu	7	3	3	5
Uttar Pradesh	12	13	13	13
West Bengal	8	8	8	9

Rural-Urban Divide

The rural-urban divide is another disturbing facet of widening socio-economic disparities in India. According to the data compiled by the National Sample Survey Organization of government of India, average monthly per capita expenditure (MPCE) of rural households during 2000–01 (July-June) was Rs. 494.90, which was nearly half (54 percent) of the corresponding figure for urban India (Rs. 914.57). About 93 per cent of the rural population during 2000–01 had a monthly per capita expenditure (MPCE) of less than Rs 914.57. Thus, the so-called rural rich enjoying consumption standards comparable to the average urban Indian constituted hardly five per cent of the rural population.

No wonder then that the gap between per capita expenditure in urban and rural areas widened by over 8 percent between 1987–88 and 2000–01. It was more pronounced with respect to non-food *vis-à-vis* food items. The average monthly expenditure on food and non-food items in 1987–88 was Rs 139.73 and Rs. 110.18 respectively. But in 2000–01, the position was reversed when average expenditures were Rs 514.01 on non-food items and Rs. 400.57 on food items.

Rural poverty deepened during 1990s because of the big drop in the annual growth rate of public investment in agriculture during the decade as also substantial decline in the growth of banks' lending to agriculture. The moderate improvement in the growth of the GDP during the decade was largely driven by urban based manufacturing and services sectors.

Uttar Pradesh: A Case Study

In this section of the paper we would look at Uttar Pradesh, the state with largest population in the country. UP's population in 2001 was 190 million; only six countries in the world, have more people than UP. They are China, India, USA, Indonesia, Brazil and Russia. Spread over an area of 238,566 km², it stands fifth in area among the Indian states, the first four being Rajasthan,

Madhya Pradesh, Maharashtra and Andhra Pradesh. It is known as the heartland of India, yet it is one of the most backward states of the country.

Bordering Nepal to the North, UP has the largest number of tourist destinations in India. Prayag (Allahabad), the city which hosts the biggest congregation of Hindus on January 14, is located in central UP. Close by is Ayodhya, the birth place of Lord Rama, and Sarnath (near Varanasi), where Buddha delivered his first sermon. Mathura, the birth place of Lord Krishna is located in western UP, and not far away from it is Agra, the city of Taj Mahal. River Ganga and its tributaries originating in the Himalaya Mountains and passing through UP have made this state agriculturally rich ever since the Vedic times. The onset of the industrial revolution in twentieth century, however, turned its strength into weakness and today it is one of the most backward states of the country.

The beauty and variety of UP has enchanted many historians, artists, writers, novelists and men and women of wisdom. It was in UP that India's two great epics, Ramayana and Mahabharata were composed. No wonder then that Ruskin Bond was so carried away by its charm, beauty and variety that he said:

"I had been to other countries—in Europe, Asia and the Middle East—but none of them had provided even half as much variety, or so much to see and experience and remember, as this one State in northern India...Uttar Pradesh is a world in itself."

The areas comprising modern-day Uttar Pradesh was settled in later Vedic times. Many of the sages of ancient India had their Ashrams (hermitages) in mountains and river banks of UP. As mentioned earlier, Rama and Krishna, the two incarnations of God, and the main characters of the two great epics of India—Ramayana and Mahabharata, were born in UP. Gautam Buddha spent many years in Sarnath (varanasi). Uttar Pradesh thus is a region of enormous cultural importance. In medieval times, the entry of Islam gave rise to a cultural synthesis rarely seen elsewhere in the world. Taj Mahal is the product of this synthesis. The East India Company annexed much of UP during 1784 and 1856 and called it the North-western provinces. In 1902, the name was changed to the United Provinces of Agra and Oudh (Avadh), and after India became a republic in 1948, it was renamed as Uttar Pradesh.

UP is a backward state but within its border there are forward and backward regions. The Western region known as Harit Pradesh (Green Land) is more urbanized and prosperous, while the southwestern region called Bundelkhand is poor, with low agricultural growth and low urbanization. East UP is densely populated and less industrialized and urbanized. And Central UP stands in-between (Fig. 2). In recent years, movement to trifurcate the state into three smaller states has gathered some momentum, but it is yet to get popular support. Politicians want smaller states to become ministers, chief ministers, and members of legislatures but people want more and better development. The tussle is on, only the time will tell which side wins. It is, however, clear from the newly created small states in other parts of India that it does not necessarily lead to more development. In fact, the experience tells opposite story. What is needed is a strong dose of regional and local planning and full and real participation of the people in each state, UP especially.

Low Level of Economic development

UP's per capita income at Rs. 5702 in 2003–04 is one of the lowest in India barring Orissa (Rs. 6487) and Bihar (Rs. 3556). It is around 47.50 percent of the national average of Rs. 11,799 per annum. When India launched its First five-Year Plan in 1950–51, the per capita income of the

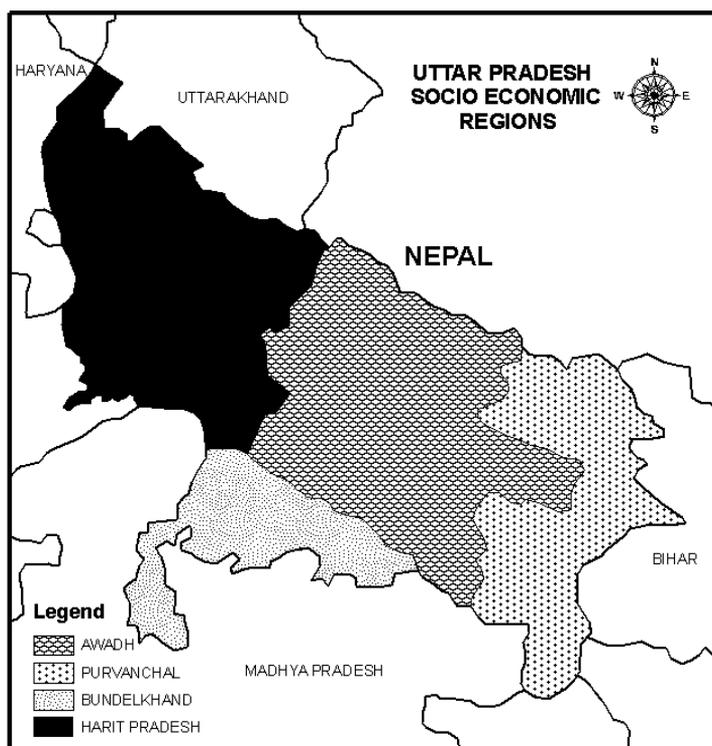


Fig. 2. Uttar Pradesh-Socio Economic Regions

state at Rs. 259 was very close to the national per capita income of Rs. 267. It was short by only Rs. 8 i.e. 3 per cent. By 1995–96 this shortfall increased to Rs. 35.8 and by 2003–04, the short fall increased to RI 6097. The average annual growth in total income of the state in the period between 1951–74 was always far less than the country. However, the population growth in the state being lower in the country during the period, the gap in the per capita income between the state and the country was narrowed down to some extent.

The post-1974 period scenario was, however, marked by a significant improvement in the total income of the state. The economy of the state grew at the rate of 5–7 per cent per annum, as against the national growth of 5.3 percent. This gain was however nullified by the spurt in population growth from 1.8 percent per annum during 1961–71 to 2.3 percent during 1971–81. It was higher than the national population growth rate (2.2 percent). Growth rate of the GDP of India picked up to touch 6 percent since 1974, but UP slid down to less than 3 percent per annum. As a result, the shortfall in the states per capita income vis-à-vis the national average increased from 35 percent in 1994–95 to 53 percent in 2003–04. Further, the structure of state income has also changed for the worse. The contribution of primary sector has declined to 41 percent of the state income though the work force engaged in agriculture continues to be 73 percent. The share of the secondary sector has gone up to 20 percent of the SDP (1991); but it employs only 9 percent of the total workers of the state. The only states which have lower share of employment in manufacturing are: Bihar (4.6 percent), Madhya Pradesh (8.4 percent) and Orissa (7.5 percent). As against the primary and secondary sectors, the share of the tertiary sector in the state income went up from 25 percent in 1970–71 to 37 percent in 1994–95 and the share of workers employed therein from 15 to 18 percent in 1991. It is clear that economic growth in UP has been more

capital intensive than labour intensive, more urban based than rural based and more industry and service oriented than primary sector oriented.

Predominance of the Primary Sector

Agriculture is the most important economic activity in the state engaging around 70 percent of population of the state and accounting for 46 percent of the state income. UP is a food-surplus state. The production of food grains has increased from 14.5 million metric tons in 1960–61 to 42.5 million tons in 1995–96, showing an average annual growth rate of 3.1 percent, which is much higher than the population growth rate. Fertile soil and irrigation facilities have made UP a major contributor to the national food grain stock. It is also home to 78 percent of national livestock population. Table 5 gives the percent of major food commodities produced in UP.

Table 5.

Share of Uttar Pradesh in Major Food Crops (1995)

S. No.	Commodity	UP's Share (in Percent)
1	Potato	47.00
2	Sugarcane	45.00
3	Wheat	38.00
4	Rice	32.00
5	Groundnut	34.00
6	Molasses	34.00
7	Sugar	30.00
8	Tobacco	20.00

UP witnessed rapid industrialization in recent years. By the end of 1995–96, the state had 1,661 medium and large industrial undertakings and 296,338 small industrial units together employing 1.83 million people. The per capita SDP was Rs. 7,263 in 1997–98 and there was visible decline in poverty level in the state. Its SDP for the year 2004 was \$80.9 billion (nominal) and \$339.5 billion (PPP); it was the second largest economy in India after Maharashtra (because of Mumbai) and a bigger economy than many of the world's big economic players like Israel, Switzerland and Hong Kong. The state does not lag behind in IT. Its software export is only next to the state Karnataka which has Bangalore, the Silicon Valley of India. But the industry is concentrated in just three districts around Delhi, the National Capital, and adjoining districts of Lucknow, the state capital.

Endemic Poverty

Despite the overall improvement in economic performance of the state, high rate of population growth has come in the way of raising the standard of living of the people. According to the round of National Sample survey conducted by the Planning commission of India, about one-third of the people of the state were living below the poverty line in 2004–05 as compared to 27.5 percent for the country as a whole on the basis of uniform recall period. Only Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and Orissa were worse than UP. An overwhelming majority of the poor (80 percent) live in rural areas. Yet, one does see a declining trend in poverty in UP in both rural and urban areas (Table 6). According to the uniform recall period data,

Table 6.

**Trends in rural-Urban Poverty Ratios in U.P. and India
(1973-74 to 2004-05)**

NSS Round	Uttar Pradesh (%)			All-India (%)		
	Rural	Urban	Combined	Rural	Urban	Combined
1973-74	56.53	60.09	57.07	56.44	49.01	54.88
1977-78	47.60	56.23	49.05	53.07	45.24	51.32
1983-84	46.45	49.82	47.07	45.85	40.79	44.48
1987-88	41.10	42.96	41.46	39.09	38.20	38.86
1993-94	42.28	35.39	40.85	37.27	32.36	35.97
1999-00*	31.22	30.89	31.15	27.09	23.62	26.10
2004-05 URP	33.4	30.6	32.8	28.3	25.7	27.5
2004-05 MRP	25.3	26.3	25.5	21.8	21.7	21.8

Source: Planning Commission estimates based on NSS rounds.

* Based on 30 days recall period.

poverty ratio in UP declined by 8.1 percent between 1993-94 and 2004-05, and the decline was greater in rural (8.3 percent) than urban areas (4.8 percent).

Doubts have been expressed about the comparability of poverty estimates between 1993-94 and 1999-00 due to differences in the reference period. However, a rough comparison based on mixed reference surveys reveals that poverty ratio declined from 31.2 percent in 1999-00 to 25.2 percent in 2004-05. This means that the rate of decline in poverty was relatively faster during 1999-2005 as compared to 1993-00. Let us also keep in view that the mixed reference period estimates point to a lower incidence of poverty (around 25 per cent).

Despite the substantial decline in the poverty ratio, the absolute number of poor in UP was around 6 million in 2004-05 i.e. 20 percent of the total poor in the country on the basis of uniform recall period (Table 7)

Table 7.

Number of Persons 'Below Poverty Line' (BPL) in U.P

NSS Round	Uttar Pradesh (%)			U.P. as % of All-India		
	Rural	Urban	Combined	Rural	Urban	Combined
1973-74	449.99	85.74	535.73	17.22	14.28	16.67
1977-78	407.41	96.96	504.37	15.42	15.00	15.34
1983-84	448.03	108.71	556.74	17.78	15.32	17.24
1987-88	429.74	106.79	536.53	18.53	14.21	17.47
1993-94	496.18	108.28	604.46	20.33	14.18	18.87
1999-00*	412.01	117.88	529.89	21.32	17.59	20.36
2004-05 URP	473.0	117.03	590.03	21.41	14.48	19.56
2004-05 MRP	357.68	100.47	458.15	21.00	14.73	19.21

Source: Planning Commission estimates based on NSS rounds.

* Based on 30 days recall period.

URP = Uniform reference period using 30 day recall period.

MRP = Mixed recall period, where for some items recall period is 365 days, while for the rest it is 30 days.

Low Level of Literacy

On the social front UP has done fairly well in recent years but it still has a huge backlog to cover. Its literacy rate was only 12.02 percent in 1951; it increased to 20.87 percent 1961; 23.99 percent in 1971; 32.65 percent in 1981; 40.71 percent in 1991; 57.36 percent in 2001. But, the differential between female and male literacy continues to be high: while in 1991, male literacy was 56 percent and female literacy 25 percent, ten years later in 2001, the male literacy went up to 70.23 percent and female literacy rate to 42.98 percent. But literacy figures are not really the true indicators of educational levels of the people. The level of functional literacy is lower than the nominal literacy.

Compared to the country as a whole, UP is far behind. Its literacy rate in 2001 was only 57.36 percent against the 66 percent for the country as a whole. The 1981 census figures revealed that crude female literacy rate among SCs in rural Uttar Pradesh was below 18 percent in 18 out of 56 districts and below 25 percent in most of the districts. Only one out of four in the 7+ age group was able to read and write in 1991, the corresponding figures for rural areas being 19 per cent; for scheduled castes it was only 11 per cent, and it was still lower for scheduled castes in rural areas (8 per cent).

When we apply more demanding criteria of educational attainment we find that in 1992-93 only 50 percent of literate males and 40 per cent of literate females could complete eight years of schooling. A disturbing feature of the educational situation in UP is the persistence of high level of illiteracy in the younger age group especially in rural areas. Poverty drives the children to work and public apathy keeps the government schools dysfunctional. The newly started private schools are beyond the reach of the poor. Various adult literacy programmes launched by the state government have so far failed to make a dent in the age old problem of illiteracy in UP.

At the level of higher education and technical education Uttar Pradesh has 30 universities, 34 medical colleges, 121 teacher's training colleges, 69 engineering colleges, 733 arts and science colleges, and 273 other institutions offering degree level courses. This provides the State with firm basis for providing opportunities for higher education to its youth.

Low Expectation of Life

Longevity of life in UP is short and uncertain. Expectation of life females is less than 55 years and the under-five mortality rate is as high as 141 per thousands. It is close to Ethiopia and Saharan Africa. Among the various states of India, UP has the highest under-five mortality rate, the second highest crude death rate, and the third lowest longevity of life. A girl born in Kerala can expect to live 20 years longer than one born in UP. The probability of her dying before the age of one is more than six times as high in Uttar Pradesh as in Kerala. According to 2005-06 National Family Health survey, UP stands second to Bihar in the incidence of under-nutrition among children below the age of five. No wonder then that the possibility of child survival in UP is low. Yet the population of the state is growing fast because among the states of India, it has the highest birth rate and the highest fertility rate.

Causes of Poverty

Three factors are responsible for endemic poverty in UP: source of livelihood, level of education and social identity. A landless person is more likely to be poor; so is the case with the one who are illiterate and belongs to the SC & ST category in social hierarchy. In 1973-74 the share of the poor in total population was 57 percent; in 1987-88 it decreased to 42.2 percent. In 1999-2000 it was 43 percent. But the total population in the BPL category increased because people living in rural areas were less inclined to adopt family planning. Interestingly, during

1993–94 nearly 60 per cent of SC households were in BPL. Interestingly, the speed with which the SC/ST households crossed the poverty line was higher as compared to other households. There is no difference between Hindus and Muslim in poverty levels in rural areas (31 percent in 1999–00) but in urban areas poverty levels were higher for Muslims (42.2 per cent) as compared to Hindus (26.4 percent).

Spatial Inequities in Development

UP is a backward state but within the state there are relatively more backward areas. The regional development scenario in UP is well illustrated by the socio-economic levels of its five distinct regions. These are:

1. Rohilkhand in the north: comparatively well-developed agriculturally, and industrially;
2. The Doab, the land between Rivers Ganga and Yamuna: comparatively well developed agriculturally;
3. Awadh (Oudh) in the centre: moderately developed industrially;
4. Eastern UP or Poorvanchal: densely populated and poorly developed socially and economically; and
5. Baghelkhand and Bundelkhand in the south: the poorest region of UP

The fifth region is as backward as Ethiopia and Sudan in Africa. Naturally, lot needs to be done to lift the state and its regions above the national poverty line. But first let us look at the causes of backwardness of UP.

Reasons for the Backwardness of UP

Interior Location

One of the reasons for the relative backwardness of UP is its interior location. Globalization tends to liberalize international trade; it favors coastal provinces over inland provinces (all other factors being equal). This is a phenomenon that can be observed worldwide—in Europe (where colonial globalization led to more rapid growth in coastal Western Europe as opposed to inland Eastern Europe); or in Africa today — where again, coastal South Africa and North Africa have done better; and inland landlocked African countries have fared the worse. In China, the differences between coastal areas and inland rural areas are obvious.

In India too we see the coastal states with some exceptions doing better than the interior states. UP, Bihar, Jharkhand, and MP are the most backward states of the country. All of them have interior locations. Farther away a region is away from the coast, more backward it is likely to be. Western Orissa is worse off than Eastern Orissa. All coastal states of India are doing well, economically as well as socially.

True, it is not the geographical disadvantages alone that have retarded the development of UP and other backward states of the country, but they cannot be discounted. Naturally then, the globalization process set in motion since 1990s, is likely to affect the land-locked states more adversely in years to come unless they develop some compensatory advantages.

Pressure of Population

Another factor that has adversely affected the development of UP is high pressure of population on available natural and other resources. UP does not have energy and mineral resources commensurate with its area and population. The most important natural resource this state can boast of is fertile soil which has been used intensively for many a millennium. Had its agriculture been diversified and its land resources diverted to cash crops, the state could have done better. But that would have meant food insecurity for the whole country.

There was yet another avenue in which the state economy could have been diverted. It could have followed the Kerala model and developed its human resources to meet the growing technological and industrial needs of the country as Kerala did. As apparent from the data given earlier, the state failed on this front too. Until 1995 AD or so, most of the young men and women aspiring to get higher education in engineering and technology had to go to the southern states and pay hefty amounts to get admission. Even in 2010 UP does not have enough quality institutions to meet the growing needs of the people.

Lack of Energy and Mineral Resources

UP is not known for any natural resource except land, water, labour force. These three resources kept the state high in income and quality of life so long as agriculture reigned supreme in the economic life of the people. Once modern industrialization and related services displaced agriculture as the main source of national income, UP lost its pre-eminence in the economy of the country. Each year, the share of agriculture and related activities in the GDP of the country is declining, and so also the status of the state among other states of the country.

Poor Quality of Political Leadership

UP has changed a lot politically, but not necessarily for the better. Earlier, the leadership was in the hands of traditional political leaders who knew how to agitate but not how to govern and manage. Even then the decades after independence were not so disheartening. The whole country was backward; UP was less backward because it was well ahead of many states in agriculture—the most important sector of the economy then. As the country pushed its secondary and tertiary sectors up, UP lost the ground for it neither had coal nor minerals like iron ore. The cotton textile industry located in cities like Kanpur died in the absence of technological up-gradation. By 1980, it fell in the category of what Ashish Bose, a Delhi based demographer calls BIMARU (sick) states (Bihar (including Jharkhand), Madhya Pradesh (including Chhattisgarh), Rajasthan, and UP). With the onset of the globalization, liberalization and privatization policy, the state slid further down. Youthful population, the only and most important resource it had, did not get the attention it deserved. During the last few years, the state government headed by a socialist party leader spent billions of rupees on top class metropolitan infrastructure in Saifai a nondescript village near Etawah and his successor chief minister had no qualms in spending billions of rupees in translating party symbol and her political mentors into more than life size statues. Neither of them cared to spare funds for appointment of teachers in primary schools; doctors in primary health centers; and legal aid to poor. The neglect of universities and other institutions of higher learning have not caused them much anguish, nor has the lack of scientific temper amongst the masses bothered them. While many have attempted to divide the society on caste and community lines, none has done anything to unite the people. All fight for their illegitimate rights, but none cares for the duties that all human beings must perform to keep humanity moving forward socio-economically as well as spiritually.

The political leadership of the state has now passed on from upper castes to backward castes. The responsibility of running the state and lifting it from the poverty and pestilence has rests on the shoulders of the have-nots since 1970s. But it has made no difference. All aim at self-aggrandizement—forward, backward, and most backward. As a result, the state has made no progress worth recording. In fact, many new problems have cropped up. Corruption reigns supreme; and law and order has deteriorated. Agricultural productivity is declining; regional imbalances in development have widened, and quality of life of the people has deteriorated. Inspired by the separation of Uttaranchal from UP in 2000, movements to divide the rest of UP into three or four states are gaining ground. The irony is that even the chief minister of the state supports this demand, thereby tacitly acknowledging that she has failed in her mission to eradicate poverty, illiteracy and violence.

No politician of the state has tried to get over the problems of poverty, violence, illiteracy, malnutrition, institutional breakdown, corruption, land degradation, water pollution, recurring floods and other natural calamities in a way that can be emulated by others. None has ever acknowledged the vital role of art, literature, and music in society, or the role of scientific and technological know-how in the development of the state.

Unscientific Development Planning

A state like Uttar Pradesh would have gone whole hog for local and regional planning to ensure that all parts of the state benefited from development investments and that people no matter whether they lived in villages or cities had the opportunities to participate in planning and development of their future. Unfortunately, there is no local planning or regional planning in the state worth mentioning. Even the state does not have any well formulated five year plan. Everything is done on ad hoc basis. There are grandiose plans costing millions and trillions of rupees such as Ganga Highway, Eco-parks, and Taj Corridor which have nothing to do with the development of the state.

The time has come for the state government to embark on local and regional planning, on improving the educational and health infrastructure, and on attracting industrial enterprises and boosting agricultural productivity. People should get jobs where they live; they should not be forced to migrate to urban slums. The people of UP are highly talented; given an opportunity to carve out a niche of their own in the national space they would out-performance many others. Further, the people of UP are generous and cosmopolitan. They welcome outsiders and know how to make them comfortable in their midst. Given a chance to participate in the rebuilding of state following the footprints of the men and women of wisdom who made this heartland of India great in the past, they would join hands and work together to create a new future, a future far brighter than the present.

Reshaping UP's Future: the Gandhian Way

UP was compelled to enter 'modern' era of globalization emasculated if not crippled, economically, sociologically, and politically. Globalization favours regions which are strategically positioned for international trade; which are rich in petroleum and natural gas; which have a well developed intellectual capital; which had early start in industrialization using the accumulated finance capital (as in the case of Britain); and which forward looking political leadership. UP has none of these. It is plagued by capital impoverishment, explosive population growth, low level of human development, no energy and mineral resources, inland location, and divisive political

leadership. Its future lies in diversifying its agriculture, harnessing its intellectual and social capital; and in making the fullest use of information technology.

UP must make up for the time it has lost since 1947, and rapidly develop its human resources. Mass literacy alone will not do although it is critical as a base; it must go fast for quality education in pure and applied sciences, information technology, engineering, and humanities. At the same time, it must transcend the sectarian divides responsible for the present-day political gridlock—and launch a new paradigm of development that combines fairness and equity with ecumenical breadth and intellectual depth. Reservations in educational institutions and services are important but they can be highly counterproductive as they are in UP today. Nor would doles, another name for charity, would serve the purpose. Educational standards in UP all the way from primary schools to universities have secularly declined. Most children go to school only to get mid-day meal; rest of the time they play or work. Violence is no longer an uncommon phenomenon in the state; law and order has nosedived. Mafias have captured the political platform; honest men and women are becoming a rarity in state legislatures and local government bodies. All this is the byproduct of the economic and social development policies followed by the state.

Solution lies in Sarvodaya Model of Development enunciated by Mahatma Gandhi during the freedom struggle. In fact, it is not only UP, India as whole must return to Gandhi, the Father of the Nation and tread on his footprints to lead the country to peace and prosperity. The Gandhian model aims at development of all and from all perspectives: spiritual, social and economic. Gandhi considered human evolution only half complete. Darwin followed evolution of species up to the emergence of *Homo sapiens*. That was, however, not the end of the evolutionary process; it heralded the end of only the first phase. In the second phase, the *Homo sapiens* have to evolve into super-conscious human beings, not by natural selection and survival of the fittest but by self-driven inner development and universal love. In this journey from primitive *Homo sapiens* to super-conscious human beings, there would be times of regression when humans would turn to their animal past and behave like beasts. But such retrogressive moves like the ones we witness today are not ever lasting; they are interspaced and interjected by transcendence giving rise to persons like Rama, Krishna, Buddha, Mahavira, Zoroaster, Christ, Mohammad, Guru Nanak, and Gandhi. General tendency would be to move in the direction of super-consciousness.

Sarvodaya, the development of all without exception is based on ancient scriptures like Vedas, Ramayana, Geeta, Bible, Avesta, Quran, and Guru Granth Sahib. It is the combination of two words 'Sarva' (all) and 'Uday' (development). The problem lies in reconciling the demands of egoism and altruism; good of the self and the 'good of all'; and inner (spiritual) development and outer (material) development. Sarvodaya, aims among others at creating a social order wherein relations between human beings and nature, and among individual human beings, are based on love and compassion. In a sarvodaya society, there will be no wars. All conflicts emerging from different perceptions of truth would be resolved nonviolently.

Sarvodaya is thus an ideology for prevention of socio-economic ills gripping modern society, and for keeping the problem of global warming and climate change at bay. It calls for keeping the interests of others as dear to the heart as the interests of the self; it lays emphasis on self development as a moral being and community development for social wellbeing; it is a nonpolitical socio-religious creed common to all religions; it stands for limitation of wants; it stands for global thinking and local action and shuns rabid nationalism, provincialism, regionalism, and localism based on self-aggrandizement. 'There is enough on this earth to meet everyone's need but not everyone's greed' said Gandhi. A sarvodaya society shuns greed and serves the needs of all, including nature.

Human beings as they advance on the road to higher level of consciousness, become more human; they not only love themselves and those near them but also all human beings, nay all

life forms. For them the whole world is a family (*Vasudhaivaikutumbakam*). They are at peace and see to it that the world around them is in peace. According to Gandhi, the first task of development is to make human beings better human beings. To set this process in motion, economic and technological advances are necessary. Bread is the God of the hungry, said Gandhi. But in order that the bread is accessible to all, man must develop as a loving being. People must share whatever is produced and care for everyone. Tendency to accumulate, usurp, and rob what belongs to all is inhuman; it takes human beings to their pre-Homo sapiens existence.

Education plays a vital role in turning the new generation of men and women into better human beings provided of course that it does not cater to the intellectual needs alone. Education must be five dimensional. For brevity let us call it (5-H) i.e. Head (knowledge), Heart (love and compassion), Hand (skill/technology), Health (physique), and Home (family and community life). Knowledge without the other four traits of education becomes sterile and takes man towards his animal past. How else were created the weapons of mass destruction. Knowledge must lead to wisdom and wisdom comes when the other four ingredients of education are also well developed. Gandhi's Nai Talim (New Education) followed the 5-H model. He advocated learning while working, living in compassionate family and community, and following the natural principles of health to keep mind and body energized. Unfortunately, the contemporary education system the world over begins with information and ends with truncated (specialized) knowledge. It produces half-baked human beings.

In a Sarvodaya society all must be able to meet their basic human needs at a level nature and technology can afford. Those who have more than what they need, must use the excess earnings for the welfare of the community. Sarvodaya also envisages development from below, self reliance, strong local government (village republic), and simple living and high thinking. Science and technology must be promoted to the maximum extent but nothing should be done that would adversely affect the nature and human beings. In a sarvodaya order, there would be no global warming and climate change for all would work within the carrying capacity of nature; and differences and disputes will be settled by discussions, negotiations, arbitrations etc. without ever resorting to violence. Gandhi banished colonialism from the India, Martin Luther King, Jr. brought justice to blacks in a white dominated USA, and Lech Walesa threw the communist dictatorship out from Poland without ever hurting the adversaries. They used the power of love to overpower violence, injustice and cruelty.

The problem with the current model of development is that it caters to only the insatiable material wants of people; and therefore it is iniquitous and cares least for what happens to those who are unable to catch up with the winners in the race for progress. It is a Darwinian world in which only the fittest survive and where might is right. In the days bygone morality did not matter in war and sensual love; today it does not matter in any walk of life. The time has now come for India, UP and, for that matter the whole world to move in the direction of Gandhi's sarvodaya. There is no other way to get over the problem of war and global warming. There is no other way to stop the proliferation of weapons of mass destruction. There is no other way to narrow the gap between rich and poor. And there is no other way to peace, harmony, happiness, and enlightened life and living.

References

1. Abdul Aziz and Sudhir Krishna (eds.), *Regional Development: Problems and Policy Measures*, New Delhi: Concept, 1996.
2. Alagh, Y.K., "Regional Planning for Industrial aspects of Indian Economy", *Indian Journal of Regional Science*. Vol. 5, No. 2, 1978, pp 147-166.

3. Ashok Kumar, ed. *Planning Development and Disparities in Rural India*, New Delhi: Commonwealth Publishers, 1990. xix, 367 p.
4. Basu, D.N. and G.S.Guha (ed.) *Agro-climatic Regional Planning in India*, New Delhi: Concept, 1996, 330 p.
5. Brown A.J., and E.M. Burrows, (eds.), *Regional Economic Problems – Comparative Experiences of Some Market Economies*, London: George Allen and Unwin, 1977.
6. Choudhury, Uma Datta Roy, *Inter-state and Intra-state Variations in Economic Development and Standard of Living*, New Delhi: National Institute of Public Finance and Policy, 1993.
7. Dadibhavi, R.V., “Inter-State Disparities in India—An Explanation”, *Indian Journal of Regional Science*, Vol. 21, No. 2, 1989 .
8. Das, S.K. and A. Barua, “Regional Inequalities, Economic Growth and Liberalization: A Study of the Indian Economy”, *The Journal of Development Studies*, Vol. 32, No. 3, February L996, pp 364- 390.
9. Datta, Bhabatosh, *Indian Planning at the Crossroads*, New Delhi: Oxford University Press, 1997, viii, 251 p.
10. Dayanandan, R. (ed.) *Sustainable Development: Opportunities and Challenges*, New Delhi: Serials Publications, 2005, xxix, 425 p.
11. Deogaonkar, S.G., *Problem of Development of Tribal Areas*, Delhi: Leeladevi, 1980. xxii, 182 p.
12. Dholakia, Ravindra H., *Regional Disparities in Economic Growth in India*, Mumbai: Himalaya Publishing House, 1985. See also his: “Regional Disparity in Economic and Human Development in India,” *The Journal of Income and Wealth*, Year : 2003, Volume : 25, Issue: 1 & 2
13. Economy of Uttar Pradesh @ webindia123.com
14. Gadgil, D.R., *Planning and Economic Policy in India*, Pune: Gokhale Institute of Politics and Economics, 1972.
15. Gandhi, MK, *Hind Swaraj*, Ahmedabad: Navajivan.
16. Gowda, K.S. Rame, *Regional Planning from Integrated Rural Urban Development in Mysore State*, Mysore: Prasaranga (University of Mysore), 1972.
17. Hasan, A & J C Das (eds.), *People of India: Uttar Pradesh*, Volume XLII, Mumbai: Manohar Publications, 2005
18. Hirschman, A.O., *Strategy of Economic Development*, New Haven: Yale University Press, Conn., 1958.
19. Jo, Johnson, The Criminalization of Indian Democracy, *Financial Times*, May 2, 2007.
20. Kundu, Amitabh and Moonis Raza, *Indian Economy: The Regional Dimensions*, New Delhi: Spectrum Publishers and Distributors, 19a2.
21. Lakadawala, Y.K., Alagh and A. Sharma, *Regional Variations in Industrial Development*, Ahmedabad: Sardar Patel Institute of Economic Growth, 1974.
22. Mahajan. O.P, *Economic Planning and Regional Development in India*, New Delhi: ESS & ESS, 1982.
23. Management Development Institute, *Backward Area Development: Strategies and Policies*, New Delhi: MDI, 1977.
24. Menon, K.S.V, *Development of Backward Areas through Incentives — An Indian Experiment*, New Delhi: Yidya Vahini, 1979.
25. Misra, G.P, *Regional Structure of Development and Growth in India*, New Delhi: Ashish Publishing House, 1985.
26. Misra, R.P, and O.P Mathur, *Planning for the Backward Areas*, Mysore: Institute of Development Studies 1973.
27. Misra, RP, et. al, *Regional Development Planning in India: A New Strategy*, New Delhi: Vikas, 1974
28. Misra R.Pand others, *Micro-level Planning and Development Process*, Mysore: Institute of Development Studies, 1977.
29. Misra, R.P and R.N. Achyutha, *Micro-level Rural Planning: Principles, Methods and Case Studies*, New Delhi: Concept Publishing Co., 1990, viii, 342 p.
30. R.P Misra and K.V Sundaram (eds), *Rural Area Development: Perspectives and Approaches*, New Delhi: Sterling, 1979. viii, 428 p.

31. Mitra, A., '*Levels of Regional Development in India*', Census of India, Vol. I, Part 1-A (i), New Delhi, 1964.
32. Mitra, A., "Problems of Regional Disparities", Bombay: *Commerce*, 1973.
33. Nanjundappa. D.M. and R.K. Sinha, (eds.), *Backward Area Development: Problems and Prospects*, New Delhi: Sterling Publishers Private Ltd., 1982.
34. Rao, Hemalata, *Regional Disparities and Development in India*, New Delhi: Ashish Publishing House, 1984.
35. Reddy, Krishna (2003). *Indian History*. New Delhi: Tata McGraw Hill. p. A11.
36. Roy Choudhury, U.S., "Inter-state and Intra-state Variations in Economic Development and Standard of Living", *Economic and Political Weekly*, December 5-12, 1992, pp 2651-2655.
37. Sarker, PC., "Regional Imbalances in Indian Economy over Plan Periods", *Economic and Political Weekly*, Vol. XXIX, No. 11, March 1994, pp 621-633.
38. Sengupta, Somini, "Brahmin vote helps party of low caste win in India". *The New York Times*, May 12, 2007.
39. Stern, Robert W. *Changing India: Bourgeois Revolution on the Subcontinent*, New York: Cambridge University Press, 1993.
40. Sundaram, K.V., *Urban and Regional Planning in India*, New Delhi: Vikas, 1977, xiii, 432 p.

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BANGALORE—A CASE STUDY IN GLOBALIZATION AND INFORMATION TECHNOLOGIES

1. Globalization

a. Introduction

Globalization is a multidimensional concept having various important facets that entail economic, financial, technological, social, and political processes, which continually transform the global economy, society, and polity. Some of the aspects of globalization are transborder trade, transborder movement of capital, the emergence of a new international order, diffusion and homogenization of economic structures and institutions, labor market consequences, governance issues; and finally prospects and problems of our global economy and society.

It is generally recognized that the process of globalization has been significantly aided by the fall in costs of communication and transportation that has led to an inevitable shrinkage of our globe into a quasi-global village—one characterized by an integration typically observed in traditional village communes. We therefore view globalization as a complex process that gradually unleashes a series of transitions: the process starts with an increased integration of the world economy through trade and investment networks. It is well understood that the harbinger of this stage of increased integration turns on the pivot of decreasing transaction costs of transborder trade and investment. Declining transaction costs are explained in terms of technical progress that reduces the cost of communication and transport costs. Declining transaction costs have direct and positive impact on cross-border trade and portfolios of direct investment.

The economic consequence of this increased integration is twofold. First, nations become more interdependent in economic terms. Second, there arises a “perception” that transborder trade and investments offer tremendous and often unprecedented economic opportunities for a nation. The first transition thus results in an increased integration of the world economy—through a mesh of multinational investments, trade flows, and flows of financial capital—with an equally important transition in the perception about the importance of transborder trade and investment as a vehicle of economic progress and prosperity for a nation. The second transition impacts national governments actively responding to this new perception that transborder trade and investments offer great benefits to those nations that entertain relevant openness to foreign trade

and investment. As a number of nations vie and compete against each other to take home the spoils of the

b. Economics of Globalization

First and foremost, we need to understand the potential and perceived net gains from transborder trade that seemingly initiates the very first transition towards a global economy, as presented in a book by some distinguished scholars (Gangopadhyay and Chatterji, 2005). In the common parlance, it is widely held that such benefits are significant and can easily be explained by models of transborder trade. Kemp (2005) shows how difficult it is to sustain the simplistic notion that all participating nations gain from transborder trade. To put it boldly, the frontier of trade theory does not necessarily endorse the view that free trade is inevitably welfare enhancing even when markets are characterized by atomistic competition. One may thus raise a simple question of whether in propelling the motive of globalization there is a gain from transborder trade, or it is an ever-shifting mirage!

Let us not lock our horns over the above question and move forward. Let us, instead, look at the immediate consequence of these perceived gains from trade: nation after nation has adopted series of liberalization measures to jockey for a significant positioning in the global economy. We now refer to the second and third transition paths/processes. How has the world shaped up with these transitions? Krugman (2005) forcefully argues that the world has become more “dangerous” and precariously “vulnerable” with these transitions. Financial, economic and currency crises are the price that all of us must pay for the vulnerability of these nations today. He also suggests necessary policy reforms to redress this vulnerability. Sachs (2005), on the contrary, argues that the global economy is resilient enough to tide over crises like the Asian crises. He analyzes the factors responsible for the Asian crises to examine the robustness of the new world order as driven by these two transitions. Azis (2005), on the other hand, raises a poignant question about the role of international agencies in making the new world order more fragile.

It is anticipated that the above issue is going to raise many more thorny debates in future years about the precise architecture of the world economy and the global financial system. It is beyond doubt that the current global order is influenced, and possibly propelled by, the homogenization of and the convergence on an economic and social model that citizens of the world have come to treat as a shared and common model. The third over-riding theme is to examine the dynamic process of the convergence of ideas, ideologies, and policies. Colander (2005) highlights the importance of viewing globalization as a dynamic process. Intriligator (2005) examines the costs and benefits of the globalization process and highlights an ever-increasing role of national and international cooperation to spread the benefits of globalization. Andersson and Andersson (2005) argue that the notion of economic and social integration as highlighted by the literature of globalization is misunderstood and offer an alternative index of integration to shed light on the future prospect of world economy.

The most contentious aspect of globalization stems from its perceived and actual effects on labor markets that partly emanate from the lack of mobility of labor across borders. Future years will witness more and more debates and a sharpening of discussion, especially on immigration policy in the context of the lightning pace of capital mobility. To many perceptible observers, this lack of mobility is not only unjust but also a major impediment to the future path of globalization. Nijkamp, van Delft, and van Veen-Groot. (2005) argue that globalization without labor mobility does not have much significance. The success of globalization will therefore critically depend on the mobility of labor. Dutt (2005) examines the labor economy. Lehrer (2005) argues that the

failure to attain equity in the global economy has to be understood in the context of international agencies and their incentives, constraints, and failures.

Globalization is neither the mantra from heaven nor does it take place in a vacuum. Globalization is a product of conscious decisions of internationalization by multinational firms. Once a multinational corporation (MNC) enters a country, the regulatory regime responds to its entry by implementing appropriate regulations to minimize social costs and maximize social benefits of multinationalism in order to avoid crises, instability, and over-exploitation of non-renewable resources. In order to entice the entry, or enhance its investment, the nation goes through a series of reforms that makes the nation more market-friendly and less authoritative and multinational investments become more productive—privately and socially. Globalization thus entails a detailed process of governance at various levels by MNCs, governments, and regulatory agencies that engenders a gradual integration of the global economy. Lehrer attempts to analyze the extent to which underlying forces, other than economic ones, need to be addressed in order to explain the duress of low-paid workers in low technology industries worldwide. A value of life approach can be used as a starting point and is widened into a discussion of the impact of an attenuation of social values—which would otherwise provide social cohesion—as social distance is increased. Cappelin (2005) looks at the process of international integration of a multinational firm and, thereby, highlights some of these governance issues. Koppa (2005) emphasizes cooperation as the only way to moderate costs of globalization and balance the costs and benefits of globalization.

c. Information and Communications Technologies (ICT)

One of the main drivers of globalization is ICT, and it is necessary to view the influences of IT with a wholistic comprehensive perspective in order to understand the impacts of globalization on regional economic development. We cannot just limit our attention to PC and internet penetration, although much attention is paid to the attraction of investments in ICT and to increase PC and the Internet penetration (UN ICT Task Force, 2005). The complexity of the ICT phenomena warrants close examination of ICT factors and the industries facilitating globalization.

Although the activities pertaining to globalization are not new (Mandle, 2005), today's globalization phenomenon is occurring at a rapid pace and is intertwined with ICT. Globalization occurs through the integration of economies as a result of the flow of trade, the flow of capital, and the cross-border use of labor. ICT enablesthis integration and tapping of foreign labor markets. The role of ICT in globalization is manifold. ICT can be a factor of production. The influences from ICT can come from ICT acting as an enabler of globalization or from ICT's functions as tools facilitating the economic/business phenomena. Whether ICT acts as an enabler or just a facilitator, the specific roles of ICT in a country and its participation in globalization can influence regional economic development.

Companies that become suppliers to global markets through the use of ICT have impacts on regional economies. It is necessary to investigate beyond the influences of capital and income flows due to such ICT activities. ICT outsourcing and non-ICT outsourcing (enabled or facilitated by ICT) plays a major role in globalization. Yet, the demand on ICT in developing countries can cause social changes and also make it easy to ignore the potential local uses for ICT that can make a difference. It is necessary to raise the questions regarding the changing influences of ICT and globalization. As a prelude, simple supply and demand analysis shows us some long-term influences on regional economic development on ICT related globalization.

2. Bangalore—a Technology City

An excellent example of the linkage of global and local network can be seen in Bangalore, a mega-city in India. In the midst of software network firms with more than 100 multinational firms and many other large, medium, and small firms, there exists a network of activities of slum dwellers with the objective of bringing them into a global system alleviating poverty and destitution. However, it is a very difficult task, and it is unlikely that the effort will succeed. Another significant aspect of the experience of Bangalore is the attempted cooperation of federal, state, and local government institutions, educational institutions, and the private sector. Bangalore is the capital of the Karnataka state, which is the eighth largest in India in terms of population and area. Both the state government and the federal government have initiated (with the cooperation of the private sector) an ambitious plan to develop the airport, power, roads, water supply, etc. However, the work is going very slowly and the situation has come to a stage where the growth in Bangalore may slow down and move to other competing areas like Hyderabad, Mumbai in Delhi. The plan of establishing software technology parks (STPs) starting in 1988 with 100% allowable foreign equity, no taxes on hardware and software imports, high speed data communication, security, independent telephone facilities, uninterrupted power supply, etc. were motivating factors for the growth in Bangalore. There is also private sector cooperative organizations like Bangalore Action Task Force (BATF) that are helping to improve the infrastructure of the city. Thus, Bangalore is providing an excellent example of how globalization and localization are acting together and how Kuklinski's scheme fits a region in the developing countries.

The revitalization in Bangalore, making it India's Silicon Valley, was engineered by transnational corporations (TNC). However, existence of low wage skilled labor is not the only reason TNCs came to Bangalore. There are other sectors in India like pharmaceuticals where the same situation exists although there has not been a dramatic movement in that sector. It is because of the non-existence of an innovative system in pharmaceuticals. Economic reforms, previous policy of import substitutions, market boom in software demand worldwide, devaluation of currency and low wage technical workers drew the transnational corporations. Although the firms could prosper with a low wage rate but also low productivity relative to its potential, scarcity of labor resources leading to higher wages eventually led to technological progress and economic efficiency. If this trend does not persist, the industry will move to other Indian regions and foreign countries.

In Bangalore, side-by-side with the multinational and big Indian companies, there exists a large number of small and medium size units with 10–50 employees (local assemblers still dominate 50% of the PC market). In many ways, the nature of innovation processes in these small enterprises is similar to those in the U.K., Scandinavia, and other western countries. Unlike other regions in India, factors such as the existence of universities and research facilities to develop skilled workers and new technologies, the existence of multinationals, entrepreneurial drive, and the availability of venture capital are mainly responsible. New product development through radical innovation (Cooke, 2001) by these small enterprises came primarily through self-motivation and the perception of new opportunities. Improvement of existing products through incremental innovation resulted due to customer pressure. The former effort is directed towards growth and export, whereas the latter is just to stay in the market. Incremental innovation took place due to external factors, and for radical innovation it is internal. Whereas the support for technology development from the government in India for small units is mostly through technology transfer, in Western countries it is through funding research projects and research grants. This low intensity of R&D in all industries, particularly small industries, and lack of technical background in entrepreneurs gives India a low technical achievement index (TAI).

The informational and networking society in Bangalore and its role in the socio-political development of the urban landscape is in many ways similar to the Silicon Valleys of other developing countries but in sharp contrast to those of the developed world. It is reinforcing the unjust socio-political divisions, disfranchising the poor, and developing information-age-elites. This is in tune with Castell's (1996) transformation theory of globalization, informational mode of transportation, and urban regional transplantation. Its theoretical basis can be seen in Paul Krugman's (Chatterji and Gangopadhyay, 2005) theory of center and periphery. The basic approach in Castell of the restructuring of capitalism (global shift of capital, weak labor, and state support for high-tech industries away from welfare activities) is the change in the development of the informational mode (use of computers) and more decentralization, separation of knowledge (elites v. manual workers), and urban regional transformation leading to high demand for knowledge workers. (Madon & Sahay, 2001)

Developing technology (radical or incremental) is not enough. It is the role of the entrepreneur (Sunder, 2004) to bring it to the market. In India this process is yet to start and needs to be nurtured. The process of globalization has greatly accentuated the role of entrepreneur. India has a long history of providing this spirit. But what is needed is more encouragement and removing the obstacles. The government's policy should be to not only protect and encourage public sector enterprise but also help the private sector, particularly small scale innovators, and encourage venture capitalists. There is also a bias towards foreign and large corporations in procurement orders. Corporate procurement processes work against the small vendor.

The government can play (van Dijk, 2003) a significant role in further developing the technology cluster in Bangalore. It can provide appropriate industrial policy, education and training, market support, physical infrastructure, and open research centers and incubators. Mobility in the region enables development and technology clusters especially. Human resources are a critical factor, and viable transportation ensures the availability of much needed human resources. The government agencies and planning plays a pivotal role in increasing mobility and effective infrastructure for transportation (Hayashi, 2008). At a time of world-wide recession, it also should be prepared to act as a cushion. The importance of the social embeddedness (Parthasarathy, 2006) of economic activity—tying state and local capital to bring economic transformation—has been discussed widely in the literature. When the state was autonomous and embeddedness was limited, like in India before the mid-80s, it hindered the ability of states in India to seize global opportunities. After that period things changed. However, although the state was not in the way, it was not helpful enough. Although embeddedness is a necessary condition, it is not sufficient. There has to be a balance between the two as we have seen in newly industrialized countries (NIC).

A significant change is taking place in the Bangalore cluster. It is moving from the position of low-wage, low-skilled software providers to high-skill R&D services supplier (Parthasarathy, 2006). It is moving up the global supply chain specializing in design and value-added R&D services. Although the state was a major player with multinational companies, this product and intersectional upgrading is taking place with the help of local entrepreneurs. Indians returning home helped in the phenomenon. Institutional thickness (previously missing) and a high level of interaction are fast developing. The type of R&D services they are pursuing is a combination of hardware and software to perform a specific task without human interaction, such as voice-data convergence, since the distinction between hardware and software designs are vanishing. In this area one can be a chip vendor (requiring substantial investment), design services provider, or seller of intellectual property (IP) blocks. There are some companies designing semiconductor chips and applying for patents. In the beginning, Bangalore started with major service providers. Another entrepreneurial group providing R&D and local networks among local firms is emerging. The

multinational corporations are taking advantage of local expertise rather than providing expertise as they did before. The absence of local manufacturing facilities poses no problem since many of the Indian firms have overseas collaboration, particularly in NIC. The technological upgrading led by multinational corporations is being replaced by local expertise. Informal networks have also increased tremendously. While informal networks and the private sector play critical roles in enabling innovation and R & D, the governmental role and importance of funding cannot be ignored (Musyck, Bernard, Reid, & Alasdair, 2007). Whether what is happening now in upgrading in Bangalore can be repeated someplace else (Hyderabad) or it will be sustainable is something to be seen.

There has been considerable work on the efficiency (Caniels & Romijn, 2003) of industrial clusters and spatial proximity under the heading of the Collective Efficiency (CE) approach. In an agglomeration, the enterprises are doing similar activities pursued by several units in a cluster that brings local external economies—including economies of scale, scope, and transaction—automatically for which a particular unit does not have to make any effort to attain. On the other hand, there are some advantages such as exchange of information and knowledge spillover that the unit has to seek actively. However, the benefit of getting this information far outweighs its costs. Thus there can be four basic types of agglomeration advantages (Caniels & Romijn, 2003): (1) spontaneous cost advantages, (2) spontaneous spillover, (3) facilitated cost advantages, and (4) facilitated spillover. The examples in (1) are economies of scale, critical local minimum demand, and local presence of specialized supplies. The examples for (2) are demonstration effects, human capital formations, and inter-firm movement of trained labor. For (3) examples are teaming up for joint projects and reducing risk in addition to advantages in (2), except that effort is needed on the part of the enterprises. In addition to intra-firm and inter-firm forces, advantages can accrue due to international technology transfer and governmental policy with respect to infrastructure development and regulation.

Caniels and Romijn (2003) use the empirical materials available from different sources for Bangalore to explain their framework of efficiency and capability building.

Macroeconomic policies of central, state, and local governments, international technology industries development, and outsourcing greatly influenced Bangalore growth. We have discussed these factors before.

Dynamic changes were already taking place in Bangalore's information technology sector. They have begun to obtain ISO certification and have moved from low skill, low wage, export-oriented software development to research and development leading to upgraded products. Many of the companies are devoting considerable amounts of resources to training and development. It is not just the multinational companies; small and large Indian companies are impacting training leading to capacity building. (Parthasarathy, 2004, 2006) The link of clusters to the U.S. software sector particularly through human capital and the increase in foreign direct investment and economic reform greatly accelerated the growth of Bangalore clusters. It is difficult to say at this stage how accumulated firm level capabilities can influence agglomeration economies to increase further. The existence of many small scale enterprises, specialized suppliers, inter-firm movement of labor, a well established forum of information exchange, and returned emigrants provided spontaneous knowledge spillover.

Although there is an increased joint private and public sector effort in improving the infrastructure as a response to growth, there is no evidence that agglomeration advantages due to deliberate effort on the part of the enterprises are forthcoming. It appears that the multinational corporations (Patibandla & Petersen, 2003) are reluctant to reveal "higher-end" knowledge and that the possibility is only for horizontal cooperation of large Indian enterprises of the same size. Due to the huge labor turnover, small and medium size enterprises are reluctant to share knowledge,

but there are some interactions on different levels of the value chain. In the case of Bangalore, compared to “new economy” factors “old economy” (Marsallian) factors play an overriding role. In this way, agglomeration economies of knowledge-based industries differ between developed and developing countries (D’Costa, 2006; Audirac, 2003; Subrahmanya, 2005).

It is often stated that the Bangalore cluster is exceedingly dependent on export-oriented, low wage, low skill activities susceptible to cyclical trends. Particularly the interaction between industry, academia, and government is missing in spite of a long history of development in technical education in Bangalore, economic reform, and a change in attitudes of the governments, etc. (D’Costa, 2006) There is a serious shortage of PhD level engineers who can devote their energy to research and development. Moreover, institutions need to be contributing at the research level to enable local development activities in a cluster (Basant & Chanda, 2007). The educational system at the post-graduate level and the high school level are particularly to blame. There is a lack of trust amongst the enterprises due to excessive competition. What is needed is vigorous cooperation between educational and research institutions, business, and government on the scale that is happening in the biotechnology field.

The growth of a cluster depends on other things such as quality of life, composition of the economic and social class of the community, provision of infrastructure, and human capital. (Wu, 2005) The questions to ask are: “What types of cities are creative? What location factors are essential? What are the urban policy initiatives used by creative cities?” Agglomeration economies are not generated purely on intra- and inter-firm linkages but also on overall external factors. A crucial factor is the political economy. For example, in the state of Andhra Pradesh where the cyber city Hyderabad (a competitor of Bangalore) is located, voters in state elections overwhelmingly rejected further growth of the IT cluster, and the state has reverted back to develop the village economy.

Global trade and global sourcing of material had been a practice for a long time in the civilized world, and with expanding capabilities of communications and transportation we have witnessed a tremendous growth in such global activities during the last two decade. In this mosaic of global transformation, Bangalore, a regional city in the southern state of Karnataka in India, appears in the forefront due to the extent and rapidity of its developments. The activities in Bangalore have brought about state and local economic transformations. Regional transformations inevitably give rise to concerns about the distribution of economic development. Not only economic transformation but also Bangalore’s distinct reputation as a region of Information Technology (IT) services production has made it possible for researchers as well as other writers to call Bangalore India’s Silicon Valley. However, researchers have shown that the economic benefits are concentrated in certain sectors, and there are disparities in the distributions of socio-economic development (Madon, 1997 & Heitzman, 2005). As a result, an analysis of research literature points to a mixture of articles where some show mostly benefits (Jahuhari, 2006; Saxenian, 2005), some depict more balanced scenarios (Nair, Ahlstrom & Filer, 2007; van Dijk, 2003), while others discuss the problems and issues (Ilavarasan, 2007; Subrahmanya, 2005). Although India had programs such as Barefoot, which does not adopt high technology, there are cases that show the role of IT enabled interventions in alleviating poverty (Jahuhari, 2006). IT institutions such as ITC in India and companies such as HP started programs or e-initiatives that help the communities through education or providing means of communications that can help alleviate problems and poverty (Jahuhari, 2006). The benefits of IT industry are not limited to established IT companies setting up operations in Bangalore but also Indians who have gone abroad such as those in Silicon Valley in the U.S. who set up or help to setup operations in India that provide employment to many other people (Saxenian, 2005).

More direct benefits to the economy arise from software and other IT industry activities in Bangalore. However, the success of the IT industry depends on a multitude of factors such as government policies and initiatives by companies that try to go beyond low cost products and service to high quality software (Nair, et al., 2007; van Dijk, 2003), which can be greatly helped by clusters. For the development of clusters and encouragement of the IT industry policies, infrastructures, and incentives are critical and government support must come at different levels of government—spanning local levels to national levels (van Dijk, 2003). Although agglomerations such as Bangalore bring economic benefits, they need a balanced approach as well. For example, governments must not try to micro-manage (Nair, et al., 2007); competitive forces must be dealt with; and diversification must be done to mitigate the risks due to heavy export dependence (Nair, et al., 2007; van Dijk, 2003). Effects of export dependent growth can be seen in the type of employment and skills sought by employers. The experience gained by employees is also required by mostly western clients (Ilavarasan, 2007). Innovation patterns are more incremental in nature when compared to that of western countries (Subrahmanya, 2005) because the innovations are driven by low cost production demands, and the majority of the clientele is outside the country, which does not seek knowledge transfers.

Not only do the aspects of outcomes that researchers discuss vary, but the theoretical lenses they have adopted in analysis and in construction of their perspectives also vary. They cover a wide range of fields such as economics, regional development, strategic management, sociology, innovation, and geography. Commonalities and differences in the events that have unfolded in Bangalore emerge from an analysis of past research literature. At a macro level, such an analysis helped us gain insights into the evolution of agglomerations and clusters in Bangalore that will be helpful in understanding globalization.

The industrial and economic development in Bangalore has occurred over several decades. The associated phenomena are worthy of deep analysis, and past researchers have contributed a significant amount of knowledge on the developments. Our objective in this section is to describe the events that have unfolded leading to agglomerations and clusters. With the use of multiple theoretical perspectives, we attempt to add predictive value to our work. Events unfolded in Bangalore with respect to IT, and high technology activities are parallel to global events in globalization and to events in other regions such as China, South East Asia, and Eastern Europe. Technological developments and impacts of IT have accelerated the globalization phenomenon that was more prominent in trade and traditional smokestack industries during the early days. Outsourcing and migration of IT production centers started taking place afterwards, and substantial developments occurred in Bangalore during this period (Arora & Athreye, 2000). From a purely economic perspective we can argue that production and transaction costs are the major factors as explained by Transaction Cost Economics (TCE) (Williamson, 1987).

Pure TCE arguments held true when companies sought Bangalore as a destination for their IT development activities looking mainly at cost reduction. However, outsourcing is a dynamic phenomenon that has evolved, and lately companies have started seeking more innovative solutions from their suppliers in addition to the cost reductions (Dedrick & Kraemer, 2009; Jayatilaka, 2009). These emergent needs occur when more institutionalization and stabilizations occur in Bangalore because of agglomerations and clusters that establish regional networks. In the early days, Bangalore policy makers had attempted to meet the needs of investors and clients seeking offshore services located in Bangalore. Due to shifting needs of clients and changing regional and global economy, Bangalore will face challenges (Anantharaja, 2009; Kuruvilla & Ranganathan, 2008; Leferve, 2009). Being dependent on external demands, Bangalore will need to have appropriate capabilities for innovation (Bhide, 2008; Jayatilaka, 2009) not only adoption of technologies but also diffusion, as well as innovations, that will allow the region to face emergent problems from

shifts in global economy and local institutionalization. (Basant & Chandra, 2007; Chaminade & Vang, 2007)

Bangalore has emerged as a front runner in the IT and software industry, and the area has become a destination for other technology development activities such as Research and Development. According to NASSCOM (National Association of Software and Services Company), India's IT industry is estimated to be about \$64 billion in 2008, and a significant part of this is in software and service exports. The growth rate of the IT industry had been more than 20 percent. Although India's IT production centers are dispersed in several geographical regions, major growth areas are limited to Bangalore, Mumbai, Delhi, and Noida (in Uttar Pradesh). Noida's IT industry is smaller than that of Bangalore. Mumbai is a major trade and industrial center, and its major industry is textiles. Delhi, being the capital, has diverse activities that preclude it from being shown as the major IT industry area. This leaves Bangalore as the only one of the four to have the IT industry as its leading industry. Among the IT industries, most prominent are the software and services industry and Business Process Outsourcing (BPO). All of these are not for export, yet exports constitutes a large percentage (about 75% or more) of the IT industry while the domestic market is about one third of the corresponding export market. Although the domestic market has grown, the export market has grown too (cf. table 1—Arora & Athreye, 2000). The ratios between the domestic market and exports are the reverse of software and service in the hardware industry where a significantly higher percentage of the hardware (more than 90%) is for the domestic market. The disparity between domestic and export markets in hardware can be due to the demand for hardware coming from the large IT software, IT services and BPO industries.

Table 1.

Growth of Software Revenues (\$ Million)

Year	Export revenues	Domestic revenues
1984	22	—
1985	26	—
1986	38	—
1987	54	—
1989/90	105	—
1994/95	485	350
1995/96	734	490
1996/97	1085	670
1997/98	1750	950
1998/99	2650	1250

(Source: Arora & Athreye, 2000)

The most prominent impact from the IT and BPO activities is the influx of capital and other funds into the cities and the surrounding regions. Foreign companies either directly setup their operations in cities like Bangalore or they outsource the activities to companies based in Indian cities. The money flow benefits the local employees as well as the other businesses that support the investors' activities. There will be stimulation of economic activities, and we can expect overall development in the cities as well in the surrounding regions as we have witnessed in the Bangalore

region. While the economic developments resulting from monetary influx are mostly tangible, development of another asset has long-term impact on the regions. The technical activities needed for meeting investor demands necessitate development of skills and creation of knowledge as well as transfer of knowledge. These can be considered as necessary intellectual capital that contributes to further developments in the future. Such regional intellectual capital gives rise to agglomerations that are enabled by communications, infrastructure, and opportunities. In addition to businesses forming agglomerations that are formed around the IT industry, Bangalore has other high tech industries such as biotechnology and nanotechnology. However, IT attracts more investments than other technologies, biotechnology for example (Bagchi-Sen & Smith, 2008).

Bangalore's prominent position in hosting IT industry and the ability to host other high tech industries is not happenstance. An appropriate mix of government policies, planning, investments, and promotional efforts have contributed to the outcome of Karnataka becoming a destination for the IT industry as well as a place for investment in other high tech industries. Munificence of the environment or the availability of resources and infrastructure facilities attract investors and subsequent economic development. Bangalore local government and Karnataka state government played active roles in creating this environment for investments in Bangalore. Deliberate efforts by Bangalore city and Karnataka state governments played enabling roles, and the institutional environment inherited by Bangalore also provided an impetus for the later activities. From a regional development perspective, making facilities available for investors in India with a large population still in poverty could be controversial. While investments result in monetary inflow and business and employment opportunities for the local people, investments also create demand for local resources. The monetary flow and demand for local resources can cause upward pressures on the prices and widen the gap between the rich and the poor. However, there were social payoffs that could be derived from the investments in knowledge creation and technology transfer (Mowrey, 1983), and India offered a populace with English language capabilities and the educational level necessary to be productive in technical realms and facilitate technology transfers. The central government of India set up committees to attract investors in high technology industries. While this effort was going on, Karnataka also had to take a proactive role to avoid being left out and unable to exploit the opportunities. Especially in the case of IT, several other regions do compete with Bangalore for investment inflow. When attempting to find causes for Bangalore's achievements as a region, analysis of history is beneficial because historical narratives establish frames useful for conceptualizations and insights (Stryker, 1996). Historical accounts of Bangalore are easy to find, and we describe some historical highlights to provide a background and a frame for understanding the factors that have led to present day Bangalore. The following description is very short, and more descriptive accounts related to the present globalization phenomenon can be found in Heitzman (2004) and Nair (2005).

Historically, Bangalore had a section of its populace that was educated and worked for the British government before independence. The Mysore region had been a dynamic region with economic and political activities even during pre-colonization (British colonization) periods. Historical events give evidence of a culture oriented towards industrial leadership, and the area can be treated as 'pre-disposed' to become a center of high-tech activities in India. As early as the beginning of the 19th century, Bangalore emerged as a bi-nodal colonial administration center while its pre-colonial administration was breaking down. This pre-colonial administration had shown its strength and leadership in development before the British overpowered the then rulers. Mughals conquered Bangalore in late 17th century (1687) and two years later sold it to Mysore, which was becoming a state. Mysore was developing at this time and so was Bangalore. Moreover, Mysore's kings had managed to expand their territory and not undergo subordination from the Mughals. Although Mysore's royal lineage ended in the mid-18th century, Mysore's ruler made

it a powerful state with military strength. At the same time, the state undertook modernization encouraging commercial and industrial growth. During the latter half of the 18th century, both British and French companies were in Southern Indian states. However, Mysore's ruler continued his aggression against the other southern states and antagonized them. The British recognized the military and industrial strength of Mysore. In essence, it was the disharmony among these states and Mysore that enabled the British to overpower Mysore's ruler. Despite the British overpowering the Sultan in Mysore and dismantling the state, they did not directly establish their rule over Mysore. Instead, the British recognized a five year old as the king of the region. This led to a bipolar administration with European military presence and regional king. This amounted to ensuring a certain degree of continuation of the social dynamics that existed in pre-British rule. Expansion of Bangalore city continued. There was economic rejuvenation and development of the textile industry under this arrangement. However, due to an increase in corruption of the regional ruler's government and protests by the locals, the administration came under British commissioners.

The British established administrative structures, and later, because of efforts by individuals both in administrative institutions and private industry, further growth and development occurred although it was not a continuous growth. Two trends that seem to have started during early stages occur in the later developments in Bangalore: (i) the migration of people to Bangalore for employment and (ii) growth and industrialization with leadership provided by individual industrialists as well as strong government involvement. Especially during the early stages of British rule, due to the competition from imported textiles the local textile industry declined. In other business areas such as services and trade, activities grew with the demand from the British cantonment and the administrative personnel. There was migration from surrounding Indian states to Bangalore for the opportunities. Similar to trends in the growth of economy and power seen in pre-British Mysore, this migrant workforce showed a trend towards a more "cosmopolitan" city as we witness today. Yet, there was no popular or citizen participation in governing activities. Also in latter part of the nineteenth century, British handed over Mysore state to a regional king. While Bangalore's population grew, the state had to undertake infrastructure projects with proper planning. As a result, Bangalore started showing leadership in industrialization and growth. Bangalore's economy continued to grow with industrialization, especially with the growth of the textile industry. Bangalore led other cities in India in electrification (Heitzman, 2003) and became the first city in India to install an electric generation and distribution system, which grew as the demand grew. Availability of electricity also contributed to industrial growth. Although early textile industry was limited to handlooms, later there was mechanization using steam power and electricity. Administrators placed emphasis on education and industry and technology management. Organizing for industries was given priority, and some individuals gave leadership in those efforts. As a result, several individuals setup companies that provided employment and contributed to regional growth. Mysore government also setup some industries resulting in a mixed economy. Events during World War II gave further impetus to industrialization in Bangalore. During the war, British facilitated an aeronautic industry for assembly and overhaul of aircraft, and it was in the interest of Indian industrialists as well. In collaboration with local government and the government of India, private industrialists setup the first Indian aeronautic industry in Bangalore. This was a continuation of an earlier trend of taking a lead in adoption of technologies. For almost a century, local governments in Bangalore encouraged industrialization, and the trend continued after independence.

Later, after independence and because of the location, the Indian government started establishing defense related institutions in Bangalore. Unlike in the pre-independence era, government involvement in the region grew. Based on political philosophy, one could argue that

more government involvement would have hampered development in the region. However, analysis of history shows that greater government involvement then helped to set up some of the essential infrastructures that contributed to the growth during the last decade of the twentieth century and beyond (Reily, O'Mara, & Seto, 2009). The government set up institutions such as Indian Institute of Technology in Bangalore and Indian Space Research Organization that are in the forefront of technology development and innovation in India. Overall, the following prominent characteristics emerge from the Bangalore and Karnataka state (previously Mysore) in general: (i) involvement of private industrialists and regional government in industrialization and growth—i.e., mixed private and public economic activities; (ii) leadership and adoption of technologies; (iii) regional development with some degree of decoupling from British domination; (iv) accommodation of migratory workers that facilitated and complemented the use of local resources; and (v) major governmental investments in institutional and infrastructural developments.

Post-independent India's government opted for governmental controls to encourage development of local industries, which some claim had hampered growth. However, later the government lifted restrictions allowing inflow of international commercial and multinational business activities. During the economic liberation in the 1980s, several multinational as well as indigenous companies set up operations in Bangalore for software development. Coupled with Bangalore region's trend in industrialization and innovation, these later initiatives enabled the populace to expand its involvement in technology related activities as well as to gain the knowledge required to participate effectively in emerging globalization activities. Workers in IT and other high-tech industries migrated from other parts of India as well, and local expertise enabled growth of IT outsourcing and establishment of offshore operations by companies in Bangalore. Establishment of IT industries took precedence over the efforts to attract biotechnology research and development and biotechnology industries. Similar to the Karnataka state government's efforts for promoting Bangalore as a destination for investments in the software industry, the government promoted investments in the biotechnology businesses during the early 2000s. In 2001, the Indian Institute of Science and a group of consultants along with University of Agricultural Sciences announced and promoted Bangalore as the biotechnology capital of India. They formed a project called the biotechnology corridor. It can be inferred that those promotional efforts were modeled after the success of the promotion of the IT corridor and the concept of Bangalore as IT capital of India.

IT Outsourcing, Production Off Shoring and Regional Impacts

IT outsourcing phenomenon has played a critical role in the development of Bangalore during the last two decades. Outsourcing has two sides, i.e., a client side and a service provider side. The service provider side is the most important when investigating Bangalore's development. However, examination of the client side will contribute to our understanding of the limitations of developmental effects on Bangalore. According to IT outsourcing research, low transaction costs have been the major drive for outsourcing. In the late 1980s when large U.S. companies set a significant IT outsourcing trend, companies outsourced to vendors in the domestic market. Among various reasons given by managers for outsourcing, a major reason was cost savings (Lacity & Hirschheim, 1993). With the trend set by large companies and their successful IT outsourcing outcomes, many other companies followed (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004), and we can logically conclude that demand for domestic outsourcing service provisioning grew consequently. It is logically correct to assume that the relationship between supply prices and demand plays a critical role in the shifting of sourcing locations. IT outsourcing market in Europe and the U.S. grew to several hundreds of billions of dollars, which is a significant percent increase from the early days. This demand growth for domestic IT services in western

countries raised vendors' prices that preceded the tendency for IT operation migration to offshore locations. However, for companies to seek offshore resources there must be sustainable sources for resources as well. The "offshoring" phenomenon, or obtaining services from locations outside the client's country, can be broadly classified into two major categories. They are (i) sourcing the services from vendors in offshore locations, such as Wipro, and Infosys in India; and (ii) sourcing the services from operations established at the overseas locations as done by HSBC, Citi group, General Electric, and others who have established operations in India. These two methods amount to total offshoring, where the location of production is completely established in places like Bangalore away from the client or user locations. Instead of completely locating production in overseas locations like Bangalore, some companies located in the U.S. and Western Europe brought in technical personnel from countries like India (Subramanian, Misra, Jayachandran, & Singh, 2008). These technical personnel work as contract employees for a specified period, and overhead costs of these employees have been low compared to that of domestic employees. With the developments described in the previous section, Bangalore possesses the capability to provide the necessary resources for all three types of offshore IT sourcing. However, the human resources that provide capabilities only are inadequate for the success of IT outsourcing. Other resources such as infrastructures for data communication networks, transportation, and physical spaces must be available to enable the effective use of human resources (Kaufman & Kumar, 2008; Kumar 2009; Lefevre, 2009; Pani, 2009). The billing of Bangalore as IT capital of India and promotion of the concept of the IT corridor were also substantially backed by public institutions. Bangalore city and the Karnataka state governments provided these other resources as well. Still, from an economic perspective not only availability of the factors of production but also low production and transaction costs are essential for the success of outsourcing. Especially for the IT outsourcing phenomenon to become a "global" phenomenon, which some researchers identified as having a band wagon effect, the efforts for cost reductions must come from more than just a few Indian, regional, or Bangalore IT companies. There must be some collective influence.

Ideally in the absence of opportunism, asset specificity, and bounded rationality, transaction costs will be zero and the minimization of these three factors results in low transaction costs. Although we cannot expect this ideal situation in reality, Bangalore offered many opportunities that enabled the lowering of transaction costs. The cost reduction from salaries of employees is well known, and the advantages are significant, as seen in Table 2. (Although the table shows data from 1995, the present day comparative salaries do not differ greatly, cf., payscale).

Added advantages arise due to regional dynamics. Especially, agglomerations and formations of clusters in the Bangalore region help drive down the costs. Such regional concentration of companies helps integration and formation of networks among similar companies, and several factors need to be considered in IT outsourcing because of the complexity of IT outsourcing. Although we often use the term IT outsourcing in general, it is not a surrogate for all the possible types of IT outsourcing. Unlike commodity type services outsourcing, different IT tasks require different types of technical knowledge sets as well as different degrees of domain knowledge. Moreover, differences can exist between how companies utilize certain IT products or services. Such differences make it difficult to evaluate the asset values of certain IT activities.

When outsourcing domestically, client companies often seek IT services such as data center, desktop support, helpdesk, software development, and network management services because these tasks are associated with low asset specificity. Some tasks such as network management have to be performed at client locations, and performing such activities in Bangalore is difficult and even impossible unless they are remote network management functions. Business Process Outsourcing (BPO) is another common type of outsourcing activity, where companies outsource processes separable from the rest of business processes. Often these processes are generic ones

Table 2.

International Differences in Salaries Paid to Software Professionals, 1995 (U.S. \$)

Job category	Switzerland	USA	Canada	UK	Ireland	Greece	India
Project leader	74000	54000	39000	39000	43000	24000	23000
Business analyst	74000	38000	36000	37000	36000	28000	21000
Systems analyst	74000	48000	32000	34000	36000	15000	14000
Systems designer	67000	55000	36000	34000	31000	15000	11000
Development programmer	56000	41000	29000	29000	21000	13000	8000
Support programmer	56000	37000	26000	25000	21000	15000	8000
Network analyst / designer	67000	49000	32000	31000	26000	15000	14000
Quality assurance specialist	71000	50000	28000	33000	29000	15000	14000
Database data analyst	67000	50000	32000	22000	29000	24000	17000
Metrics / process specialist	74000	48000	29000	31000	–	15000	17000
Documentation / training staff	59000	36000	26000	21000	–	15000	8000
Test engineer	59000	47000	25000	24000	–	13000	8000

(Source: Arora & Athreye, 2000)

that can be found across different businesses, e.g., customer service/call centers, human resources, payroll processing, accounting processes, and on-line payment processing. When we eliminate the location dependent processes and activities, other tasks require resources at the offshore locations. Because the processes have low asset specificity, competitiveness in personnel and the skills market (skills required to perform the processes) is low, which essentially results in low transaction costs. On the other hand, being low in asset specificity implies that the personnel who work on these processes find greater career mobility among the vendors and companies that produce the services. Mobility of personnel essentially establishes conditions for knowledge transfer among the companies and for close relationships among them that are conducive to the formation of clusters (Chaminade & Vang, 2008). Formation of such clusters in Bangalore not only resulted in low asset specificity but also resulted in other benefits such as innovation costs that are not explicitly considered in transaction costs. From a Transaction Cost Economics perspective, clusters contribute to a reduction of opportunism.

The relationships among companies in a cluster enable information sharing that reduces opportunism of vendors or resource providers. The concentration of service providers or outsourcing vendors in a region such as Bangalore enables interaction and communication among the vendors. This enables the flow of information among vendors or among production centers in general. Such information sharing among vendors or production centers facilitates competitiveness, especially if bidding is involved (Whang, 1992). Often managerial decision making

is shaped by information availability in the environment, and media reports, etc. play an important role in forming an organizing vision that facilitates decision making (Ramiller & Swanson, 2003). Information on Bangalore is widely available through public sources, yet not all such publicly available information may be relevant for decision makers. However for information seekers, obtaining information on companies in clusters concentrated in a given region becomes less costly than finding information in a more dispersed cluster. Clusters in a given geographical region facilitate clients' or resource users' information access, thereby facilitating their evaluation processes. Having informed evaluations allows clients to counter opportunism and the effects of bounded rationality. The desired lowering of transaction costs had occurred in the Bangalore region. However, from the service providers' perspective for the continuation of production, production costs must be low for sustainability as well as for their businesses to make substantial contributions to the regional economy.

Although the growth of IT industry in Bangalore and the strides the region has made in other industries is undisputed and often discussed as a model (Dalmia, 2006; Renuka, 2005), the regional impact of the IT industry on Bangalore is debatable (Ilavarasan, 2007; Scherer & Harhoff, 2000; Shah, 2006). For a business in the IT software industry, recurring production costs might be significant and often surpass the initial capital expenditure for infrastructure. Bangalore's advantage in lowering production costs resides in the skilled workforce whose wages are low compared to their western (European and U.S.) counterparts (Commander, Chanda, Kanagasniemi, & Winters, 2008). Other capital costs for technology such as hardware costs have declined. Other common infrastructure needs exist and in the case of Bangalore these needs are met by the Karnataka government. Karnataka's expenditure on planning and infrastructure to provide facilities for a global IT industry is disproportionately high for a state in a country not as economically developed as Western countries. In addition to the investments on infrastructure, the state also has to forgo some tax revenue due to tax incentive given to investors. Hence, often a debate on the real economic benefits of globalization and IT offshore/outsourcing to Bangalore ensues (Audirac, 2003). The infrastructure developments to meet the needs of the global IT industry chokes the regional development necessary for a growing population, which is another outcome of the increased IT and other technology production activities.

Disparity of growth and the economic gap between the poor and the rich does not mean that the efforts to attract investments and high technology activities are futile. There are two major benefits, i.e., (i) infrastructure and technology transfers that have direct utility value to the local business and residents (ii) opportunities for further growth and opportunities for formation of networks (Jauhainen, 2006). When compared to the size of the population served by the first mentioned benefit, it is possible to argue that the resulting regional economic benefits are not adequate. In spite of such arguments, there are benefits coming from the Internet infrastructure and other communications capabilities that can be utilized by local industries and businesses. Extending these Information Communications Technologies (ICT) infrastructures to wide geographical areas without limiting them to selected areas, IT and other high-tech production facilities will enable the citizens and local businesses to reap IT benefits (Jauhari, 2006). IT will enable productivity growth and effective governance with improved communications (Richards, 2004) that result in improved services in the region (Puri & Sahay, 2007). In addition to the infrastructure facilities, mobility of the workforce will facilitate knowledge transfers to local businesses and the development of systems and technologies that suit local needs (Jayatilaka & Chatterjee, 2007). While such knowledge transfers are direct and show benefits or sustainable development, the second aforementioned benefit of knowledge networks and knowledge creation has long-term benefits.

Bangalore and Karnataka governments' planning when locating businesses, creation of corridors and communication infrastructures (Heitzman, 2004; Nair, 2005) enabled the formation of clusters that could help reduction of costs due to the possibility of knowledge transfers among companies. Although producing somewhat mixed outcomes, agglomerations give rise to opportunities for growth for other businesses that support the high-tech industries (Koo, 2005). Nevertheless, exploitation of these opportunities the region provides through proper planning, incentives, and infrastructure requires certain knowledge sets and skills. The required knowledge sets cannot be generalized due to the differences that exist. Although IT and other high-tech industries both required specialized expertise in certain knowledge areas, some activities in these industries do not require such highly specialized skills and expertise. Such activities are the ones that are well developed as routines, and some associated products have achieved a significant degree of "commoditization," e.g., activities requiring assemblies that can be done in assembly lines with mechanization, routine helpdesk functions, and some customer service activities and datacenter tasks. Bangalore has the infrastructure and people that provide these different levels of knowledge sets. R & D institutes and educational institutions play the most critical roles in producing knowledge and the development of businesses and technologies. Bangalore's research and educational institutes have played a significant role in knowledge networks and in supplying knowledge resources (both in terms of research outcomes and in the form of human resources) that helped industrial growth in the region (Basant & Chandra, 2007; Roy & Banerjee, 2007). Educational and research institutions' role is a critical one, especially, and their role will be more important and definitely not less with changing dynamics in the industries.

One trend is that companies expect more than just cost savings from outsourcing and offshore production activities. The lowering transaction costs and the availability of low cost human resources had the intended effect of increased flow of funds and subsequent economic development. From a holistic perspective, several other factors, which are not directly taken into consideration in transaction costs, influence economic development and the sustainability of development. Especially with clusters involving offshore and outsourcing activities, innovation is one such factor that drives long term sustainable economic development.

Innovation and Development

IT outsourcing as well as seeking offshore production and services is not an invariably static phenomenon. Companies always seek economically viable sources for factors of production, and what they seek as well as the sources' locations shift according to the dynamics of the markets. In IT outsourcing and offshore activities, a shift is occurring with some companies seeking innovations from vendors (Jayatilaka, 2007; Levina & Su, 2007). There are different types of IT industries. At a very high level, we can categorize the IT industries as software and hardware industries. The PC industry and the production of other computer hardware fall under hardware industry.

Companies have outsourced or have located knowledge creation activities in the form of hardware design in offshore locations like India. PC industry was completely domestic in the beginning, and later companies sought low cost components from overseas vendors. Afterwards, with expanding foreign markets, PC industry started moving manufacturing offshore to optimize distribution and logistics costs. As domestic costs grew in comparison to offshore costs, companies went offshore and subcontracted subassemblies and manufacturing. Final assembly work also shifted to offshore locations, and the movement of design and development functions followed this trend. Offshore destinations of these early shifts in PC industry were the Orient and Southeast Asian countries such as Japan, Taiwan, the Philippines, and Malaysia. Although India

and specifically Bangalore were destinations for software and other IT activities, Bangalore had not been a destination for major hardware development. This started to change in the late 1990s with hardware related activities in Bangalore. Intel setup Intel India Development Center (IIDC) in Bangalore in 1999 to perform software and hardware engineering. According to Intel, IIDC became possible due to India's IT and engineering talent pool. IIDC is an Intel organizational unit with the most divisions outside of the U.S. and the largest among Intel's international non-manufacturing sites. According to Intel, "the IIDC has grown to employ more than 800 employees, all supporting its mission of delivering high-quality, cost-effective Intel solutions through technology leadership and quality engineering" (Intel.com). This shows the quality of the Indian talent in Bangalore and its potential for innovations. IIDC activities in Bangalore are not limited to obtaining sources for its design and development but extend to involvement in education and community development. Innovations associated with software are somewhat different from those associated with hardware.

Computer software can be classified broadly as applications software and systems software. Innovations in application software need a greater degree of applications domain knowledge than systems software design and innovations. Application software is tightly linked to application domains, e.g., financial analysis. A software programmer needs to know the specific analysis methods and user processes. In essence, innovations in application software require application domain knowledge, e.g., knowledge about business processes that use the software. Often business processes are dependent on culture and society. This implies that the knowledge required for translation of the software requirements will need some country or society specific knowledge as well. However, this does not mean that offshore innovations cannot be done. Outsourcing activities in India had shown that some of the culture dependent activities are done in India effectively after proper training. Bangalore's software development companies had undertaken such projects where requirements of others countries are met successfully by Indian companies, e.g., Infosys, Wipro.

Innovation, which is termed as the next frontier of outsourcing, is a knowledge creation as well as a knowledge transfer activity. Knowledge creation does not occur in absence of any related knowledge, and Indian personnel have already gained the necessary basic knowledge in technology fields to perform the necessary knowledge creation. Innovations start with attention to new ideas, and later developments occur through developing the ideas further, combining with existing knowledge, and finally implementing the developed and assimilated ideas in a useful manner. Often individuals become complacent and tend to dwell on familiar activities. This implies that new idea generation requires triggers to change or threats to existing circumstances. Threatening or disruptive events cause new idea generation (Schon, 1971), but in an organization such idea generations occur due to expectation failures or due to deliberate actions such as goal setting (Argyris & Schon, 1977). Idea generation occurs at the individual level, while groups and organizations enable and provide support. The relationship of new ideas to the whole activity or the organization must be understood, and a relationship must emerge for an innovative idea to become a reality. For resulting innovations to be useful, the ideas generated must be related to ongoing activities as well.

The relevance of innovations to regional development needs to be examined further. Often innovations that occur in a region are relevant to the region, but when local companies have to meet the needs of multinational companies or overseas clients, innovations' usefulness to the local communities is questionable. The innovations' outcomes do not always get distributed from an innovator to a region as macroeconomic, and as research had shown the inventions and innovation outcomes tend to be limited to a smaller percentage of companies (Scherer & Harhoff, 2000). As found in Nair, et al., the Bangalore software companies' successful growth is based on

demands from international markets (Nair, Ahstrom & Filer, 2007). Nair, et al.'s (2007) findings also confirm the implications Scherer, et al.'s (2000), findings on the skewed innovation outcome distributions. There are two possible ways for software industry innovators to contribute to regional development and innovations: (i) through diffusion of process innovations, which result from software development process; (ii) adoption of innovations to regional situations. IT and other technology innovations can contribute to regional development due to the interactions among organizations. The development of clusters especially enables innovations. In turn, innovations also lead to the development of clusters because innovations require interactions for idea generation. Knowledge transfers required for such innovations in Norway's high-technology clusters (in four cities) have occurred through labor markets (Onsager, Isaksen, Fraas, & Johnstad, 2007). It may be difficult to attain such knowledge transfers in Bangalore due to brain drain or overseas migration (Walcot and Heitzman 2006). Although it cannot be generalized, Subrahmanya (2005) found many differences between innovations in small enterprises in Bangalore (which are more interrelated with the regional development) and in northeast England. As Subrahmanya (2005) points out, there are many similarities between Bangalore and northeast England with research institutes, concentrations of industries, and traditions of growth. Nevertheless, the R & D intensity of small-scale enterprises in Karnataka is much lower (three times less) than that in the UK, and innovations in the UK are more radical, while innovations in Karnataka are incremental. Such low innovative activities also are reflected in technology achievements and industrial performance (Subrahmanya, 2005). Despite this biasness in Bangalore, there are cases from India where R & D activities have contributed to medium and small scale industries (Roy & Banerjee, 2007). The lopsidedness of innovative activities and the tremendous growth in high-tech industries in Bangalore regions does not imply that the regions lack resources for development.

Overall, innovative capabilities and necessary resources in Bangalore have the potential of attracting a new generation of outsourcing and offshore activities. This can amount to direct economic contributions to the region. In addition, the innovations have the potential to contribute to further technical as well as administrative innovations that spin further regional economic development in agglomerations. While agglomerations and clusters facilitate innovations and innovations feed the development of clusters and agglomerations, phenomena non-complementary to innovations in companies can develop in regions.

Institutionalization

With production of similar services and technologies, the companies in Bangalore and similar regions that become outsourcing and offshore suppliers develop organizational fields. An "organizational field" consists of "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services and products" (DiMaggio & Powell, 1983). Organizational fields develop when the following five attributes exist: (i) an increase in the level of interaction among organizations, (ii) an increase in the load of information, (iii) emergence of a structure of domination, (iv) emergence of patterns of coalition, and (v) development at the cultural level of an ideology of the potential field (DiMaggio & Powell, 1983). Organizational fields give rise to institutionalization that produces homogeneity. It will be useful to investigate whether organizational fields and homogenization of organizations has occurred in Bangalore because such organizational fields will result in institutionalization that can deter further technical developments in the region. This deterrence can hinder the necessary innovations that drive further economic development. Homogenization in Bangalore is evident in areas such as culture (Shah, 2006),

innovations (Walcot & Heitzman, 2006), and export dependent high-tech industries (Auirac, 2003; Nair, et al., 2007).

Especially in countries like India with poverty and low literacy (Walcot & Heitzman, 2006), homogenization within high-tech industries can further polarize.

Bangalore is a success story. We have indicated here why it happened there and not in other places of India. However, things are changing. There are serious diseconomies of scale. Other regions in India and elsewhere are competing with Bangalore. The infrastructure is deteriorating. Cost of doing business is going up. There are environmental problems. Industries are moving to other parts of India. We suspect similar situations exist in other parts of the world. We hope that others will prepare case studies for those regions and compare with that of Bangalore. A daunting task will be to develop some sort of theoretical model involving globalization, ICT, national and international industrial and economic policies. We hope such a framework will be available in the near future.

Bibliography

- Anantharaja, Ammu. Causes of Attrition in BPO Companies: Study of a Mid-Size Organization in India. *The IUP Journal of Management Research*, 8(11), 2009 8-27
- Andersson, David E., & Andersson, Acke E. (2005). Globalisation in Stages. In: Partha Gangopadhyay & Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 78-94.
- Apte, U. M., Sobol, M. G., Hanaoka, S., Shimada, T., Saarinen, T., Salmela, T. & Vepsalainen, A. P. J. (1997) IS Outsourcing Practices in the USA, Japan and Finland: A Comparative Study. *Journal of Information Technology*, Vol. 12, pp. 289-304.
- Arora, Ashish and Athreye, Suma (2000) "The Software Industry and India's Economic Development" *Information Economics and Policy*, Volume 14, pp. 253-273
- Audirac, Ivonne. "Information-Age Landscapes outside the Developed World." *Journal of the American Planning Association*. Volume 69 (2003): pp. 16-32.
- Aunde, Madhchhanda Das and Mathew, Saji K. (2009), "Risks in offshore IT outsourcing: A service provider perspective" *European Management Journal*, Volume 27, Issue 6, pp. 418-428.
- Azis, Iwan. (2005) "IMF Perspective and Alternative Views on the Asian Crisis." In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 33-56.
- Bagchi-Sen, S. and Smith, H. L. (2008) "Science, Institutions, and Markets: Developments in the Indian Biotechnology Sector", *Regional Studies*, Volume 42, Issue 7, pp. 961-975.
- Barney, J.B. (1991) "Firm Resources and Sustained Competitive Advantage," *Journal & Management* Vol. 17, Issue 1, pp 99-120.
- Basant, Rakesh and Chandra, Pankaj (2007) "Role of Educational and R&D Institutions in City Clusters: An Exploratory Study of Bangalore and Pune Regions in India" *World Development* Volume 35, Issue 6, pp. 1037-1055.
- Basu, S., Fernald, J. G., Oulton, N. and Srinivasan, S. (2003) "The Case of the Missing Productivity Growth, or Does Information Technology Explain Why Productivity Accelerated in the United States but Not in the United Kingdom?" *Macroeconomics Annual*, Vol. 18, Issue 1, pp. 9-71.
- Bhide, Amar (2008) "What Holds Back Bangalore Businesses?" *Asian Economic Papers*, Volume 7, Issue 1, pp. 120-153.
- Cappelin, Riccardo. (2005) "The Governance of Regional Networks and the Process of Globalisation" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 145-162.
- Caniels and Romijn. "Dynamic Clusters in Developing Countries: Collective Efficiency and Beyond." *Oxford Development Studies*. Volume 31 (2003): pp. 275-292.
- Castells, M. *The Rise of the Network Society*. Oxford: Blackwell, 1996.

- Chaminade, Cristina and Vang, Jan (2008) "Globalisation of knowledge production and regional innovation policy: Supporting specialized hubs in the Bangalore software industry" *Research Policy*, Volume 37, pp. 1684–1696.
- Chatterji, Manas, Arlosoroff, Saul and Guha, Gauri (2002). *Conflict Management of Water Resources*. Ashgate Publishing, UK.
- Chatterji and Gangopadhyay. *Economics of Globalisation*. Aldershot: Ashgate, 2005
- Colander, David. (2005) "Globalisation and Economics" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 57–66.
- Commander, S., Chanda R., Kanagasniemi, M and Winters, L.A. (2008) "The Consequences of Globalisation: India's Software Industry and Cross-border labour mobility" 31(2), pp. 187–211.
- Cooke, Philip. "New Economy Innovation Systems: Biotechnology in Europe and the USA." *Industry and Innovation*. Volume 8 (2001): pp. 267–289.
- D'Costa, Anthony P. "Exports, University-Industry Linkages, and Innovation Challenges in Bangalore, India." *World Bank Policy Research Working Paper*, 2006.
- Dalmia, Shikha (2006) "What Detroit Can Learn From Bangalore" *Reason Online* <http://www.reason.com/news/printer/36680.html>, last accessed March 2009.
- Dhume, Sadanand. "Hi-tech Centres—Silicon Slugfest." *Far Eastern Economic Review*. 22 August 2002.
- Dedrick, Jason and Kraemer, Kenneth, (2009) "Offshoring and Outsourcing in the PC Industry" In R. Hirschheim, A. Heinzl, J. Dibbern, (eds.) *Information Systems Outsourcing Enduring Themes, Global Challenges and Process Opportunities*, Springer Berlin, 2009, pp. 281–304
- Dibbern, J., Goles, T, Hirschheim, R. and Jayatilaka, B. (2004) "Information Systems Outsourcing: A Survey and Analysis of the Literature," *DATA BASE for Advances in Information Systems*, Vol. 35, Issue 4, pp. 6–102.
- Dicken, Peter. *Global Shift: Mapping the Changing Countours of the World Economy*. New York: Guilford, 2007.
- Dutt, Amitawa Krishna. (2005) "Globalisation, South-North Migration and Uneven Development" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 115–130.
- DiMaggio, P. J. and Powell, W. W. (1983) "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields," *American Sociological Review*, Vol. 48, Issue 4, pp. 147–160.
- Florida, R (2002). *The Rise of the Creative Class: How it is transforming work, leisure, community and every day life*. New York. Basic Books.
- Fowler, Bridget, (1997) *Pierre Bourdieu and Cultural Theory: Critical Investigations* Sage Publications, California.
- Gasior, Anna-Niemiec, Kuklinski, Antoni, Lamentowicz, W. (2008). *Faces of the 21st Century*. Rewasz Publishing House. Warsaw, Poland.
- Goodstein, J., Boeker, W. and Stephan, J. (1996) "Professional Interests and Strategic Flexibility: A Political Perspective on Organizational Contracting," *Strategic Management Journal* Vol. 17, Issue 7, pp. 577–586.
- Greenspan, Anna. *India and the IT Revolution: Networks of Global Culture*. Hampshire: Palgrave Macmillan, 2004.
- Grover, V., Cheon, M.J. and Teng, J.T.C. (1996) "The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions," *Journal of Management Information Systems*, Vol. 12, Issue 4, pp. 89–116.
- Hayashi, Yoshitsugu (2008) "Mobility for Sustainable Development Bangalore Case Study" Laboratory of Professor Yoshitsugu Hayashi, International Research Center for Sustainable Transport and Cities.
- Heitzman, James. (2004) *Network City: Planning the Information Society in Bangalore*. New Delhi: Oxford University Press.
- Ilavarasan, Vigneswara (2007) "Is Indian software workforce a case of uneven and combined development?," *Equal Opportunities International* 26(8), pp. 802–822
- Intriligator, Michael. (2005) "Globalisation of the World Economy: Potential Benefits and Costs and net Assessment" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 67–76.

- Jahuaari, Vinnie (2006) "Information technology, corporate business firms and sustainable development: lessons from cases of success from India", *Journal of Services research*, 5(2), pp. 38–76.
- Jakubowska, Patricia, Kuklinski Antoni, and Zuber Piotr (ed) 2007. *The Future of European Regions*. Ministry of Regional Development. Gov. of Poland, Warsaw.
- Jayasimha, K.R. "Hotline Technologies: Competing for Local Dominance." *VISION—The Journal of Business Perspective*. Volume 9 (2005): pp. 77–87.
- Jayatilaka, Bandula "Reaching Across Organizational Boundaries for New Ideas: Innovation from IT Outsourcing Vendors" In R. Hirschheim, A. Heinzl, J. Dibbern, (eds.) *Information Systems Outsourcing Enduring Themes, Global Challenges and Process Opportunities*, Springer Berlin, 2009, pp. 255–278.
- Isard, Walter (1960). *Methods of Regional Analysis: An Introduction to Regional Science*. The M.I.T. Press. Cambridge, Massachusetts.
- Kamssu, A. J., Siekpe, J. S. and Ellzy, J. A. (2004) "Shortcomings to Globalization: Using Internet Technology and Electronic Commerce in Developing Countries", *The Journal of Developing Areas*, Vol. 38, Issue 1, pp. 151–169.
- Kaufman, R. J. and Kumar, A. (2008) "Mapping the Multi-Tiered Impacts on the Growth of IT Industries in India: A Combined Scale-and-Scope Externalities Perspective", *Information Technology for Development*, Volume 14, Issue 3, pp. 225–252.
- Kemp, Murray C. (2005) "Economic Development and the Gains from International Trade and Investment" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 7–12.
- Klein, Lawrence (1962) *An Introduction to Econometrics*, Prentice Hall, Englewood Cliffs, NJ.
- Klepper, R. (1995) "The Management of Partnering Development in I/S Outsourcing," *Journal of Information Technology* Vol. 10, pp. 249–258.
- Koo, Jun (2005) "Technology spillovers, agglomeration, and regional economic development", *Journal of Planning Literature*, 20(2), pp. 99–115.
- Koppa, Tapani. (2005) "Globalisation of the Cooperative Movement" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 163–180.
- Krugman, Paul (2005) "Crises: The Price of Globalisation?" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 13–32.
- Kumar, K. (2009) "The Role of Local Entrepreneurship and Multinational Firms in the Growth of IT Sector: An Exploratory Study of Bangalore" *South Asian Journal of Management*, Volume 16, Issue 3, pp. 24–42.
- Kuruvilla, Sarosh and Ranganathan, Aruna (2008) *Economic Development Strategies and Macro- and Micr-level Human resource Policies: The Case of India's 'Outsourcing' Industry*" *ILR Collection* Cornell University ILR School, Cornell, NY.
- Lall, S. and Narulla, R. (2004) "Foreign Direct Investments and its Role in Economic Development: Do We Need a New Agenda" *European Journal of Development Research*, Vol. 16, Issue 3, pp. 447–464.
- Lamentowicz, Wojtek (2008). *The Gordian Knots and Alexandrian Solutions: New Approaches to Forecasting and Strategy Making*. Ministry of Regional Development. Government of Poland, Warsaw. (Mimeo)
- Lee, S. T., Gholami, R. and Tong, T. Y. (2005) "Time series analysis in the assessment of ICT impact at the aggregate level—lessons and implications for the new economy" *Information and Management*, Vol. 42, pp. 1009–1022.
- Lehrer, Keith (2005) "Ethical Issues for Multinationals in the Age of Globalisation" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 131–144.
- Lefevre, Benoit, (2009) "Long-term energy consumption of urban transportation: A prospective simulation of 'transport-land uses' policies in Bangalore" *Energy Policy*, 37 pp. 940–953.
- Madon and Sahay. "Cities in the Developing World: Linking Global and Local Networks." *Information Technology & People*. Volume 14 (2001): pp. 273–286.
- Madon, Shirin. "Information-Based Global Economy and Socioeconomic Development: The Case of Bangalore." *Information Society*. Volume 13 (1997): pp. 227–244.
- Maleki, Edward J. *The Future of European Regions: A View from Across the Atlantic* in (Jakubowski, et al 2007).

- Mandle, Jay R. (2005) "The Present as History: Globalization and the Asian Industrial Revolution", *The Journal of the Historical Society*, Vol. 3, Fall 2005, pp. 347–362.
- Martti, S. (2003) "One Concept, Two Approaches: Putnam's and Bourdieu's *Social Capital*" *Sociologia*, Vol. 40, Issue 3, pp. 204–218.
- Meadows et al (1972) *The Limits to Growth*. Universe Books, NY, US.
- Mowery, D. C. (1983) "Economic theory and government technology policy" *Policy Science*, Volume 16, pp. 27–44.
- Musyck, Bernard & Reid, Alasdair (2007) "Innovation and regional development, do European structural funds make a difference?", *European Planning Studies*, Vol. 15, Issue 7, pp. 961–983.
- Nair, A., Ahlstrom, D. and Filer, L. (2007) "Localized advantage in global economy: the case of Bangalore" *Thunderbird International Business Review*, 49(5), pp. 591–618.
- Nair, Janaki.(2005) *The Promise of the Metropolis: Bangalore's Twentieth Century*. New Delhi: Oxford University Press, 2005.
- Nair, Renuka (2005) "*The promise of the metropolis Bangalore's twentieth century*", Oxford University Press, New Delhi: India.
- Nijkamp, P, van Delft, H. and van Veen-Grott, D. (2005) "Sustainable Mobility and Globalisation: New Challenges for Policy Research" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. 95–114.
- Oz, E. (2005) "Information technology productivity: in search of a definite observation" *Information and Management*, Vol. 42, pp. 789–798.
- Pani, N. (2009) "Resource cities across phases of globalization: Evidence from Bangalore", *Habitat International*, Volume 33, pp. 114–119.
- Parayil, G. (2005) "Digital Divide and Increasing Returns: Contradictions of Informational Capitalism" *The Information Society*, Vol. 21, pp. 41–51
- Parthasarathy and Aoyama. (2006) "From software services to R&D services: local entrepreneurship in the software industry in Bangalore, India." *Environment and Planning*. Volume 38 pp. 1269–1285.
- Parthasarathy, Balaji. (2004) "India's Silicon Valley or Silicon Valley's India? Socially Embedding the Computer Software Industry in Bangalore." *International Journal of Urban and Regional Research*. Volume 28 Issue 3 pp. 664–85.
- Patibandla and Petersen. "Role of Transitional Corporations in the Evolution of a High-Tech Industry: The Case of India's Software Industry-A Reply." *World Development*. Volume 32 (2004): pp. 561–566.
- Payscale (2010) <http://www.payscale.com/research/IN/Country=India/Salary> , last accessed May 2010.
- Penrose, E. T. (1959) *The Theory of the Growth of the Firm*. New York: John Wiley.
- Pfeffer, J., and Salancik, G.R. (1978) "A Social Information Processing Approach to Job Attitudes and Task Design," *Administrative Science Quarterly* Vol. 23, Issue 2, pp 224–253.
- Pfeffer, J. and Salancik, G. R. (2003) *The External Control of Organization*. Stanford (CA), Stanford Business Books, 2003.
- Poppo, L. and Zenger, T. (1998) "Testing Alternative Theories of the Firm: Transaction Cost, Knowledge-Based, and Measurement Explanations for Make-or-Buy Decisions in Information Services," *Strategic Management Journal* Vol. 19, pp. 853–877.
- Porter, Michael E (1979). "How Competitive Forces Shape Strategy" *Harvard Business Review*, March-April 1979.
- Puri, Satish K. and Sahay, Sundeep (2007) "Role of ICTs in participatory development: an Indian experience" *Information Technology for Development*, 13(2), pp. 133–160.
- Quinn, J.B. (1999) "Strategic Outsourcing: Leveraging Knowledge Capabilities," *Sloan Management Review* (Summer), pp. 9–21.
- Ramiller, N. C. and Swanson, E. B. (2003) "Organizing Visions for Information Technology and Information Systems Executive Response" *Journal of Management Information Systems*, Vol. 20, Issue 1, pp. 13–50.

- Reily, Michael K. , O'Mara, Margaret P and Seto, Karen C., (2009) "From Bangalore to Bay Area: comparing transportation and activity accessibility as drivers of urban growth" *Landscape and Urban Planning*, Volume 92, pp. 24–33.
- Richards, Caspian (2004) "Information technology and rural development", *Progress in Development Studies*, 4(3) pp. 230–244.
- Roy, Santanu and Banerjee, Parthasarathi (2007) "Developing regional clusters in India: the role of national laboratories" *International Journal of Technology Management and Sustainable Development*, 6(3), pp. 193–209.
- Sachs, Jeffery (2005) "Preface" In Partha Gangopadhyay and Manas Chatterji. *Economics of Globalisation*. Aldershot England: Ashgate, pp. xv–xviii.
- Saxenian, AnnaLee (2005) "From Brain Drain to Brain Circulation: Transnational Communities and Regional Upgrading in India and China" *Studies in Comparative International Development*, Vol. 40, No. 2, pp. 35–61.
- Scherer, F.M. and Harhoff, Ditmar (2000) "Technology policy for a world of skew-distributed outcomes" *Research Policy* 29, pp. 559–566.
- Shah, Grishma (2006) "The new IT culture of Bangalore" *The International Journal of Knowledge, Culture & Change management*, 6.
- Subramanian, R., Misra, R., Jayachandran, C. and Singh, T. (2008) "Infosys Technologies Limited: The Global Talent Program", *Asian Case Research Journal*, Volume 12, Issue 2, pp. 249–273.
- Subrahmanya, M.H. Bala (2005) "Pattern of technological innovations in small enterprises: a comparative perspective of Bangalore (India) and Northeast England (UK)" *Technovation*, 25, pp. 269–280.
- Sunder, R. "Pain and Excitement of Taking Technology to the Market." *Vikalpa*. Volume 29 (2004): pp. 57–68.
- Stiglitz, Joseph E. *Globalization and Its Discontents*. New York: W.W. Norton & Company Ltd., 2002.
- Strite, M and Karahanna, E (2006) "The Role of Espoused National Cultural Values in Technology Acceptance", *MIS Quarterly*, Vol. 30, Issue 3, pp. 679–704.
- Stryker, Robin. (1996) "Beyond history versus theory", *Sociological Methods and Research*, Volume 24, Issue 3, pp. 304–352.
- Swanson, E. B. and Ramiller, N. C. (1997) "Organizing Vision in Information System Innovation", *Organization Science*, Vol. 8, Issue 5, pp. 458–474.
- Tan, B.C.Y., Wei, K., Watson, R.T., and Walezuch, R.M. (1998) "Reducing Status Effects with Computer Mediated Communication: Evidence from Two Distinct National Cultures", *Journal of Management Information Systems*, Vol. 15, Issue 1, pp. 119–141.
- Thomas, M.D. (1972). *The Regional Problem, Structural Change and Growth Pole Theory* in A.R. Kuklinski (ed) *Growth Poles and Growth Centers in Regional Planning*. The Hague, Mouton. 69–102.
- United Nations ICT Task Force (2005) "Measuring ICT: the global status of ICT indicators" UN ICT Task Force, United Nations, New York.
- Van Dijk, Meine Pieter. (2003) "Government Policies with respect to an Information Technology Cluster in Bangalore, India." *The European Journal of Development Research*. Volume 15 pp. 93–108.
- Van Mieghem, J.A. (1999) "Coordinating Investment, Production, and Subcontracting," *Management Science* (45:7), pp. 954–971
- Walcot, Susan M. and Heitzman, James (2006) "High technology clusters in India and China: divergent paths", *Indian Journal of Economics and Business*, Special Issue China & India, pp. 1–18.
- Whang, S. (1992). "Contracting for Software Development," *Management Science*, Vol. 38, No. 3, pp. 307–324.
- Williamson, O.E. (1985) *The Economic Institutions of Capitalism* Free Press, New York.
- Williamson, O.E. (1987) "Transaction Cost Economics", *Journal of Economic Behavior and Organization*, Vol. 8, pp. 617–625.
- Wu, Weiping. "Dynamic Cities and Creative Clusters." *World Bank Policy Research Working Paper*, 2005.

VALTTERI KAARTEMO

BRIC INNOVATIONS CHALLENGING THE ATLANTIC COMMUNITY

1. Introduction

For the beginning of the 21st century, the emerging economies are challenging the Atlantic Community. The leaders of the BRIC countries gathered to discuss the new global order in Russia, in June 2009. Sadly, it seems like the design of the new global order has been forgotten in the Atlantic Community.

For the readers of the Reopus series, the re-emergence of the BRIC-countries in the global scene does not come as a surprise. In fact, for the introduction of this volume, Professor Kuklinski stated that the design and implementation of new global order is the great challenge of the 21st century. The previous volumes have also handled these issues from insightful perspectives (e.g. Michalak 2008, Penkala 2008, Rybinski et al. 2008).

The rise of the emerging economies is a part of the Gordian knot of the Atlantic Community. We are under a threat of continuing life and decision-making in the Atlantic Community as back in the good days of the 20th century. However, the context has changed as a result of global financial crisis, global warming, re-emergence of BRIC countries, technological development and network economy. Therefore, we should not continue on the given path or otherwise the Atlantic Community will transform itself into “the Titanic of the 21st century”.

It is more or less agreed among the scholars that the global economy is characterised by the growing interdependence of capital, talent, resources, consumers and innovation (Accenture 2008). When the Atlantic Community has knowledge stored in their companies, it is easy for BRIC countries to buy this knowledge, or to get access to it with other arrangements. Therefore, it is not enough for the Atlantic Community to act on its own in a world of “mutual dependencies”. (Kaartemo 2007a.)

BRIC companies have already been able to improve their competitiveness, and they can be regarded to some extent as a threat for the companies in the Atlantic Community. Especially, when investments from the emerging economies are strategic in nature, they are likely to improve the position of the investing companies. Therefore, local companies should follow the manoeuvres of BRIC country internationalisers and adjust their business operations accordingly. (Kaartemo 2007a.)

“The Emerging Giants” have already started to enter the global markets in full steam. In 2005, there were only 27 companies from BRIC countries which made it to the *Fortune Global 500*. Currently, there are 60 BRIC companies on the list (Fortune 2009). A tremendous hike in

just 4 years! Companies from BRIC-countries have also increasingly engaged in R&D activities, and 21 of them are already among top 1,000 R&D investors in the world. The R&D spending of these BRIC companies has grown rapidly. Over last four years, the top R&D spenders have increased their R&D expenditure on average by 132% in Brazil, 95% in Russia, 43% in India and 59% in China. The growth rate of respective companies in the USA has been 24%, and only 15% in Europe.

Table 1.

Countries of origin for top companies in terms of turnover and R&D spending

	Companies in Fortune Global 500		Companies in top 1,000 R&D investors	
	2005	2009	2005	2009
Brazil	3	6	3	3
Russia	3	8	2	1
India	5	7	1	12
China	16	37	3	5
Europe*	175	180	294	333
USA	176	140	423	378

*Europe excluding Russia

Where does this expansion stem from, and how should the Atlantic Community react?

A part of this development may be explained by the investments of BRIC economies in innovation-based activities. Particularly, China and Brazil have improved their knowledge economy since 1995.

Table 2.

Development of Knowledge Economy Indicators in selected countries

Country	Year	Position in the ranking	KEI*	Economic incentive regime	Innovation*	Education	ICT
Brazil	1995	69	5.23	4.81	5.98	3.95	6.17
	2009	54	5.66	4.31	6.19	6.02	6.13
Russia	1995	58	5.73	2.55	5.64	8.12	6.60
	2009	60	5.55	1.76	6.88	7.19	6.38
India	1995	108	3.56	3.47	3.70	2.56	4.50
	2009	109	3.09	3.50	4.15	2.21	2.49
China	1995	100	3.93	3.24	4.07	3.62	4.77
	2009	81	4.47	3.90	5.44	4.20	4.33
Western Europe	1995	16**	8.95	8.69	9.21	8.66	9.25
	2009	17**	8.76	8.71	9.27	8.29	8.78
United States	1995	2	9.53	9.29	9.55	9.44	9.84
	2009	9	9.02	9.04	9.47	8.74	8.83

* Innovation variables are weighted by population

** The ranking for Western Europe is calculated based on its KEI points

Although it is often analysed as a group of countries, the BRIC-countries differ remarkably in their innovation potential and development. In the following article, the innovation potential and challenges of each four countries are analysed separately. The focus is on their internal innovation resources and attitude towards international collaboration. In the concluding remarks, I will focus on the recommendations what the Atlantic Community needs in the future.

2. Brazil

The world may recognise Embraer, Havaianas and some Cachaça brands but honestly — Brazilian companies have not performed well in the world markets. Despite Brazil started to develop an innovation system earlier than most other then-developing and developed countries, the country is underperforming in innovation. The problems accumulate in the statistics: Brazil is not spending in R&D (1% of GDP), the little R&D investments are mostly undertaken by the public sector (approximately 60%), the private R&D investments are concentrated in few major companies, and the supply of venture capital is relatively scarce. (OECD 2006.)

In many terms these problems reflect the general view which Brazilian companies have towards innovations. Brazilian companies have no interest in long-term profit and are more encouraged by short-run gains which encourages using mediocre resources. The local experts have recognised that it is more popular to hire a tax lawyer than R&D people, as lawyers are able to cash in faster. This cultural feature hinders the development of innovation system in Brazil and leaves innovative activities mainly to more globally-oriented MNCs. There is also evident mistrust in public institutions such as politics, economy and corruption.

To some extent the lack of interest in investing in R&D may also be explained by macroeconomic volatility and high interest rates, which do not encourage companies to take risky actions (OECD 2006). Traditionally, money has been expensive but recently Brazilian central bank has been able to cut interest rates — even during the financial crisis. Real interest rates still remain closer to 30%, which discourages investments.

One major reason for the underperformance in innovation development is the trade policy which protected domestic producers from foreign competition and cut the need for the private sector to invest in R&D or its commercial applications. These weaknesses still lie at the heart of Brazil's lacklustre economic growth (Finpro Brazil 2008). There is relatively little demand for innovation in the unsophisticated internal market. Protection continues to undercut the need for innovation and creative risk taking. The lack of competitive pressure on the home market has most probably also affected the eagerness of Brazilian companies to apply for international patents and to pay license fees for foreign companies (OECD 2006).

Consequently, the Brazilian concept of a national innovation system devotes little explicit attention to acquiring foreign knowledge or to disseminating knowledge (Finpro Brazil 2008). However, a new Council for International Co-operation has just been formed at the Ministry of Science and Technology, which may change the situation. Although Brazilian companies seldom have formal collaborative ventures for innovations, they are still co-operating with their suppliers and customers and even imitating their competitors (OECD 2006). Brazilian Coteminas has also international R&D centres in the United States and Asia (Accenture 2008).

Despite the cuts in tariffs during the past decade, importing foreign resources remains expensive (OECD 2006). It is positive that there have been no hikes in customs and taxes during the economic crisis but they still add up 60–70% to the FOB prices. This encourages looking for domestic alternatives, which may result in the usage of worse quality resources and thus hinders the development of Brazilian competitiveness. There have also been tax incentives established in

order to lower the costs on foreign machinery and royalties (OECD 2006). The tax incentives have mostly been directed to ICT industry but the level of the ICT industry is further away from international breakthrough than other strategic areas which have better basis in the scientific competence of the country.

As a result of openness towards international markets, foreign companies have invested massively in the country. Despite the increased interest of foreign companies to invest in Brazil, they have not undertaken innovative projects in larger extent there. According to statistics, foreign companies use less money for R&D than domestic companies in Brazil (OECD 2006).

As a result of these shortcomings, Brazil's innovation system remains focused on academic research. The coordination of the Brazilian innovation system between science and technology, and industry and commerce is not very strong. (Rodríguez et al. 2008) The innovation issues are dispersed around various ministries and to different councils in these ministries. Consequently, it is difficult to identify a clear innovation policy in Brazil.

Recent turns in innovation policy

Good news is that there is a wide political consensus on the need for innovation and various programmes have been launched to improve the situation. National Plan for S&T&I is targeting the innovation policy, and US\$ 20 billion has been allocated in its development (Finpro Brazil 2008). R&D&I investments have been expected to increase to 1.5% of GDP by 2010, and eventually to 2% of GDP (OECD 2006). It remains to be seen whether this helps the country's economy. As R&D intensity is a measure of costs and GDP, it does not necessarily measure positive development of the competitiveness. Therefore, more telling would be to have more companies in the Fortune Global 500 list among the largest companies in the world. Perhaps, apart from natural resource-dependent companies, this tells that R&D money is well spent. The economic crisis has, however, discouraged investments and it remains to be seen whether these expectations are realistic. The government has announced that the economic crisis would not have negative impact on the Brazilian innovation system but in reality budget cuts seem to be evident.

Innovation policy has recently been refocused towards collaboration between the science and technology, R&D programmes and trade competitiveness (OECD 2006), which shows that the government has understood that innovation policy is much more than purely a scientific task, and has to be in line with the country's long-term strategy. Collaboration between universities and companies is encouraged by government financing R&D via universities (covering almost two-thirds of overall governmental spending on R&D). There have also been interesting new projects, like Inova, an innovation agency created by the University of Campinas (OECD 2006). Otherwise the results may remain nominal. There was a new innovation law set in 2005 in order to strengthen the interaction between university and industry; promote the shared use of S&T infrastructure by firms and S&T institutions; stimulate the creation of new technology based firms by researchers; create new financial mechanisms for grants to R&D and innovation in firms. While it is considered to be a step in the right direction, administrative rules to implement the law have not yet been issued. Consequently, it has had virtually no impact since firms are reluctant to act, leery of how its provisions will be interpreted by tax authorities. (Finpro Brazil 2008.)

The refocused innovation policy has also resulted in changes on the foreign trade and industrial policy which has been integrated more closely to the target of innovation policy (OECD 2006). As companies are faced by foreign competitors, they must increase their innovative effort to stay on the business. And this competition should not only be considered to be against the Western companies but also other BRIC companies hungry for market share in the global economy.

Level of educational system hinders innovation development

Brazil has been able to increase coverage but quality in basic education still remains low. The percentage of individuals with very low literacy skills exerts a strong negative effect on growth, as basic skills for the entire population appear as important to growth as the development of sophisticated, high-level skills within a country (Finpro Brazil 2008.) Therefore, remarkable growth in Master and Doctoral degrees during the past 20 years may not be sufficient to widen the innovation base of the country.

As the country is short of skills, the reasoning of innovation policy is on a vague basis. Of course the country can still develop a lot but the profitability of changes in taxation may come short as the skills of labour hinder the innovative activities. It may also be waste of money to coordinate the government's R&D funding via universities as their capacity to undertake innovative activities is relatively low even compared with countries on the same income-level.

Scientific progress is above average in the fields of photonics, materials science, biotechnology, agronomy and veterinary medicine, physics, astronomy and space sciences, microbiology and plant and animal sciences. For instance agricultural success is not solely based on preferable location but science base which has remarkably increased productivity. Particularly, sugarcane production is heavily researched, and there are numerous projects on bio ethanol. There have also been encouraging scientific collaborative projects which have engaged Brazilian companies into commercially-oriented research projects. (OECD 2006.) As Brazil hosts 5% of the world's arable land, it is well-positioned for the future. Although it is difficult to estimate the future markets, it is evident that the world needs food and the growing population puts even more pressure on the supply of foodstuff.

Focus on life sciences and sustainable development also positions Brazil well in the projected boom of environmental friendly solutions. In fact, Brazil is already the only industrialized country which generates close to half of its energy from renewable sources (Grützmann et al. 2009).

Concluding remarks on Brazil

It is difficult to say what kind of innovation producer Brazil can be in the near future. Brazil's new S&T&I Action Plan does not define the explicit goals for innovation development but defines the resources which will be allocated until 2010. However, Brazil's new industrial policy sets several ambitious medium term goals, and it is expected that at least the priority programmes will advance. (Finpro Brazil 2008.) Most of the recent plans have been put into action which is good news but the results of these actions remains to be seen. Although these measures are considered to have positive impact on the Brazilian innovation system, it takes a lot of time to make visible changes in an economy with a size of Brazil.

3. Russia

Russia seems to be worst positioned on the innovation front among the BRIC countries. There is a clear distinction between the innovation inputs and outputs, as the private sector is not interested in getting involved in R&D and interaction with public sector researchers (Kaartemo et al. 2009). The current problems are further emphasised by negative demographics which leads to ageing R&D personnel.

Good news is that the Russian innovation environment is developing. A number of factors, such as developing legislation system, governmental support to regional innovation development

agencies, increasing availability of financial resources (such as public funds, private venture companies, business angels, and growing interest of global venture capital towards Russia) is turning Russian economy to more innovative direction. The Government is promoting the innovation policy on all levels of education and economy. Particularly, President Medvedev has repeatedly emphasised the importance of innovations to the economic development of the country. However, it is quite telling that innovations were not in reality seen as the way out from the economic crisis, as public R&D expenditure was cut by up to 30% for 2009. Also otherwise the government's reaction to the economic crisis has had features of anti-innovativeness (Dezhina & Kaartemo 2009; Simachev et al. 2009).

The commission on Modernization and Technological Development of the Economy has decided to focus on five priority areas in order to get rid of energy dependency: nuclear technology; space and communications technology; energy efficiency; medical technology; and information technology, including supercomputers. In addition, the presidential support of nanotechnology is providing it a special status. In fact, nanotechnology is one of the most advanced and prospective area of sciences in Russia (Koponen 2009).

Currently, Russia lies far beyond the leading nano-countries like the USA but nanotechnology is also such a new field of study that Russia may not be late from its development. The market for nano-products also remains marginal but it is expected that during the following two decades, it will be embedded in all kinds of product categories. The basis for nano business is also realistic in Russia, as the level of basic research is high in nuclear, space and civilian nanotechnologies.

Rusnano is probably the largest profiled venture investment fund in the world and it is aiming to invest only into products based on nanotechnologies in Russia (Koponen 2009). Even with Rusnano there are major shortcomings. The number one problem is that they have too many rules on where they can and can't invest, which does not encourage the effective allocation of resources. Innovations are borderless but the rules hinder Rusnano's international investments. This is quite opposite from the Chinese anti-crisis approach, as the Chinese have eagerly set for the after-crisis party by buying assets abroad. The financial crisis might have given interesting global opportunities to Rusnano, too. This again proves that nationalist-oriented approaches of Russia seem to be more important than economic reality. Secondly, the scientific community seems not to trust Rusnano, as they are working differently from what the researchers have used to. This makes Rusnano's work in Russia very challenging. Thirdly, the Russian nanotechnology research remains far from market demand and the solutions are more targeted to the state-run defence sector than to end consumers. Although some of the most valuable innovations have their basis in defence sector, such as internet, it is a long and bumpy path to diversify the economy.

Lack of foreign collaboration

There are major problems in the attitude of Russians and Russian companies towards international cooperation. Conservative investors are not willing to have cooperation in Russia, although the innovators would be internationally oriented. It is also a problem that patents are often applied solely in Russia, as innovative products are not aimed at global markets. Large home market, at least in certain product categories, does not push the companies to foreign markets. The culture also holds Russians back as they are not encouraged to go abroad. The new generation of modern and internationally-oriented young Russians may anyway provide stable movement of Russia towards innovative society.

Despite the challenges mentioned above, Russian companies have entered into partnerships with foreign companies in various ways (such as joint ventures, research contracts, and cooperative research projects) in order to get access to the latest technology as well as managerial and

marketing experience. At the same time, Russian research organisations have been very active in mobilising foreign support and research contracts. In addition to American and European governmental and non-governmental programs supporting non-commercial R&D activities in Russia, there is also a growing number of Western companies that contract out research of a commercial nature to Russian research institutes. Foreign funding makes up for nearly 10% of all R&D expenditures in the Russian Federation. Primary sources of foreign funding are: the EU, the USA, and some Asian countries such as China, Japan, and South Korea. (European Commission 2007.) Rusnano has also understood the need for international collaboration, as they are seeking collaboration particularly with US venture funds (Moscow Times 2009a).

The institutional development, however, does not support collaboration with international partners. For instance, the patenting system is not related to those of Western, and the Russian companies have not been willing to apply for international patents. Partnerships with foreign companies might also provide them with the capital for product development from national and supranational funds. The funding is also available in Russia after the recently established state funds, business angels and venture funds but the lack of collaboration and trust makes their functions challenging.

No incentives for innovations in home market

No one invests in Russia, so there are no investments in innovations either. This line of thinking is partly due to lack of competition in the Russian market, as domestic enterprises are protected by the Russian government. Rusnano is basically the only instance which is investing in new business. To some extent there are investments in traditional sectors of the economy like dairy business but this may not help the country to diversify the country in a larger scale.

During the past few years, the state-owned enterprises have gained more power in the economy, and there have been features of renationalisation in the Russian economy. This has further deteriorated the competitive environment of the Russian economy (Dezhina & Kaartemo 2009). The increasing role of SOEs is problematic, as the state financing often crowds out private investments. The available public funding should be boosting private money but in Russia it seems not to be the case. This is problematic as the public sources dominate R&D investments in the country. During the crisis the share of Federal funding in innovation investments has even increased (NAIR-IT 2009). It is also a well-known fact that state-owned enterprises do not innovate, and Russia is no exception there.

Concluding remarks on Russia

All in all, the problem in Russia seems to be that the decision-makers are aiming at innovations instead of providing good soil for innovations. The development of innovation environment is seen merely as a bureaucratic task. Also general distrust, corruption and bureaucracy are hindering the innovation development. These problems are well-acknowledged but the continuation of top-down approaches is not really helping the situation without incentives for private businesses. Private investors are not investing only if the bureaucrats tell them to do so. Instead, the decision-makers should be listening to the entrepreneurs and do whatever it takes to support their innovative activities based on their needs. It must be stated that the availability of innovation inputs is not a problem as such. Particularly, the level of education is very good in Russia. Also President Medvedev has agreed that the problem is instead how to use it. Russia has talent but fails to find commercial applications for it, and “the situation with innovation at enterprises ... is not only failing to change but is worsening because of the crisis,” Medvedev has said. (Moscow Times 2009b.)

4. India

India's expenditure on R&D has increased rapidly during the early 21st century, and was about 5.7 billion euros in 2005. As a result, India's R&D investments are above those of Brazil and Russia, but behind China (Halme & Grützmann 2009). A majority of R&D (70–80%) originates from public sources. Of this, bulk of money is allocated to defence, space and energy. In fact, in these sectors India has been able to some extent to develop some innovations which may also be brought to civilian applications.

The problem with the public R&D funding can be found in fragmentation, bureaucracy, lack of coordination, focus on inputs rather than impact, focus on frontier technologies, insufficient focus on commercial and applied areas of public goods, and insufficient interaction among public institutions (Dahlman et al. 2007). Despite these problems, there are some large private firms with significant innovative and managerial strength. For instance, Tata Group and Reliance Group have been ranked among the top 25 most innovative companies in the world by BusinessWeek (2008). In addition to these conglomerates, there are strong Indian companies in pharmaceuticals, software and auto components, which are the major R&D investment sectors. In addition to these industries, nano- and biotechnology, agriculture and engineering industries have recently increased collaboration with universities. Innovation in manufacturing has also made progress. It has provided high-technology and skill-based products available to consumers at low cost.

Given the declining productivity levels in agriculture and forecasted rise in demand, the government has started to promote rural-based industrial clusters and intermediary technological solutions, which connect the rural agro-industrial sector with the skill and knowledge base in the formal science and technology system (Halme & Grützmann 2009). Stronger focus on innovations in services is also positioning India favourably into the future.

Importance of international cooperation has been understood

As other BRIC countries, India still suffers from its heritage of being earlier closed and planned economy which did not encourage innovativeness. In 1970s and 1980s India was mostly counting on self-reliance and import substitution in innovation development. This all changed in early 1990s when economic reforms were targeted in liberalisation of the Indian economy. The policy shifted from self-reliance to outward-orientation. The economy opened space for private businesses and welcomed FDI inflows. Software, pharmaceuticals and biotechnology industries benefited from the S&T policy of 1970s and 1980s, and they were further strengthened during the economic reforms. Ultimately, these industries proved to be true success stories in India.

Since then, the global R&D and innovation strategies have changed dramatically. India has been well positioned in attracting outsourced R&D operations of MNCs, particularly for services outsourcing and software development. Nobody knows exactly how many R&D centres foreign companies have established in India but estimates vary somewhere around 300. The country also remains one of the top locations for foreign R&D, as a result of its provision of low cost labour with technical and language skills, and further creamed by supportive government policies. As a result, India is considered to provide the best human capital per USD, which has encouraged outsourcing R&D activities to the country. Majority of R&D investments have originated from the USA but there have also been investments from Europe and China.

As a result of opening up, some Indian companies have also internationalised. Companies like Tata, Infosys, Mittal and Wipro are already key players in their respective industries. In the past couple of years Indian firms have made some 150 acquisitions in the Atlantic Community.

Like China, also India has benefited from overseas natives. There is about 20 million Indians living abroad. Non-resident Indians have acted as mentors, investors, policy advisors and returning talent. The demographics are also very suitable to India and the young labour force is expected to provide basis for the future growth of India. By 2050, it is expected that the age group of 20–59-year-olds will increase by 263 million in India, whereas the Atlantic Community will mostly witness negative figures. On the other hand, this gives pressure to the development of the education system in the country.

Educational system as a bottleneck to be widened

According to one estimate, India has more than 12 million science and engineering graduates, of which 100,000 hold PhD degrees. India's stock of scientists and engineers is among the largest in the world, and availability of S&E personnel is also recognised in international competitiveness reports. There are also some world-class institutions of higher education located in India, such as IIT and IIM.

There are also world-class challenges in the Indian education system. The enrolment ratio is low, and the level of primary and secondary education has become a bottleneck for innovativeness. There is a lack of qualified teachers, and the system encourages memorisation and taking orders from above instead of independent thinking. The development of the universities has been slow, too. It is evident in slower progress in academic publications than in China, for instance. The universities are also only limitedly engaged in R&D activities which hinders the innovation development in India. A significant amount of basic research is conducted at public research institutions but they have been found to suffer from complex policy and decision-making. As a result of bureaucratic resource allocation combined with the lack of risk taking, these institutions have not been using the public R&D funding effectively.

The low level of education system also shows the huge potential which may shake the world. The education has become the core of the current 11th five year plan of India. During the 11th five year plan, India aims at increasing the R&D intensity from 1.1% to 2.0% — close to OECD average. In the plan there is an increase of 400% in funding for science, technology and education. It indicates the serious actions taken by the Indian government. As a result of new budget allocations, the share of education would increase to 6% of GDP.

Concluding remarks on India

All in all, there has been insufficient emphasis on innovation culture in India. Most Indian companies have not yet realised the importance of deploying resources in innovation development. There is no sufficient collaboration between private and public sectors, and in practice there are neither innovation hubs nor industry clusters developed in the economy.

5. China

Economic reforms, including the launch of the “open door” policy in late 1970s, have led the Chinese economy to three decades of remarkable development. As a result of the changes, China has become the most open of the large developing economies, and the world leader in high-tech and ICT exports. As a result, there are more than 1,000 foreign-owned R&D centres in China which all have been established during the past two decades. Currently, the number is growing by 150–200 new units each year. In 2004, foreign companies covered for nearly 30% of R&D

expenditure in China, 48% of technology imports and 76% of exports. Even during the economic crisis, the Chinese economy has showed strong resistance to external shocks.

To some extent, China is already more open than a number of significantly more developed market-based economies. The number of private enterprises has mushroomed, outnumbering SOEs by the factor of ten in only 10 years. Consequently, about 65% of its GDP and 75% of its employment originates today from private enterprises. The expansion of private sector is good news as private companies are remarkably more productive than companies under direct state control (OECD 2008). In addition to changes in privatisation and opening up of the economy, also the governance of S&T and innovation policy has improved.

Despite the remarkable development, it must be remembered that innovation capability remains low in China compared to the Atlantic Community and even among the BRIC countries (Table 2). Level of higher education remains low in average, the education system is oriented towards passive learning, and there is also little basic research in high-tech sectors which has led to shortage of human capital in domestic private firms. China also lacks institutional framework for a venture capital system. Domestic venture capital firms have been set up by the government, and are run by government officials who do not always have adequate skills.

The size does matter

China benefits from large market size which attracts foreign companies, and provides companies a good test bed for innovations on a large scale. As a result of huge labour reserves in rural China, labour costs have remained low in urban China even during the period of economic expansion. The lower income level of local customers has also directed Chinese companies to be cost-efficient and they have been able to provide high-tech products in low prices also to global customers.

In part of global market orientation, R&D investment is increasing in the Chinese business sector. Consequently, R&D intensity is no longer lagging far behind OECD average. In the OECD countries R&D intensity has remained nearly steady since early 1990s. However, it has been found out that China's R&D expenditure has not been efficient (Lee & Park 2005), and therefore the R&D intensity growth is not only good news to China.

To date, China has largely relied on the supply of foreign technology, and the development of its scientific and technological capability has until recently lagged behind its economic growth. In fact, China's export growth has been largely based on the expansion of low-wage manufacturing utilising imported components, equipment and technology. However, it is now boosting investment in science and technology and has taken steps towards building a high-performing innovation system. Since the end of the last decade significant progress has been made towards developing the country's innovation potential.

China's dependence on the Atlantic Community remains visible. Need for foreign investments remains significant and the foreign-owned companies account for more than half of China's exports (OECD 2008). In fact, China itself remains specialised in low-tech. High-technology industries, notably ICT-related manufacturing, are primarily under foreign control, while traditional industries such as textiles and garments are largely domestically owned. High-tech industries are considerably less R&D-intensive in China than in advanced OECD countries. Industries in this category typically produce high-volume goods, often by assembling imported components with low share of value added.

It is shocking that foreign firms are less R&D-oriented in China than indigenous companies (OECD 2008). The question is whether the R&D activities in China can be considered as "innovation activity". Foreign R&D in China is generally considered to be market-seeking, involving tactical,

short-run adaptations to the market. The overall perception is that the R&D activities of most foreign firms are development-focused (rather than research-focused) and aim to support their local business and customers. Current patterns of specialisation, a lack of absorptive capacities in Chinese firms and shortcomings in institutional development may have limited the amount of spillovers. Improvements in these areas would allow China to better benefit from international technology flows.

FDI projects and the operations of foreign-invested firms have also helped to improve China's access to advanced technologies, to management practices and to a wide range of skills. Foreign MNEs diversify their R&D activities through science-industry partnerships with Chinese research institutes and universities. Public-public R&D partnerships between Chinese and foreign research institutes, universities and government agencies are beginning to complement R&D cooperation in the private/business sector. Moreover, there is a high level of mobility of skilled people in science and engineering between China and OECD countries as well as between different parts of the Chinese economy.

Chinese firms' outward R&D investment to OECD member countries and developing countries has been booming (Kaarremo 2006). In addition to inward flow of FDI, Chinese companies have established themselves internationally. Companies like Huawei and ZTE even run R&D centres abroad (Kaarremo 2007b). Huawei has also established R&D centres in Russia and India. It is interesting to see that the BRIC countries are collaborating on the innovation front which resembles the new global order.

Educational system is ok but institutions are not

China has recently started to educate more PhDs. By 2010 it is expected that there will be for the first time more S&E doctorates from China than from the USA. The number of students has increased by 21% per year during the past decade. In addition to these home-made graduates, 250,000 overseas Chinese have returned from abroad with education. Simultaneously, China has built its expertise in nanotechnology, and is already the second most important (20%) publisher of nanoscience papers in the world behind the USA.

Innovation development however lags due to low institutional development. There are major problems in IPR, corporate governance, social capital and trust. There is insufficient interaction among private and public actors, and even between various parts and layers of government. There is also a constant shortage of complementary assets as a result of underdeveloped service sector. These challenges can also be seen in the problems of commercialisation and innovation management.

Recent policy initiatives show the government's commitment to develop a competitive innovation system. The S&T Strategic Plan 2006–2020 sets out the key objectives and priorities in science and technology. The overarching goal is to make China an “innovation-oriented” society by the year 2020 and — over the longer term — one of the world's leading “innovation economies”. The Strategic Plan, for instance, proposes several initiatives to increase access to funding for high-tech SMEs and start-ups. China is taking the need for innovations seriously and aims to increase R&D expenditure to 2.5 % of GDP by 2020 (Accenture 2008), which requires annual growth of 10–15%. Since 1999, R&D has grown 24% annually. Additionally, the investments in education prove the commitment of the Chinese government to innovation development. They have also very much emphasised needs-driven research (Schwaag Serger 2009) which is fruitful for innovation development.

Concluding remarks on China

All in all, as new enterprises have emerged alongside SOEs and the latter are restructured with a view to making them more market-oriented, incentives to invest in R&D and innovation will become more closely attuned to market signals. However, most Chinese firms remain unfamiliar with innovation activity.

6. Concluding Discussion

The great crisis of the 2008–2010 can be seen as a turning point in the global economy. It is a landmark to the crisis-resistant emerging economies and a wake up call to the Atlantic Community. Although the re-emergence of the BRIC-economies started long before the great crisis, it may have significant changes in the global economy. It is likely to bring us to a global economy with increasing interdependencies between developed and emerging economies (Fidrmuc & Korhonen 2009).

These increasing interdependencies require new approach to innovation development at a global level. The logic of the 20th century does not work anymore in the 21st century. It is no longer clear who benefits from innovations, customers of innovations are elsewhere, capabilities are scattered around the globe, the developed economies face problems of ageing, and global challenges will emerge. Consequently, **the concept of national innovation system loses its meaning**. Whereas an innovation used to be a by-product of research projects by regional/national universities, nowadays innovations result more often from international networks.

The great crisis has truly taught us about the complexity of the global economy. In the network economy everything is connected to everything and the countries, regions, industries and companies should not be analysed in a vacuum but in a larger context. This is no news and should now be clear to the Atlantic Community, and it must be realised in full in order to build up context for positive future. This also requires scholarly intelligence, particularly in foresight research. If we think about the world in 2050, it brings global challenges more clearly in to the scenes. Particularly, global warming demands global innovations. In that sense the picture changes from the race for gold medals in national colours in Beijing 2008 to a race for common well-being in the world in 2050. Cooperation in the field of innovations is important to tackle the global challenges, particularly environmental threats, but this new global order needs new vision of the countries and their role in the global economy.

It is no news that the BRIC-economies pose “a threat” to the Atlantic Community in the innovation race. However, the look at the innovation figures may not be enough but we need deeper understanding of the dynamics which lie beneath. As people and companies are (relatively) freely moving across borders, it is difficult to say who benefits from the public and private investments in the innovation system. As there are 700,000 Chinese-born highly skilled residents in OECD countries and over 1,000 foreign-owned R&D centres in China, this requires the concept of national innovation system to be seen from a new perspective. It may be that innovation activities are undertaken in the United States by companies originating from Asia hiring and being owned by both Asian and European people.

The focus is on the ability of cashing in with inventions. The previous hegemony of the Atlantic Community was largely based on the lucrative markets of West. This situation will change dramatically in the 21st century, and the understanding of emerging market customer needs becomes more crucial. As the consumer spending in the BRIC countries is about to overcome G6 markets by 2025 (Accenture 2008), the emerging market companies are well-positioned.

It may however be a problem that whereas companies and people show no respect to country borders, the innovation policies are mainly set by national decision-makers. Despite the development of the European Research Area (ERA), 95% of R&D budget in Europe is dominated by policies with national orientation (Nauwelaers 2009). From that respect countries and regions matter but its efficiency is questionable.

Policy recommendations:

1. We need a new toolbox for cooperation with emerging economies

The differences between, and among, the BRIC economies mean that we need different tools for cooperation and competition with individual countries, technologies and services. Research programmes, such as ERA, should therefore not be based on “one size fits all”-tools but they should address the differences among the features of innovation culture, incentives, nature of technology et cetera. Moreover, the incentives should not only be thought from the perspective of the Atlantic Community. The real problem is how to make private and public innovation actors of the emerging economies interested in collaboration with the Atlantic Community actors.

The collaboration should be specified on technology-/ service-level in order not to continue with regional representative offices which try to help cooperation among all “regionally strategic businesses”. In some niche areas representative offices of European businesses might be more efficient, and they should be established to find collaborative projects among European companies dealing with environmentally-friendly technologies, for instance. As foreign investments are important, these offices could also promote FDI inflows more effectively by excelling in the key actors and regions in the Atlantic Community. As above, promotion is to large extent about provision of incentives.

2. We need incentives to encourage innovativeness and entrepreneurship

It is clear that people, and companies alike, respond to incentives. Therefore, new policy measures are needed to encourage entrepreneurship and innovativeness. The people of the Atlantic Community are accustomed to the ease of life in their daily jobs and they do not need entrepreneurial spirit to keep up with the Joneses. However, the emerging and developing economies are not providing this luxurious context and the incentives are self-made — often you must run your own business in order to eat. The Atlantic Community should take this challenge seriously and provide better safety nets for people who are willing to turn their business ideas into reality.

Innovative and entrepreneurial culture of the Atlantic Community may save it in the future but the framework must be improved from the current one. This requires a better safety net for researchers to move into start-ups. They must be guaranteed a position in the academia after experimenting with the commercial success of their ideas. Similarly, businessmen should be provided incentives to participate in the research projects. In the current situation, they must face lower salary and gloomy career development if they engage in the academia. This is not really supporting the mobility of innovative people within the Atlantic Community.

3. We need an institution to improve global innovation development

World Innovation Organisation must be established to set common rules and aims for innovation policy around the world. This kind of collaborative forum is needed in order to get rid of nationally-oriented innovation policies. When innovations are no longer benefiting their “home country”, national governments will easily lose interest in developing the innovation system. However, innovations are needed for increasing the global well-being and an authority should be

established to watch this important work. This organisation should be encouraging provision of public goods, too.

Suggestion for future studies:

1. We need more foresight research on the global innovation development

In order to exploit the opportunities and to avoid the facilitation of the threats, we need a long-term oriented cross-border foresight programme (Kaartemo & Kaivo-oja 2009). The foresight programme should focus on the global challenges and the potential solutions to them. We need knowledge how to counteract the trends of global warming and population growth which potentially lead into a worldwide crisis.

2. We need more comparative studies on innovation potential of BRIC countries

There is need for a practically-oriented comparative study on BRIC-countries as a location for innovative activities. So far there have not been comparative studies contributing to the location decision-making of internationalising companies. It is a challenging task to make a comprehensive analysis of one innovation system. Thus, it must be understood that the comparative study of BRIC innovation systems with global dimensions requires a grand project. This requires resources but it is a necessity for the Atlantic Community to reposition the innovation policies in the global context.

3. We need a new definition of R&D intensity and high-tech

Similarly, we need a new definition for high-tech exports as it does not anymore indicate the innovation outputs of countries. Since the 1980s when the concept was invented, R&D and production facilities have scattered all around the world. Actually, we might ask to whom is high-tech, actually high technology? Is it high-tech for the assembling country? Is a product high-tech for a consumer who has no idea about the R&D inputs but is more interested in how it matches his needs? More focus should be put on data on the value-added in products, which would better resemble the innovative characteristics of exports.

It also remains unclear whether the Atlantic Community is able to compete against the BRIC-countries with R&D investments. As the figures are set to increase, the focus should be on the quality instead of quantity. Therefore, the aim of the Lisbon Strategy should not be measured in R&D intensity. As the cost level for R&D activities is lower in BRIC-economies, they also may get equal amount of work with smaller investments. However, if the use of money is uncoordinated, this all may result in unproductive measures in practice.

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References

- Accenture (2008) Multi-Polar World 2: The Rise of the Emerging-Market Multinational, www.accenture.com.
BusinessWeek (2008) 50 of the Most Innovative Companies in the World. Tata, General Motors, Facebook Are Big Surprises, by: Bruce Nussbaum, April 18th 2008, www.businessweek.com.

- Dahlman, Carl — Dutz, Mark A. — Goel, Vinod K. (2007) Creating and Commercializing Knowledge, In: *Unleashing India's innovation: toward sustainable and inclusive growth*, Ed. Mark A. Dutz, The World Bank: Washington D.C.
- Dezhina, Irina — Kaartemo, Valtteri (2009) All quiet on the innovation front — the Russian reaction to the economic crisis, *Electronic Publications of Pan-European Institute*, No. 19/2009, www.tse.fi/pei.
- European Commission (2007) *INNO-Policy TrendChart — Policy Trends and Appraisal Report Russia 2007*, European Commission, www.proinno-europe.eu.
- Fidrmuc, Jarko — Korhonen, Iikka (2009) The impact of the global financial crisis on business cycles in Asian emerging economies, *BOFIT Discussion Papers*, 11/2009, www.bofi/bofit.
- Finpro Brazil (2008) Update on the Brazilian Innovation System for Tekes, August 29th 2008.
- Fortune (2009) *Fortune Global 500*, July 20th 2009, <http://money.cnn.com>.
- Grützmann, Kathrin — Halme, Kimmo — Reiner, Rolf (2009) *Emerging Economies (BRIC* Countries) and Innovation*, INNO-Views Policy Workshop Workshop Output Paper, www.proinno-europe.eu.
- Halme, Kimmo — Grützmann, Kathrin (2009) *Emerging Economies (BRIC* Countries) and Innovation*, INNO-Views Policy Workshop Background and scope of the workshop, www.proinno-europe.eu.
- Kaartemo, Valtteri (2006) Chinese FDI in the Baltic Sea Region — Implications on competitiveness, In: *Warsaw Conference Towards a New Creative and Innovative Europe*, Eds. Antoni Kuklinski, Cezary Lusinski and Krzysztof Pawlowski, Wyzsza Szkola Biznesu–National-Louis University: Nowy Sacz.
- Kaartemo, Valtteri (2007a) Outward FDI from China and its Challenges and Opportunities for Europe, In: *Towards a New Creative and Innovative Europe*, Eds. Antoni Kuklinski, Cezary Lusinski and Krzysztof Pawlowski, Recifer Eurofutures Publication Series, REUPUS.
- Kaartemo, Valtteri (2007b) The motives of Chinese foreign investments in the Baltic Sea Region, *Electronic Publications of Pan-European Institute*, No. 7/2007, www.tse.fi/pei.
- Kaartemo, Valtteri — Lisitsyn, Nikita — Peltola, Kaisa-Kerttu (2009) Innovation infrastructure in St. Petersburg — Attractiveness from the Finnish managerial perspective, *Electronic Publications of Pan-European Institute*, No. 14/2009, www.tse.fi/pei.
- Kaartemo, Valtteri — Kaivo-oja, Jari (2009) Finland 2050 in the Perspective of Global Change, In: *The Future of Regions in the Perspective of Global Change*, Eds. Patrycja Jakubowska, Antoni Kuklinski and Piotr Zuber, Conference Proceedings, Part Two, Volume 4, Warsaw.
- Koponen, Timo (2009) Opportunities of Finland in Russian innovation environment, *Baltic Rim Economies*, Issue 4 2009, www.tse.fi/pei.
- Lee, Hak-Yeon — Park, Yong-Tae (2005) An International Comparison of R&D Efficiency: DEA Approach, *Asian Journal of Technology Innovation*, Vol. 13, No. 2, pp. 207–222.
- Michalak, Przemyslaw (2008) The EU's and China's Convergence on Energy Security — Sharing Common Future, In: *Faces of the 21st Century*, Eds. Anna Gasior-Niemiec, Antoni Kuklinski and Wojtek Lamentowicz, GlobalFutures Forum GFF.
- Moscow Times (2009a) Rusnano Pushes for U.S. Tax Breaks, *The Moscow Times*, Issue 4179.
- Moscow Times (2009b) Medvedev Looks to Harness Young IT Talent, *Alexandra Odynova*, *The Moscow Times*, Issue 4170.
- NAIR-IT (2009) Wlijanie krizisa na sektor inovacij. Itogi perwogo kwartala 2009 goda, April 29th 2009, www.nair-it.ru.
- Nauwelaers, Claire (2009) Internationalisation of science, technology and innovation policies in Europe: State-of-the-art and challenges, presentation at INNO-Views Policy Workshop, Brussels, 9–10 July 2009, www.proinno-europe.eu.
- OECD (2006) Boosting innovation performance in Brazil, Carlos H. de Brito Cruz and Luiz de Mello, Organisation for Economic Co-operation and Development, Economics Department Working Paper No. 562, www.oecd.org.
- OECD (2008) *OECD Reviews of Innovation Policy China*, Organisation for Economic Co-operation and Development, www.oecd.org.

- Penkala, Michal (2008) *The Tale of Two Chinas: The Middle Kingdom at the Threshold of the 21st Century*, In: *Faces of the 21st Century*, Eds Anna Gasior-Niemiec, Antoni Kuklinski and Wojtek Lamentowicz, GlobalFutures Forum GFF.
- Rodríguez, Alberto — Dahlman, Carl — Salmi, Jamil (2008) *Knowledge and Innovation for Competitiveness in Brazil*, WBI Development Studies, World Bank Publications.
- Rybinski, Krzysztof — Opala, Pawel — Holda, Marcin (2008) *Gordian knots of the 21st century*, Polish Ministry of Regional Development, REDEFO, Vol. 2.
- Schwaag Serger, Sylvia (2009) *The changing global innovation geography*, presentation at INNO-Views Policy Workshop, Brussels, 9-10 July 2009, www.proinno-europe.eu.
- Simachev, Y. — Yakovlev A. — Kuznetsov B. — Gorst M. — Daniltsev A. — Kuzyk M. — Smirnov S. (2009) *Assessment of Policy Measures to Support Russia's Real Economy*, Bank of Finland, BOFIT Online, 2009.

STANISŁAW M. SZUKALSKI

BRIC—GLOBAL COMPETITOR OF THE ATLANTIC COMMUNITY

BRIC companies investments in world R&D

I would like to remark on a number of issues regarding the article written by Valtteri Kaartemo, entitled *BRIC innovations challenging the Atlantic Community*. I am planning to concentrate on three following issues: a/ is it justified to talk about BRIC, in face of Russia's weak position? b/ assets and weaknesses of BRIC countries, c/ the position of BRIC originating corporations and their contribution in the R&D expenditures.

1. BRIC or BIC?

The BRIC acronym (Brazil, Russia, India, China) created by J. O'Neill in 2001 has become a household name in the global economic literature. A question is raised, however, should it not rather be BIC today? Russia, in spite of its potential assets such as: raw materials, the country's area, research expenditures, is not a progress engine for the BRIC group, and what is more, the gap between Russia and other countries is growing. Russia's raw materials potential is highly influenced by the global economic trends (dramatic slump in prices of oil and other raw materials in the second half of 2008 crucially weakened the budgetary revenue). Russia suffers from huge deficiency of the capital and foreign capital is carefully introduced in Russia. Most of all, nevertheless, the outdated economy structure and demographic regress have negative effects on the Russia's future.

Russia's position is particularly weakened by the latter. Russia has got negative population growth index (- 0,4657%), high percentage of people over 65 in comparison to other BRIC countries (13,9%), whereas the figure for India is 5,3%, Brazil 6,4% and China 8,1%. Thus, if the current growth rate remains stable, Russia will have lost 33 million people by 2050, meaning its population will outnumber this of Turkey by only 18 million, whereas today this gap stands at over 64.5 million people. Russian economy equals the French one. The country, whose population is 2.5 times as large as French (140 million people versus 64 million people) has GNP compared to France—2.133 billion dollars, Russia—2.27 billion dollars (GDP—purchasing power parity). 75.7 million people are employed in Russia, with 28 million in France. GNP per capita is respectively: 16.1 thousand dollars and 33.3 thousand dollars¹. Apart from Gazprom and Lukoil, it is difficult

¹ *The World Factbook 2009*, <https://www.cia.gov>

to find other major companies on the global market, which is different from other countries in the group.

2. Assets and weaknesses of BRIC countries

Taking into consideration the population potential, beneficial structures of the populations (except Russia), working resources supply, huge consumption and investment market, BRIC countries will undoubtedly have a significant influence on the global economy, not necessarily a positive one, if we take into account the effects on the global raw material market, consequences connected with environmental protection, as well as aspects resulting from structural development disproportions in these countries. A set of data characterising the BRIC group has been presented below (see. table 1).

First of all, BRIC countries possess the largest population potential of the USA—UE—BRIC trio, making up 41.9% of the global population; provide nearly 46.4% of the global work resources supply, produce 22.2% of the world's GNP.² The BRIC countries population is relatively young, since people aged 64+ constitute only 8.4% of the population (without Russia this figure stands at 6.6%), whereas in the USA 12.7%, and in the UE as much as 17.1%. The prospect of 2050 illustrates that BRIC countries population, despite its growth by 1.8 billion people, will diminish its global share as a result of the prospected population growth of Africa's population by nearly a billion people.

Secondly, at present labour resources in BRIC countries are ten times as large as in the USA, and are forecasted to grow by about 292 million people by 2050 (assuming that the current professional activity index remains unchanged), in the USA by nearly 50 million people, whereas in the UE this figure is estimated to fall by 21 million people. China and India are bound to supply the global labour market by 140 million people by 2020 alone, whereas in Europe the workforce supply will decrease by 16 million people³.

Thirdly, in the period of 2000–2007 the discussed group of countries enjoyed GNP growth rate of 6.9% annually, and was three times higher than in the USA and over three times as high as in the Euro zone countries. In the period of 1990–2008, China enjoyed the annual growth rate of 9.9%, whereas the corresponding period in the USA witnessed 2.3% growth rate. In BRIC countries 2008 brought GNP calculated with the purchasing power parity in dollar of 15.56 billion, with China—7.99 billion dollars, India—3.3 billion. dollars⁴. Compared with: the USA—14.44 billion and UE—14.94 billion. It should be noted that per capita income in BRIC countries which amounts to 8.8 thousand dollars constitutes 18.5% of this income in the USA (47.5 thousand dollars). The mentioned index for India amounts to merely 6.1%, and for China to 12.6%. China occupies 132nd position in the world in terms of per capita GNP. If this country was to reach the USA level of per capita GNP, than its GNP would have to equal present global GNP.

Fourthly, world trade relations are undergoing a phase of change, since BRIC countries exports in the period of 1997–2007 increased by 18.7%, whereas in the USA by 5.6% and in the UE by 9.3%. In 1997, the relation between the general value of the American export to the global Chinese one amounted to 3.1:1, whereas in 2007 — 0.95:1⁵. These two countries are characterised by a unique relationship. On the one hand, there is a competition for the global

² World Population Prospects: <http://esa.un.org/unpp>, 2008; (own calculations); CIA, *The World Factbook 2009*, GDP (Purchasing Power Parity).

³ According to International Labour Organization estimates <http://laborsta.ilo.org>.

⁴ CIA, *The World Factbook 2009*, op.cit.

⁵ WTO, *International Trade Statistics 2008*, (own selection and calculations).

Table 1.

Comparing the potential of USA—UE—BRIC. Selected indexes

	World	USA	EU	BRIC	Brazil	Russia	India	China
Population:	6		49	2	19			
	790	307	1	843	9	140	1 166	1 338
% of population	100%	4,5%	7,2%	41,9%	2,9%	2,1%	17,2%	19,7%
Population aged 64+	7,6%	12,8%	17,1%	8,4%	6,4%	13,7%	5,3%	8,1%
Population growth rate	1,167%	0,975%	0,108%	0,734%	1,199%	-0,467%	1,548%	0,655%
Life expectancy	66,6 0	78,11	78,4 0	70,4	71,9	66,30	69,89	73,40
Labor	3		22	1	9			
	232	154	4	500	4	76	524	807
% of Labor	100%	4,8%	6,9%	46,4%	2,9%	2,3%	16,2%	25,0%
GDP (purchasing power parity) m USD	70,14	14,44	14,94	15,562	1,998	2,27	3,304	7,99
% of GDP	100,0%	20,6%	21,3%	22,2%	2,8%	3,2%	4,7%	11,4%
GDP (official exchange rate USD)	6	78,3	14,44	4	18,1	8,784	1,5	7
Real growth rate 2008	2,9	0,40	0	0,9	8	6,7	5,1	0
Real growth rate 2000-2007	4,1	2,30	0	2,0	0	6,9	3,4	4
GDP - per capita (PPP)	10	500	47 500	33	700	800	8	10
GDP - composition by sector (2008 est.)	100	100	100	100	100	100	100	100
agriculture	4,	0	1,2	0	2,	10,	7	6,
industry	32,	0	19,2	1	27,	35,	0	28,
services	64,	0	79,6	9	70,	54,	3	65,
Labor force - by occupation	100	100	100	100	100	100	100	100
agriculture	5	40,	0,6	6	5,	33,	0	20,
industry	5	20,	22,6	7	27,	19,	0	14,
services	39,	0	76,8	7	66,	47,	0	66,
Unemployment rate	0	30,	5,8	2	7,	9	9	7,
Investment (gross fixed)	21,8	14,3	21,1	5	30,1	19	22,1	39
Inflation rate (consumer prices)		3,8	3,5	0	8,5	5,7	14,1	8,3
								5,9

Source: *World Population Prospects*: <http://esa.un.org/unpp>, 2008; CIA, *The World Factbook 2009*, (own selection and calculations).

domination position, and on the other hand, strong economic bonds—the USA market is one of the key markets for the Chinese production, and Chinese trade turnover brings the trade surplus, which is growing systematically. In 1997 it amounted to 16.4 billion dollars, whereas in 2007 it was as high as 219.9 billion, with the total amount of annual surpluses in the whole period of 1997–2007 equalled 986.8 billion USD. In the period analysed, the Chinese export increased its value by 6.6 times, the BRIC group export by 5 times, with the USA export increasing merely by 1.69 and that of UE by 2.39 times. As a result of the export expansion, China enjoys high currency reserves amounting to 2132 billion dollars at the end of June 2009, which are allocated at various foreign assets, 65% of which are securities denominated in dollars. 85% of these securities

(1.2 billion dollars) are bonds issued by the American government⁶. The value of the currency reserves at the end of 2008 amounted to 1.95 billion dollars, with the 48% share allocated in BIC countries⁷.

What is more, the sector structure of GNP and employment in BRIC are characterised by the high share of the agricultural sector. It is particularly noticeable in India, where 60% of the population is employed in the I sector. The figure in China is 43% and in Brazil 20%. Service provision is relatively undeveloped in China and India, despite the fact that India holds the position of the world's leader in business services provision (information technology and telecommunications as well as offshoring).

Undoubtedly, the dynamic development of the countries belonging to the BRIC group is changing the structure of the global GNP, as well as the distribution of forces in the global economy. On the other hand, this development results in growing consumption aspirations, which raises concerns about its consequences, also those consequences resulting from Western consumption styles being implemented by those countries (even if this phenomenon is restricted owing to cultural differences). Dynamic development of BRIC countries also poses a threat of tensions, resulting from disproportion in structural development occurring in those countries. Let us analyse potential sources of such tensions.

What is of paramount importance in this aspect is China's economic development, which is currently based, to a large extent, on rapidly increasing external demand as well as huge investments (43.6% in the period of 2004–2008)⁸. This, in turn, means that the internal consumption is set at a relatively low level and equals around 40% GNP (the share is 60–70% in developed countries). The foreseeable future may suffer the consequences of such policy, provided that the enriching Chinese community proves to have growing consumption aspirations. So far, such dynamic growth has been allowed by (still) low necessities of life of the population, high working ethos, being open to the investment capital and the geopolitical position. China may also lose its competitiveness, as a result of its currency depreciation and salaries increase. What may pose a threat to the growth and territorial integrity are large regional and structural differences in the country's development. It is related to the fact that vast areas of central and western China are dominated by agriculture (45% of the population employed in this sector), as well as small traditional craftsman enterprises. On the other hand, there are the eastern regions, occupying only 3% of the Chinese area, with only 15% of the country's population. However, this part of the country is responsible for 45% of GNP, as well as for approximately 70% of international trade and investments. For example per capita GNP in Shanghai is ten times as high as in Guizhou province. Even though Chinese economy belongs to the most dynamically growing economies, it still means that it had to make its way from a low-level starting point and even spectacular annual growth of GNP may influence the real level of economy only over a prolonged period of time.

India has a lower growth rate than China and it also has a different sector structure of economy, with a high share of agriculture and a share of services provision higher than in China. It refers in particular to the services based on information technology, which are exported in more than 70%. India boasts its intellectual potential as well as relatively cheap, well-qualified work force. These factors provide the impulse to invest in business services based on ICT technologies and also research services which are gaining ever growing significance in Indian services export.⁹ Nevertheless, numerous hazards may also be mentioned in India's context. To provide some data:

⁶ M. Wolf, *Why China must do more to rebalance its economy*, "Financial Times", 23.09.2009 <http://www.ft.com/>.

⁷ International Monetary Fund, *World Economic Outlook, October 2009*, s. 194 <http://www.imf.org>.

⁸ Asian Development Bank, *Asian Development Outlook 2007, 2008, Statistical appendix* <http://www.adb.org>.

⁹ See. S.M. Szukalski, *Chiny i Indie na globalnym rynku usług*, in: K. Klośiński (red): *Chiny-Indie. Ekonomiczne skutki rozwoju*, Wydawnictwo KUL, Lublin 2008.

a) only 27% of the India's population live in urban areas, b) enormous ethnic diversity with strong nationalist and separatist tendencies—the population consists of Hindus (39%), Telugus (8%), Bengalis (8%), Marashtrians (Marathi people) (7%), Tamils (7%) as well as other minorities (31%), c/ religious conflicts between Hinduism followers (80,5% of the population), and Muslims (13,4%), d/ significant social stratification — 250 million people belonging to the middle class and, on the other hand, 26% of India's population lives on the brink of poverty, e) sanitary conditions, water deficit, lack of sanitary installations and sewage-treatment plants are all a widespread problem f) the country suffers from undeveloped infrastructure and is being corroded by the corruption resulting from imprecise legal and fiscal systems.

Brazil can boast numerous assets such as the following: beneficial demographic indexes (5th largest population in the world—196 million), large raw material resources (including oil), (Brazil is the second largest crude oil and natural gas producer on the continent — after Venezuela), power engineering based on renewable sources of energy (45% of power engineering needs is produced from renewable energy sources (whereas the world's average just below 15%). Brazil is an important producer of biofuel, second only to the USA (70% of biofuel is produced by these two countries). It also benefits from good conditions for hydro energy development, and sixth largest uranium resources in the world enable Brazil to produce nuclear energy. Brazil enjoys strong political position in the region, which is additionally reinforced by initiatives that aim at creating and leading regional organizations. The aforementioned are MERCOSUR (Mercado Común del Sur — Southern Common Market) and UNASUR. The former was created in 1991 as an economic, regional organization, on Brazil's and Argentina's initiative. 90% of the Brazilian industrial goods exports is directed at MERCOSUR countries, while exports directed at other markets consist of mainly raw materials and agricultural produce. The last several years have witnessed numerous initiatives for cooperation and association of this organization with UE¹⁰. UNASUR (Union of South American Nations created in 2004) is an initiative which aims at building the political and economic community of the twelve South American countries. It was a response to an attempt made by the USA which was supposed to group the continent's countries and to create a free trade zone for both continents. The American initiative was dropped, however its recreation cannot be ruled out. It appears that the biggest challenge for Brazilian governments is the reduction of poverty, crime, traffic in arms and drugs (Brazil is, at present, the second largest cocaine consumer—after the USA) and education development.

Table 2.

Overall Performance of companies in the 2009 Scoreboard

Factor	EU1000	Non-EU1000	BRIC	% Non-EU100
R&D Investment, € bn	130.4	300.4	5,8	1,9
<i>Change from previous year, %</i>	7,8	6,6	x	x
Net Sales, € BN	5711.8	8185.5	699,6	8,5
<i>Change from previous year, %</i>	7.2	8.7	x	x
R&D intensity*, %	2.3	3,7	x	x
Market capitalisation, € bn	3737.5	7525.8	898,0	11,9

*R&D intensity is the ratio between R&D investment and net sales of a given company or group of companies.

Source: European Commission, *Monitoring Industrial Research: The 2009 UE Industrial R&D Investment, Scoreboard 2009*.

¹⁰ See. E. Nowacka, *Mercosur jako ugrupowanie umacniające kraje członkowskie w ramach procesu integracyjnego obu Ameryk*, in: K. Żukrowska (red) *Procesy integracyjne i dezintegracyjne w gospodarce światowej*, SGH Warszawa 2007.

Table 3.

BRIC companies in top 1500 in the 2008

Rank	Company	ICB Sector	Country	R&D Investment	Net Sales	Market Capitalisation	R&D Investment	Net Sales	Market Capitalisation
				2008	2008	2008	2008	2008	2008
				€m	€m	€m	%	%	%
76	PetroChina	Oil & gas producers (53)	China	818,26	112 948	255 170	11,8%	48,9%	16,6%
79	Vale Do Rio Doce (now Vale)	Mining (177)	Brazil	780,58	26 925	76 484	52,5%	17,9%	25,6%
88	Petroleo Brasileiro	Oil & gas producers (53)	Brazil	676,99	85 078	123 778	9,7%	36,8%	8,0%
127	Gazprom	Oil & gas producers (53)	Russia	470,10	82 913	86 346	6,8%	35,9%	5,6%
133	ZTE	Telecommunications equipment (9578)	China	450,52	4 671	6 510	1,7%	2,3%	2,1%
152	China Petroleum & Chemical	Oil & gas producers (53)	China	361,36	153 118	105 761	5,2%	66,3%	6,9%
238	Tata Motors	Automobiles & parts (335)	India	218,05	10 476	3 147	0,3%	0,6%	0,6%
259	China Railway Construction	Construction & materials (235)	China	185,15	23 136	12 802	6,1%	6,6%	8,7%
317	EMBRAER	Aerospace & defence (271)	Brazil	141,73	4 558	2 930	0,9%	1,2%	1,3%
368	Prithvi Information Solutions	Computer services (9533)	India	117,35	166	17	1,4%	0,1%	0,0%
372	China Coal Energy	Mining (177)	China	115,99	5 377		7,8%	3,6%	0,0%
378	China Communications Construction	Construction & materials (235)	China	114,62	18 863	13 541	3,7%	5,4%	9,2%
391	Polaris Software Lab	Software (9537)	India	109,96	162	196	0,6%	0,1%	0,0%
402	BYD	Electronic equipment (2737)	China	106,31	2 825	8 554	0,6%	0,7%	3,0%
403	China South Locomotive	Commercial vehicles & trucks (2753)	China	105,99	3 700	5 832	1,6%	1,6%	5,3%
412	Mindtree	Software (9537)	India	102,90	183	270	0,5%	0,1%	0,1%
530	Semiconductor Manufacturing	Semiconductors (9576)	China	73,56	974	809	0,3%	0,5%	0,2%
558	Bharat Heavy Electricals	Industrial machinery (2757)	India	68,48	2 851	16 148	1,1%	1,1%	8,9%
559	Lukoil	Oil & gas producers (53)	Russia	68,35	77 468	28 926	1,0%	33,6%	1,9%
579	Kpit Cummins Infosystems	Computer services (9533)	India	65,97	117	64	0,8%	0,1%	0,0%
591	Ranbaxy Laboratories	Pharmaceuticals (4577)	India	63,70	1 096	1 865	0,1%	0,2%	0,2%
627	Tencent	Internet (9535)	China	59,33	754	19 889	1,8%	2,8%	13,1%
708	Dongfang Electric	Industrial machinery (2757)	China	51,95	2 865	3 674	0,8%	1,1%	2,0%
715	China Telecom	Fixed line telecommunications (653)	China	51,67	19 697	30 727	0,6%	4,0%	5,2%
735	Harbin Power Equipment	Industrial machinery (2757)	China	49,79	3 153	1 068	0,8%	1,2%	0,6%
779	HCL Technologies	Computer services (9533)	India	46,18	1 117	2 715	0,6%	0,7%	1,8%
789	Reliance Industries	Oil & gas producers (53)	India	45,52	20 253	47 978	0,7%	8,8%	3,1%
824	Mahindra & Mahindra	Automobiles & parts (335)	India	42,77	2 602	3 295	0,1%	0,2%	0,6%
833	Sun Pharmaceutical Industries	Pharmaceuticals (4577)	India	42,22	496	3 796	0,1%	0,1%	0,4%
851	Weichai Power	Automobiles & parts (335)	China	40,02	3 434	3 455	0,1%	0,2%	0,7%
860	Core Projects & Technologies	Support services (279)	India	39,51	66		2,9%	0,1%	0,0%
911	Infosys Technologies	Software (9537)	India	36,62	3 203	17 517	0,2%	2,5%	4,2%
950	Cipla	Pharmaceuticals (4577)	India	34,30	592	3 287	0,0%	0,1%	0,3%
964	China Railway	Construction & materials (235)	China	33,32	23 728	11 409	1,1%	6,7%	7,7%
977	Nucleus Software Exports	Software (9537)	India	32,86	49	54	0,2%	0,0%	0,0%

Source: European Commission, *Monitoring Industrial Research: The 2009 UE Industrial R&D Investment... op.cit* (own selection and calculations).

3. Position of the BRIC-based corporations and their share in global R&D expenditures

Valtteri Kaartemo puts emphasis on the dynamic development of BRIC-based companies, which is illustrated by their growing number being classified in the “500” list of transnational Corporation (TNC), as well as dynamic growth of research expenditures incurred by these corporations. It is true, but it begs the question, to what extent these phenomena influence the situation on the market of global research conducted by TNC, what features of this phenomenon are and whether we are threatened with the domination of BRIC-based companies in the forthcoming decade. Our analysis is based on the materials of the European Commission¹¹. The comparison refers to: R&D Investment, net sales of the companies classified and market capitalization of these companies' value. Analysis includes 1000 non EU companies, as well as 1000 EU. The following facts are worth stressing: (Table 2–6).

Table 4.

Comparative analysis the USA—UE—BRIC in the 2009 Scoreboard

	EU*	USA	Brazil	Russia	India	China	BRIC
R&D Investment / GDP (%)	1,8	2,8	1	1,2	0,8	1,4	1,07
Number of companies „G1500”	551	531	3	1	15	15	35
R&D Investment, € BN	144 472	159 203	1 599	538,450	066,4	2 617,8	5 821,98
Per cent of R&D Investment “G1500”	33,9%	37,4%	0,38%	0,13%	0,25%	0,61%	1,4%
Net Sales, € bn	5 263 257	3 542 441	116 561	160 381	43 428	379 243	699 613
Per cent of Net Sales,	40,23%	27,07%	0,89%	1,23%	0,33%	2,90%	5,35%
Market capitalisation € bn	3 901 947	3 980 454	203 192	115 271	100 349	479 202	898 014,4
Per cent of market capitalisation	35,7%	36,4%	1,9%	1,1%	0,9%	4,4%	8,22%
USA=100							
R&D Investment, € bn	90,75%	100	1,00%	0,34%	0,67%	1,64%	3,66%
Net Sales, € bn	148,58%	100	3,29%	4,53%	1,23%	10,71%	19,75%

* Switzerland + Norway

Source: European Commission, *Monitoring Industrial Research: The 2009 UE Industrial R&D Investment... op.cit* (own selection and calculations).

First of all, if we take into account 2000 enterprises from all over the world that have been classified on the basis of the expenditures incurred on R&D, which amounted to 430.8 billion euro in 2008, we will notice that BRIC-based companies contributed a mere 1.9% of the expenditures value in the non -EU1000 group, 8.5% of the net sales and 11.9% of market capitalisation non-EU (table 2). Taking into consideration 1500 companies from all over the world which incur 98.9% of R&D expenditures, we may observe that the group consists of 551 EU companies (36.7%), 531 USA corporations (35.4%), 256 Japanese companies (17.1%), and 35 BRIC companies make up 2.3%. 76th position in the ranking is occupied by PetroChina, 79th by a Brazilian mining concern,

¹¹ European Commission, *Monitoring Industrial Research: The 2007 UE Industrial R&D Investment, Scoreboard 2007; Monitoring Industrial Research: The 2009 UE Industrial R&D Investment, Scoreboard 2009*

Table 5.

The share of BRIC-based companies in selected sector groups in 2008

	ICB Sector	R&D Investment		Net Sales		Market Capitalisation	
		€m	%	€m	%	€m	%
1	Automobiles & parts (335)	72 505,60	17,0%	1642238,13	12,6%	520656,8	4,8%
2	Pharmaceuticals (4577)	69 690,60	16,4%	445445,69	3,4%	1018141,82	9,3%
3	Semiconductors (9576)	27 274,70	6,4%	180728,18	1,4%	333751,53	3,1%
4	Telecommunications equipment (9578)	25 949,70	6,1%	201906,47	1,5%	312125,49	2,9%
A	Total	195 420,60	45,8%	2 470 318,47	18,9%	2 184 675,64	20,0%
	BRIC	965,14	0,5%	24 339,92	1,0%	26 164,34	1,2%
5	Chemicals (135)	19 216,60	4,5%	678067,95	5,2%	444177,12	4,1%
6	Software (9537)	18 848,80	4,4%	126348,03	1,0%	417839,29	3,8%
7	Electronic equipment (2737)	17 961,10	4,2%	386249,8	3,0%	289155,31	2,6%
8	Computer hardware (9572)	17 458,00	4,1%	416935,67	3,2%	294846,03	2,7%
9	Leisure goods (374)	17 089,00	4,0%	277634,23	2,1%	170504,67	1,6%
10	Aerospace & defence (271)	15 487,00	3,6%	373298,62	2,9%	229807,98	2,1%
11	General industrials (272)	11 986,20	2,8%	534629,38	4,1%	295893,06	2,7%
12	Electrical components & equipment (2733)	11 350,50	2,7%	314327,28	2,4%	216592,17	2,0%
13	Biotechnology (4573)	10 695,90	2,5%	39959,74	0,3%	186660,13	1,7%
14	Fixed line telecommunications (653)	8 216,30	1,9%	490664,86	3,8%	588818,48	5,4%
15	Computer services (9533)	8 147,60	1,9%	161125,96	1,2%	148091,59	1,4%
16	Health care equipment & services (453)	7 777,00	1,8%	127317,28	1,0%	242847,74	2,2%
B	Total	164 234,00	38,5%	3 926 558,80	30,0%	3 525 233,57	32,3%
	BRIC	669,82	0,4%	27 518,83	0,7%	60 114,35	1,7%
17	Oil & gas producers (53)	6 948,00	1,6%	2370894,98	18,1%	1538453,53	14,1%
18	Commercial vehicles & trucks (2753)	6 746,80	1,6%	227541,24	1,7%	110716,34	1,0%
19	Industrial machinery (2757)	6 174,90	1,4%	254471,68	1,9%	181083,16	1,7%
20	Food producers (357)	5 092,30	1,2%	355416,28	2,7%	306525,47	2,8%
21	Household goods & home construction (372)	4 126,10	1,0%	188878,1	1,4%	184498,67	1,7%
22	Internet (9535)	3 385,10	0,8%	27190,47	0,2%	151467,88	1,4%
23	Banks (835)	3 364,50	0,8%	272792,92	2,1%	509691,52	4,7%
24	Electronic office equipment (9574)	3 299,10	0,8%	57821,45	0,4%	23357,81	0,2%
25	Construction & materials (235)	3 058,10	0,7%	351594,59	2,7%	147851,29	1,4%
26	Industrial metals & mining (175)	3 005,70	0,7%	390796,57	3,0%	193364,78	1,8%
27	Electricity (753)	2 729,20	0,6%	377571,48	2,9%	264569,85	2,4%
28	Personal goods (376)	2 709,00	0,6%	129859,28	1,0%	157449,98	1,4%
29	Media (555)	2 012,00	0,5%	113472,61	0,9%	91951,96	0,8%
30	General retailers (537)	1 978,20	0,5%	139426,92	1,1%	74167,61	0,7%
31	Oil equipment, services & distribution (57)	1 929,60	0,5%	94362,45	0,7%	121430,85	1,1%
32	Mining (177)	1 487,60	0,3%	150744,56	1,2%	299314,25	2,7%
C	Total	58 046,20	14%	5 502 835,58	42%	4 355 894,95	40%
	BRIC	4 005,78	6,9%	643 130,63	11,7%	808 805,42	18,6%

Source: European Commission, *Monitoring Industrial Research: The 2009 UE Industrial R&D Investment... op.cit* (own selection and calculations).

88th by Petroleo Brasileiro (Brazil), 127th Gazprom, 152nd ChinaPetroleum & Chemicals (table 3). All BRIC investments in R&D are no more than 3.66% of the expenditures incurred by American TNC (table 4).

Secondly, what matters is the structure of investments in R&D according to sectors. Four sectors: Automobiles & Parts, Pharmaceuticals, Semiconductors, Telecommunications equipment receive 45.8% of R&D expenditures in the companies belonging to the group analysed (G1500).

Table 6.

**The top 700 companies in respect of R&D investments: Comparative analysis the
USA—UE—BRIC**

	USA	EU	Japan	BRIC	Brazil	Russia	India	China
2004								
Number of companies in "G700" group	278	208	161	7	2	1	1	3
Per cent of R&D investments in "G700" group	37,6	35,3	22,4	0,35	0,1	0,02	0,02	0,2
Per cent of net sales in "G700" group	31,8	39,8	21,4	2,05	0,47	0,36	0,01	2,05
Per cent of market capitalisation in "G700" group	46,2	33,5	12,4	3,34	0,81	0,67	0,4	1,82
2008								
Number of companies in "G700" group	251	219	155	35	3	2	15	15
Per cent of R&D investments in "G700" group	37,3	33,7	22,7	1,3	0,41	0,14	0,14	0,61
Per cent of net sales in "G700" group	28,4	39,4	31,4	5,5	1,06	1,46	0,04	2,98
Per cent of market capitalisation in "G700" group	38,7	34,8	17,1	8,3	2,19	1,24	0,2	4,62

Source: European Commission, *Monitoring Industrial Research: The 2007 UE Industrial R&D Investment, Scoreboard 2007, The 2009 EU Industrial R&D Investment... op.cit.* (selection and calculations)

Expenditures incurred by BRIC-based companies make up only 0.5% of these investments, 1.0% net sales and 1.2% market capitalisation. In another group of 16 sectors, which covers 38.5% of expenditures, BRIC makes up only 0.4% of their value, 0.7% net sales and 1.7% market capitalisation. BRIC companies can boast a stronger position in raw materials sectors such as: oil and gas producers (R&D investments make up 35.1% of the global expenditures this sector, with 22.43% net sales and 42.12% market capitalisation. Mining respectively: 60.27%, 21.43%, 25.55%, Construction & materials: 10.89%, 18.69%, 25.53%, Industrial machinery: 2.76%, 3.49%, 11.54%, Internet: 1.75%, 2.77%, 13.13% (table 5).

Thirdly, it is worth noting that BRIC companies have improved their positions in the group of 700 R&D largest (such a group has been reviewed to enable data comparison between 2004 and 2008). Indeed, it shows the growth dynamics, since the number of BRIC-based companies grew as much as 5 times and the volume of their expenditures 3.7 times. Nevertheless, the analysed group's share in the R&D investments amounted to a mere 1.3%, with not a single country exceeding 1%. At the same time the USA noted 37.3%, EU 33.7% and Japan 22.7%. It is the growing share of mainly China and Brazil that must be stressed, but BRIC is still responsible for no more than 1.3% of the global investments in the group analysed, 5.5% of the global net sales and 8.3% of the company value (table 6).

Conclusion

1. Trans-national corporations originating in Atlantic countries are the creators of innovative solutions and it seems that in the forthcoming dozen or so years this position in the leading research sectors is non-threatened.

2. We have to bear in mind the financing structure of R&D, as in the USA and UE it is mostly the corporations that contribute to the research, while in China and Russia state budgets play a major part. We must also remember about the exceptionally strong growth dynamics in R&D expenditures particularly in China (growth rate as of 1998 is about 20% per annum) and Brazil. Therefore, it seems necessary for the UE to introduce a more active innovative policy. The right way to achieve this goal is, undoubtedly the initiative aiming at creation of the European Research area (ERA), which is nonetheless dominated by state politics. A number of difficulties are connected with the ERA creation, and the faster they are eliminated, the sooner the project will be completed. Six of them seem to be crucial.
 - First of all, so far, no transparent state or regional policies consistent with the Union policy and ERA creation have been formulated, the same problem applies to the realisation funds, competences, cooperation conditions and the successful completion of the whole enterprise will depend on initiatives of individual governments.
 - Secondly, a problem concerning one of the ERA project goals such as the formation of the uniform labour market for the research area workers has still not been resolved. It requires a number of special regulations on a European level, for instance, those that allow transfers of social welfare benefits connected with research scientists being relocated within ERA or the link between job security and flexibility of the scientific labour market.
 - Thirdly, instruments consolidating European research institutions have not yet been perfected. Such instruments may be created by the structures with private-public capital and providing funds to research units of both public and business sector. However, this goal may be difficult to achieve, taking into account the autonomy of these units. It might be realized through grants, competitions which joint research institutions will enter, just as it was forecasted in the ERA creation project. But will it be sufficient?
 - Fourthly, there is a problem connected with financing and managing of pan-European structures which will be created in course of building the common European research infrastructure. So far, no solutions have been suggested.
 - Moreover, research optimisation leads to planning, verification, control, and assessment of the national and regional research programmes. Owing to the research units autonomy and likely national government resistance, it may seem like a difficult task.
 - In addition, it is essential to transfer innovations to MSP sector; which frequently cannot afford expensive research projects.
3. Last but not least, one should hope, that multitude of the EU programmes aiming at the European innovativeness consolidation, will not lead to funds being wasted and that slogans “Innovative Europe” or “common research area” will become more than just mottos. Doubts may be raised because of hitherto moderate effects of the Lisbon Strategy (according to Lisbon assumptions R&D share in the UE GNP was supposed to amount to 3%, whereas it only managed to reach 1.8%).

Part V:
The Debate

ANTONI KUKLIŃSKI

THE GEOSTRATEGIC RECONFIGURATIONS OF THE GLOBAL SCENE

The Experiences and Prospects of the XXI century

Introduction

This paper is a direct follow up of my contribution published in volume four of *Reupus*¹. We are observing now and participating in one of the greatest transformations of the global scene in the last 500 years. This transformation is creating dramatic or may be even tragic challenges in five fields—civilization, globalization, capitalism, democracy and ecology.

Part One— Transformations. The shifting balance of civilizations

The processes of shifting balance of civilizations will probably be the main feature of the XXI century. The five hundred years domination of the Western Civilization is coming to an end². The new multipolar world of global powers and civilizations is emerging. We have to read once more the path breaking opus of Samuel Huntington³ to see the prophetic quality of his thinking⁴.

Globalization

The great crisis 2008–2011 is destroying the wisdom of an universal globalization presented in the brilliant book of Thomas Friedman⁵ “The world is flat”. This book is not a “brief history of the twenty first century”. Contrary to the view Thomas Friedman the world of the XXI century will be not flat.

The landscape of the XXI century will be very deeply differentiated in the dimensions of civilizations, economies, societies and the political power structures. The vision of a stiff model of

¹ A. Kukliński, *The future of Europe. A modest contribution to the European Debate* [in:] A. Kukliński, K. Pawłowski (eds.) *Futurology. The challenges of the XXI century. Reupus volume 4, Nowy Sącz 2008*

² Compare F. Zakaria, *The Post American World*, Penguin Books, London 2008

³ S.P. Huntington, *The clash of Civilization and the Remarking of World Order*, Simon and Schuster, N.Y. 1996

⁴ Compare the evaluation of S. Huntington legacy, A. Kukliński, K. Pawłowski, J. Woźniak (eds.) *Polska wobec wyzwania cywilizacji XXI wieku*, Kraków 2009

⁵ T. Friedman, *The Word is flat. A brief history of the XXI century*, Ferrar Straus, New York 2005

globalization will probably be replaced by a model elastic globalization not destroying the creative features of regional and local communities⁶.

The changing substance of capitalism

In simplistic interpretation of the great crisis 2008–2011 is a shifting balance of neoliberalism and neokeyensism as prevailing ideologies shaping the global economy and indirectly also the global society.

This dualistic approach neoliberalism versus neokeyensism is not expressing the dramatic necessity to develop a new doctrine and ideology of capitalism. We are waiting for a great charismatic personality of a new Keynes, who would be able to grasp the emerging realities of the XXI century. In pessimistic interpretation this is only an utopian dream. The deep weaknesses of the contemporary global elites are creating a Gordian Knot where Alexandrian Solutions of a new Keynes are just impossible.

The multipolar model of capitalism of the XXI century

The universality versus multipolarity of capitalism is a great challenge of the XXI century. We will observe and anticipate different processes of the universal transformation of capitalism. But we might be interested also in the processes of the development of different “regional” faces of global capitalism. Let me mention only the Anglosaxon face, the face of continental Europe, the Chinese and the Indian faces.

The Anglosaxon⁷ and European faces of capitalism have a broad and comprehensive analytical documentation. In this place let me only formulate a few comments related to the Chinese⁸ and Indian faces of capitalism.

The Chinese capitalism is an amalgamation of three ideologies and realities: *Primo*—the reality and ideology of an autocratic political system which can be seen in neoorwelian terms⁹.

Secundo—the ideology and reality of an economic system absorbing the solutions of the global capitalism and especially an open minded and at the same time activist attitude to the great transnational corporations as a driving force of the globalization processes¹⁰.

Tertio—the reality of a social system which de facto has unexpected similarities to the social system of middle XIX century England. The social conditions of the working class in China can be interpreted in F. Engels¹¹ framework of his well known book analyzing the conditions of the working class in England in the middle of XIX century England.

So I am offering an unexpected trio of authors as an inspiration for the interpretation of Chinese capitalism George Orwell, Thomas Friedman and Fredric Engels.

* * *

⁶ Compare the contributions of Roman Galar Inter alia In the volume P. Jakubowska, A. Kukliński, P. Żuber (eds.) *The future of Region in the perspective of global change*, Ministry of Regional Development, Warsaw 2008

⁷ Compare H. R. Zon In this volume

⁸ Compare M. Penkala In volume four of Reopus

⁹ Compare G. Orwell, *Animal Farm*, 1945 and *Nineteen Eighty Four*, 1951

¹⁰ T. Friedmann, op.cit.

¹¹ F. Engels, *Die Lage der arbeitenden Klasse in England 1845. The conditions of the working class in England*, Penguin Books, NY 1987

One of the miracles of the last decade of the XX century is the shift from a stagnant to on dynamic, economic system in India. There are many interpretations of this turning point. A very important and a new interpretation was outlined by Akash Kapur¹². Let me present a set of extensive quotations from this contribution.

* * *

“The breakup of the Soviet Union had a profound impact on India. In many ways, it paved the way for a reinvention of the country: from a stultified, socialist economy to a more dynamic, capitalist one; from a foreign policy defined by suspicion of America to one defined by shared interests and even mutual affection; and from public attitudes that frowned on individualism, consumerism and ambition to a nation that today exalts those same qualities.

A founding member of the global non-aligned movement, India was never a Communist country. But it was far closer to the Soviet Union than to the United States throughout the Cold War; buying weapons on concessional terms, doing barter trade with the Eastern Bloc and receiving financial and technical aid for industrial and infrastructure projects.”

* * *

Most important, the death of Communism had a psychological and intellectual impact that paved the way for India’s transformation. As the economist T.N. Srinivasan (among others) has argued, it provided an opening for would-be reformers, who had already recognized the need for some form of liberalization but who had run up against ideological resistance.

The collapse of the Soviet Union wasn’t just the collapse of a political and military behemoth. It was the collapse of an idea, too, and with the discrediting of Communist ideology, Indian socialism, long the guiding philosophy of statecraft and economic policy making, confronted a crisis of confidence. Ideas that had until then been anathema to the nation’s governing class—ideas about markets, about profits, about entrepreneurship—suddenly seemed, amidst the detritus of Communism, to be incontestable.

* * *

Over one thing, though, there is little debate: India, today is fundamentally different from the India that existed before the collapse of the Soviet Union. And that transformation, although attributable to many causes, is testament to the power of ideas—to the way they rise and fall in credibility and valence, to the way they travel across continents and cultures, and to the way they shape the destinies of nations and the people who live within them.

* * *

This is a confirmation of the point of view, that 1989 was an important turning point in the global scale.

Democracy versus autocracy

We are deeply convinced that the democratic political systems are the most eminent creations and the final destiny of the historical processes of human development. The history of the XX century is leading to an optimistic conclusion that the democratic political systems were able to face the mortal challenges created by the totalitarian systems. However in the first decades of

¹² Akash Kapur, *India’s path was paved by Soviet fall*, ITH, November 20 2009

the XXI century the democratic systems are losing the capacities of innovation, the will to life and the will to power. They are also losing the capacity of long term strategic thinking.

In these conditions the democratic system of Europe and North America face a dramatic vision of failure not able to confront the challenges created by dynamic and autocratic China slowly but consistently building up the position of global leadership or at least global co-leadership.

The observation of P Opala and K. Rybiński¹³ “The rise of China and the failure of democracy” is a dramatic warning light. We are trying to find a route of hope that China sooner or later will develop its own incarnation of a democratic system accepting the universal assumptions of this system.

The present observation of the weakness of the democratic systems of the Atlantic Community is not able to create in China a strong inspiration to leave the tested trajectory of autocracy and enter the trajectory of democracy which may be the trajectory of failure.

The collapse of the Soviet Empire has induced India to drop the Soviet model of development. The strong renaissance of the power of the Atlantic Community may induce China to consider the democratic system as an option for political and social transformation.

The Titanic of the Atlantic Community of the XXI century is not an inspiration for the transformation of the political system in China.

Ecology

In 1972 almost forty years ago, The Club of Rome has injected in to the mind of the global elite and the global public opinion the unexpected vision of the Limits to Growth¹⁴.

The immense success in terms of conferences publications and discussions was not followed by global, political activities trying to improve the quality of global ecology and to face the dramatic challenges of the “Limits to growth”.

Now in 2009 the status quo of global ecology is much worse than it used to be in 1972. The Grand Copenhagen Conference is facing the tragic ecological challenges of the XXI century. In this context I would like to present the cassandrian vision of Bill McKibben¹⁵.

* * *

Almost no matter what happens, the Copenhagen talks that open this week will be a disaster. That's because climate change is not like any other issue we've ever dealt with. Because the adversary here is not conservatives, or socialists, or deficits, or racism, or any of the problems we normally face—adversaries that can change over time, or worn down, or disproved, or cast off. The adversary here is physics.

Physics has set an immutable bottom line on life as we know it on this planet. For two years now, we've been aware of just what that bottom line is: The NASA team headed by James Hansen gave it to us first Any value for carbon dioxide (CO₂) in the atmosphere greater than 350 parts per million is not compatible “with the planet on which civilization developed and to

¹³ Compare P. Opala, K. Rybiński In Reupus volume four op.cit.

¹⁴ Compare the papers of Z. Sadowski and W. Świtalski in volume four of Reupus

¹⁵ Bill McKibben, The physics of Copenhagen, Copenhagen I climate change is not Just another political problem. The enemy here is physics and its implacable, IHT December 8 2009, compare also Copenhagen II and Copenhagen III in the same issue IHT, compare also S.N. Bhanoo, *Oceans are losing ability to absorb CO₂*, IHT November 20 2009, compare however more optimistic evaluations of Copenhagen Conference E. Rosenthal, *Forestry deal could end up high point in Copenhagen. Plans nearly finalized to compensate nations for conserving resources*, ITH December 16 2009, compare also *Letters to the Editor, Thoughts on Copenhagen*, IHT December 24 2009, compare also J. Kanter, *EU blames others for the “great failure” in Copenhagen*, IHT December 23 2009

which life on earth is adapted.” That bottom line won’t change: above 350 and, sooner or later, the ice caps melt, sea levels rise, hydrological cycles are thrown off kilter, and so on.

And here’s the thing: Physics doesn’t just impose a bottom line, it imposes a time limit. This is like no other challenge we face because every year we don’t deal with it, it gets much, much I worse, and then, at a certain point, it becomes insoluble—because, for instance, thawing permafrost in the Arctic releases so much methane into the atmosphere that we’re never able to get back into the safe zone. Even if, at that point, the US Congress and the Chinese Communist Party were to ban all cars and power plants, it would be too late.

Oh, and the current level of CO₂ in the atmosphere is already at 390 parts per million, even as the amount of methane in the atmosphere has been spiking in the last two years. In other words, we’re over the edge already. We’re no longer capable of “preventing” global warming, only (maybe) preventing it on such a large scale that it takes down all our civilizations.

* * *

May be this cassandrian vision is too pessimistic. May be a light of good hope will be created by the Copenhagen Conference. However our illusion should not be expanded too far. The present crisis of the global elite and the impotence of this elite as a community of strategic thought and action is leading to a pessimistic conclusion. Hinc et nunc it is almost impossible to avoid the global ecological disaster of the XXI century.

* * *

Part one of this paper is just a set of notes which may be useful as an inspiration to discuss the transformation of the global scene of the XXI century. We have proposed to see five fields of transformation:

- Civilization
- Globalization
- Capitalism
- Democracy
- Ecology

Part two— The geostrategic reconfigurations

Part one is an inducement to analyze the potential transformation of the global scene of the XXI century. These transformations will create different geopolitical reconfiguration. In this context I would like outline six configurations which may be seen as an utopian dream or a feasible reality of the future:

- The triadic configuration
- The G3 configuration
- The Bric configuration
- The Chimerica configuration
- The configuration of the Atlantic Community
- The G7 configuration

The triadic configuration

In the last decade of the XX century the Triad of the victorious coalition of USA, European Union and Japan was the dominating power of the global scene.

The Triad was the most effective benchmarking metaphor emerging constantly in the analytic studies of the European Union¹⁶. The Triad benchmarking was also an inspiration for the design and early promotion of the Lisbon Strategy¹⁷.

The Triad was however not able to grasp an unique opportunity to create a new global order after the collapse of the Soviet Empire.

In this context it is worthwhile to review the charming and illuminating intellectual joke of *The Economist*¹⁸ published in the New Year of 1993 as a sui generis science fiction under the title “Looking back from 2992 — World History, Chapter 13—“The disastrous 21st Century”. Let me present three passages from that essay.

“This was an opportunity of a magnitude the world had rarely seen before. As Chapter 12 explained, the three-sided War of Ideas that had occupied most of the 20th century ended in a sweeping victory for the once apparently doomed forces of liberalism. The defeat of racial totalitarianism in 1945 having been followed by the defeat of communist totalitarianism in 1989–91, the victorious pluralists seemed to have the future at their feet.”

“The failure of clear thinking applied to all three members of the victorious coalition—the United States, the European Community and Japan. They could, if they wished, have brought a share of liberty and prosperity to much of the rest the world by the end of the 21st century. They did wish it. But they failed to see that to succeed they had to remain a partnership. Instead, each of the three almost at once started to assert itself against others.”

* * *

“Looking back from 2992, one can see why the democracies missed the great opportunity they were given in the 1990s. The fact that they had had to spend the 20th century fighting their two-front War of Ideas, against communism and fascism, was itself a sign that a cycle of history was approaching its end. The democracies needed to re-examine the ideas that had created this cycle: but they left the re-examination too late.”

* * *

After World War II—the victorious global elite was able to design and establish a new global order. This order was functioning in the second half of the XX century as a sui generis global government. Unfortunately the global elite of the end of the XX century was not able to design a new global order for the XXI century. The intellectual joke of *The Economist* is revealing a real great tragedy of lost opportunities in global and mega historical scale.

In the first decade of the XXI century. The Triad metaphor has quietly evaporated from the attention on the global scene.

¹⁶ Compare P. Caracostas, U. Muldur, *Society the endless frontier. An European vision of research and innovation policies for the 21st century* European Commission, Brussels 1997

¹⁷ Compare G. Faylin Reopus volume 4

¹⁸ *The Economist*, December 26 1992, January 8 1993, compare the paper of A. Kukliński in volume four of Reopus

The G3 configuration

The hypothesis can be formulated that G3 will be the dominating power of the XXI century. G3 is defined as the prevailing global coalition of the USA, European Union and China. This coalition is more an utopian dream than a feasible reality for two reasons:

The first reason is a deep transformation of the American society and the American elites. This transformation is drastically reducing the role of European legacy and European inspiration in the development of American society and culture.

The vast field of European studies in American Universities is shrinking quite rapidly. There is no doubt that the USA of the XXI century will be less interested in Europe than the USA of the XIX and XX century.

The second reason is the alarming weakness of the European Union as an actor of the global scene and potential equal partner in relation to the US and China.

Let me quote in this context the pessimistic comment of The Economist "We are all Belgians now"¹⁹

"EUROPE, it is said, must resist the temptation to become a giant Switzerland: ie, a smug, rich, insular place. But judging by the antics of European leaders as they filled two top European Union jobs on November 19th, the club faces another danger altogether becoming a giant Belgium.

Lots of European countries indulge in shadowy coalition politics, with jobs divvied out among rival parties, but Belgium takes the biscuit. All Belgian governments are big coalitions, uniting parties that loathe one another, staffed by fixed quotas of ministers from the French- and Dutch-speaking communities (who also cannot stand each other). Democracy barely counts, as even parties thumped at the ballot box return to office. What is the link between this and the selection of Herman Van Rompuy as the first full-time president of the European Council, and of Catherine Ashton as a new foreign-policy chief? It is the European weakness for coalition politics, in which a quest for "balance" all too often trumps talent or merit."

The historical opportunity to establish a strong leading team of the European Union was lost. The possibility to try to promote the idea of G3 was also lost.

The Bric configuration

The Bric metaphor is a new phenomenon of the global scene. This is a club of four countries China, India, Brazil and Russia²⁰. These four countries have two common features.

Primo—a strong and promising development potential

Secundo—an ambition to assume the role of real global powers creating a countervailing pattern in relation to the classical domination of the Atlantic Community. But the illusion of Bric are stronger than the realities. The cohesion of Bric is very low. Each member of the Club has divergence interests inside and outside the Club.

The vision to transform Bric into G4 is not realistic. We should however observe and analyze the development of Bric as a phenomenon of global importance. The paper of V. Kartemo²¹ published in this volume is a step along this trajectory.

¹⁹ Charlemagne, We are All Belgians now. How the European Union's horse trading over top jobs reflects murking coalition building, The Economist, November 28 2009

²⁰ C.J. Levy Russia's Costly "Bridge to Nowhere", IHT, April 22 2009, compare also S. Rao, *The money is following into Brics*, IHT, December 23 2009, compare also A. Barriomievo, *Fighting for the forests in Brazilian Wild West*, IHT December 23 2009

²¹ V. Kartemo In this volume

The Chimerica configuration

If we like it or not Chimerica will probably be the most important feature of the XXI century. By Chimerica we understand a bipolar world dominated by USA and China. I would like to present three quotations which may be useful in the interpretation of the Chimerica of the XXI century. The first quotation H.A. Kissinger²²:

“As a new century begins, the relations between China and the United States may well determine whether our children will live in turmoil even worse than the 20th century or whether they will witness a new world order compatible with universal aspirations for peace and progress.”

The second quotation—W. Lam²³

“Hongkong While no breakthroughs came out of the Barack Obama-Hu Jintao summit meeting, the U.S. president maiden trip to China will go down in history as a pivotal event in the relations between the two most powerful countries of the 21st century.

For the first time, the leaders of the United States and China talked as equals. And the rough parity between an apparently declining superpower and a fast-rising quasi-superpower has major global implications for issues including regional security, nuclear proliferation, trade, climate change and human rights.

The problem is that while its newfound power has emboldened Beijing to assume a much higher profile in world affairs, the Chinese Communist Party leadership has a radically different interpretation from the United States of what China’s international role or responsibility should be.

First, the plus side. Mutual recognition by Washington and Beijing of their status as peers could dispel misunderstandings and facilitate efforts, in the words of the Obama-Hu joint statement to “deepen bilateral strategic trust” and “take concrete actions to steadily build a partnership.”

The third quotation—T.L. Friedman²⁴

“Let’s today step out off the normal boundaries of analysis of our economic crisis and ask a radical question: What if the crisis of 2008 represents something much more fundamental than a deep recession? What if it’s telling us that the whole growth model we created over the last 50 years is simply unsustainable economically and ecologically and that 2008 was when we hit the wall—when Mother Nature and the market both said: “No more.”

We have created a system for growth that depended on our building more and more stores to sell more and more stuff made in more and more factories in China, powered by more and more coal that would cause more and more climate change but earn China more and more dollars to buy more and more U.S. T-bills so America would have more and more money to build more and more stores and sell more and more stuff that would employ more and more Chinese... We can’t do this anymore.”

Chimerica is a triple paradox²⁵

1. The encounter of an declining and rising superpower
2. The encounter of a democratic and autocratic system
3. The encounter an open and not open society and civilization.

²² H.A. Kissinger, *US and China Conflict is not an option*, IHT June 9 2009

²³ W. Lam, *Equals et last for better or worse*, IH, November 19 2009, compare also Zhang Wei-Wei. *Eight ideas behind China’s success*, IHT October 1 2009

²⁴ T.L. Friedmann, *The great disruption*, IHT March 9 2009

²⁵ Compare J.S. Nye, *The Paradox of American Power*, Oxford University, Press, N.Y. 2002

We should not accept only a simplistic assumption of the growing power of China and the declining power of USA. We can also imagine the renaissance of the Americans soft and hard power of the XXI century and the collapse of the power of China.

Chimerica is a great enigma of the XXI century. Taking into a count the deep weakness of the American economic, social and political system we can envisage however that for a long time the USA will keep the place of the first global superpower.

There is an open question if the de facto closed Chinese civilization would allow China to assume even in the secular perspective the role of the first global superpower.

In this enigma we can find a chance for the renaissance of the global role for the Atlantic Community.

The Atlantic Community. The Titanic of The XXI century?

The beginning of the XXI century is a very dramatic or even tragic time in human history. We are overwhelmed by the perspective of the intellectual climate of neospenglerism. We are inclined to believe, that *Der Untergang des Abendlandes*²⁶. The decline of Western Civilization is a fatalistic verdict of history. In this spirit we are inclined to believe that the leading role of Western Civilization is a closed chapter in human history of the years 1500–2000²⁷.

The XXI century will be an age of Asia and especially an age of Chindia—China and India. The Gordian Knots paralyzing the Atlantic Community at the beginning of the XXI century are destroying our hope and will to power; to be a very important actor of the global scene of the XXI century. We need wisdom, imagination and courage to analyze the experience of the Atlantic Community at the beginning of the XXI century using the conceptual framework of Gordian Knots and Alexandrian Solutions²⁸.

The dramatic Gordian Knot of the Atlantic Community at the beginning of the XXI century is the destruction of the unity of Western Civilization, the unity of the European Union and the USA as an integrated actor of the global scene.

We need a megahistorical Alexandrian Solutions to establish the unity of the Atlantic Community as an integrated and powerful actor of the global scene of the XXI century.

Nobody—China, India, Russia, the Islamic powers, the power of oil — can challenge the integrated power of the Atlantic Community of the XXI century. This optimistic message is emerging from the brilliant book of Timothy Garton Ash²⁹ *Free World—America, Europe and the surprising future of the West*.

The Atlantic Community is a very grand and powerful Community — A Community of Western Civilization, a Community of Liberal Democracies, a Community of Innovative Culture, a Community of Academic Freedom, a Community of dynamic capitalistic enterprises.

This power and grandeur is paralyzed by the political and ideological disintegration—a dramatic or even tragic Gordian Knot. **If the Atlantic Community will not find an Alexandrian Solution for this Gordian Knot then the Atlantic Community will really transform itself into the Titanic of the XXI century.**

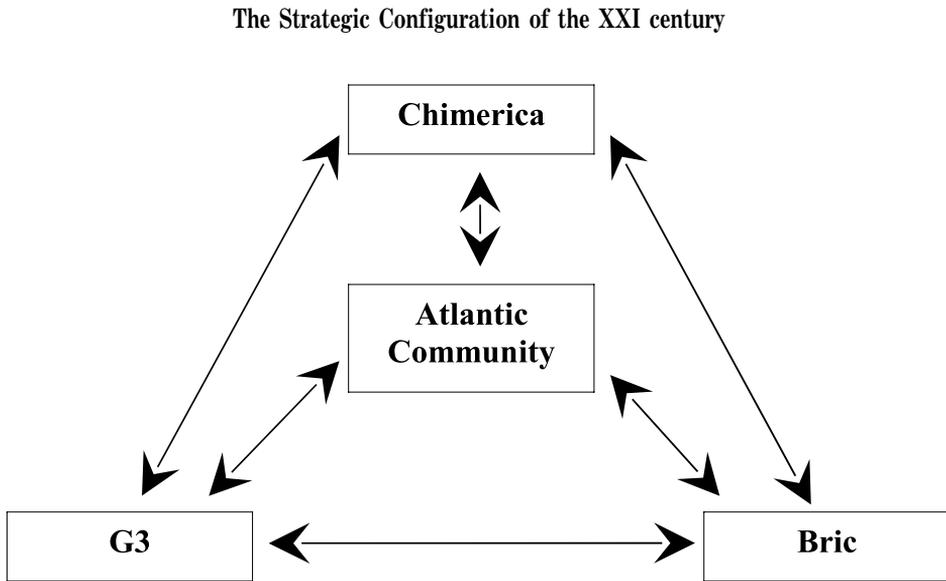
²⁶ O. Spengler, *Der Untergang des Abendlandes*, München, Beck 1979, in English—*The Decline of the West*, in polish *Zmierzch Zachodu*

²⁷ Compare A. Kukliński, *The transformation of the global scene* [in:] A. Kukliński, B. Skuza (eds) *Turning points in the transformation of the global scene*. The Polish Association for the Club of Rome, Warsaw 2006

²⁸ Compare K. Rybiński, P. Opala, M. Holda, *Gordian Knots of the 21st century*, Ministry of Regional Development, Warsaw 2008

²⁹ T.G. Ash, *Free World*, Random House, New York 2004, the polish edition Znak, Kraków 2005

Table 1.



G7 The seven pillars of the global scene of the XXI century

We have assumed in this contribution that in the reconfigurations of the global scene of the XXI century the leading roles be performed by seven great powers: the USA, the European Union, Japan, China, India, Russia and Brazil. It means not that this is a comprehensive geostrategic map of the XXI century.

A much more comprehensive presentation of this map is outlined in the brainstorming Report of the World Bank³⁰.

I think however that an analyses of G7 is a very interesting and productive field of studies outlining the different types of interaction, cooperation, competitive friendship and hostility pulling together and apart the G7 world.

The world of this interaction is also a field of changing polarization of economic, political, cultural and military power and the changing global roles of the Atlantic Community, of Chimerica and Bric. This is a way of interpretation of the Chimerica of the XXI century as seen in the context of G7. Table one is a preliminary framework to analyze the interaction the framework of G7 using the inspiration of the input-output notation. I am not quite sure if this is an effective analytical analogy.

Part Three— The Future of the Atlantic Community

The art of *contra spem sperare* is a very challenging and difficult art. The Atlantic Community without hope will transform itself into a hell. The dramatic question formulated by T.G. Ash “Can the West be put together again”³¹ is for us the critical question of our times.

³⁰ World Development Report 2009. Reshaping Economic Geography, The World Bank, Washington D.C. 2009

³¹ T.G. Ash, *op.cit* p. 12

Table 2.

G7 thematrix of vertical and horizontal interactions in the “input-output” convention

Vertical interaction Inputs	Horizontal interactions output						
	USA	EU	Japan	China	India	Russia	Brazil
USA							
EU							
Japan							
China							
India							
Russia							
Brazil							

I would like to present two quotations as a contribution to the interpretation of this question:

Question one End of whose history”³²

* * *

SINGAPORE The 20th anniversary of the fall of the Berlin Wall has just been celebrated. For many, that momentous event marked the so-called end of history and the final victory of the West.

This week, Barack Obama, the first black president of the once-triumphant superpower in that Cold War contest, heads to Beijing to meet America’s bankers—the Chinese Communist government — a prospect undreamt of 20 years ago. Surely, this twist of the times is a good point of departure for taking stock of just where history has gone during these past two decades.

Let me begin with an extreme and provocative point to get the argument going: Francis Fukuyama’s famous essay “The End of History” may have done some serious brain damage to Western minds in the 1990s and beyond.

Mr. Fukuyama should not be blamed for this brain damage. He wrote a subtle, sophisticated and nuanced essay. However, few Western intellectuals read the essay in its entirety. Instead, the only message they took away were two phrases: namely “the end of history” equals “the triumph of the West.”

* * *

Consequently, in the 21st century, history will unfold in the exact opposite direction of what Western intellectuals anticipated in 1991. We will now see that the “return of history” equals “the

³² K. Mahubani, *End of whose history*, IHT, November 12 2009

retreat of the West.” *One prediction I can make confidently is that the Western footprint on the world, which was hugely oversized in the 19th and 20th centuries, will retreat significantly.*

This will not mean a retreat of all Western ideas. Many key ideas like free-market economics and rule of law will be embraced ever more widely. However few Asians will believe that Western societies are best at implementing these Western ideas. Indeed, the assumption of Western competence in governance and management will be replaced by awareness that the West has become quite inept at managing its economies.

* * *

Here, too, as the 21st century unfolds we will see the exact opposite outcome. The return of Asia will be accompanied by an astonishing Asian renaissance in which many diverse Asian cultures will rediscover their lost heritage of art and philosophy.

There is no question that Asians will celebrate the return of history. The only question is: Will the West join them in these celebrations, or will they keep waiting for the end to come?

* * *

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* * *

This is an interesting Asian point of view excluding implicate the vision of a renaissance of the power of the West. In this context I would like to quote a charming note published in the *Economist*³³.

* * *

ONE of the great studies of decline is a novel about a fictional Sicilian prince, living more than a century ago. There is much about Giuseppe di Lampedusa’s “The Leopard” that is remote now: peasants paying their rent with wheels of cheese and freshly killed lambs, footmen in knee-breeches, a constant threat of revolutionary violence on the horizon. Today’s Europe is at peace. Feudalism is long gone. Blatant inequalities are frowned on. Yet today’s European leaders would still do well to study “The Leopard”, for it offers them some topical lessons.

* * *

“Today “The Leopard” is best-known for a single line: “If we want things to stay as they are, things will have to change.” It is a fine line, but it is also one that can easily be misinterpreted. Today’s European leaders talk about things changing, but in ways designed to appeal, all too often, to the side Of Europe that is old, tired and anxious. Buzzwords of the moment include a “Europe that protects” (a phrase recently used by both President Nicolas Sarkozy of France and Chancellor Angela Merkel of Germany). It is a horribly defeatist slogan. What about a Europe that makes its citizens strong, or one that equips them to compete? Europeans can live off their inherited wealth for a bit longer, and many still lead largely enviable lives. There is much that is fine and even noble about Europe, including its ambitions to reduce social inequalities. But

³³ Charlemagne, *Lessons from The Leopard*, *The Economist*, December 12 2009, compare also the very interesting contribution of N. Tenzer, *Quand La France disparaît du monde essai*, Grasset Paris 2008

Europe's rivals are young and hungry. The old continent should resist the allure of a genteel surrender."

* * *

I am convinced that the United States and Europe should strongly resist the allure of a genteel surrender.

Conclusion

We hope that volume six of Reopus will be a controversial contribution to the debate of the Enigma of the XXI century. To outline the geostrategic reconfiguration of the global scene is a great challenge for our mind and imagination ³⁴. This paper is only a very modest contribution trying to face this challenge. Your expressions if agreement or disagreement would be very highly appreciated.

Warsaw-Nowy Sącz, 31 December 2009

³⁴ Compare the paper of Luis Emmerij which is the opening paper of volume 6

ANTONI KUKLIŃSKI

POST SCRIPTUM

This is a really brainstorming volume formulating the dramatic question.

The Atlantic Community. The Titanic of the XXI century?

The rich and multidimensional content of the volume is presenting a set of interesting may be even charismatic contributions outlining two interpretations of this mega historical and mega geographical question. The Atlantic Community versus The Atlantic Community. The Atlantic Community versus Bric.

In the first interpretation we are exploring the great challenge of the unity versus disunity of The Atlantic Community. The destruction of the Unity of the Atlantic Community is a sui generis suicide of Europe and the Unites States as global powers and as one of the most important civilizations – the Western Civilization.

The second interpretation is exploring the rising stars of Bric – Brazil, Russia, India and China as competitive powers in relation to the Atlantic Community.

The content of volume six is a contribution to the interpretation of the development of a new global order of the XXI century. The most charismatic sentence in the volume is the observation of Krzysztof Szczerski “Titanic in ourselves”.

* * *

We hope that in the present volume you will find some charismatic contributions moving our knowledge and imagination to recognize the “Titanic” problem as one of the crucial problems of the XXI century.

We hope that the academic communities, the political communities, the business communities and the journalistic communities will find a sufficient amount of intellectual and moral courage to answer grand question:

The Atlantic Community - the Titanic of the XXI century?

We should create a new comprehensive infrastructure of international research programmes, conferences and publications which will find and promote the Alexandrian Solutions for the Gordian Knots of the XXI century.

The present system of conventional wisdom and political correctness is not able to face the great historical challenges of our time.

The first stage in the process to create communities facing the Titanic problem is already a living reality documented by the publication of volume 6.

We are convinced that the knowledge, imagination and the intellectual courage of the Authors of this volume will open the trajectory to answer—the dramatic question—The Atlantic Community—The Titanic of the XXI Century?

Antoni Kukliński

Nowy Sącz - Warsaw 20 September 2010

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