



Double Factor Ten: Responsibility and Growth in the 21st Century*

F. J. Radermacher

Head, Research Institute for Applied Knowledge Processing, Ulm, Germany;
Professor of Computer Science at the University of Ulm, Germany; Member, Club of Rome

Abstract

*Since the world conference in Rio in 1992, the world has been facing the challenge of consciously organizing sustainable development. The goal is no less than the organization of growth compatible with sustainability, together with the creation of a global social balance and the preservation of ecological systems. In this context, the demands of a **global ethic** and of **intercultural humanism** must be effectively implemented in terms of a global domestic policy. Furthermore, adequate regulations must be set in such a way so as to make systematic practices that run counter to sensible rules and to the fair interests of others economically unprofitable.*

*The chances of attaining this ambitious goal of balance are limited. The alternatives are a **collapse** or a **resource-dictatorship / brazilianization**, probably connected with terror and civil war. Both alternatives are so disastrous that the countries of the world, facing the global financial crisis, the threat of a climate catastrophe and an aggravating division between the rich and the poor, might still come together in order to implement a better designed global order: **eco-social instead of market-radical**.*

1. Global Problems

As a consequence of economic globalization, the global economic system is undergoing a process in which it is increasingly ridding itself of fetters and constraints within the context of the **mega-trend of “explosive acceleration”**, which is taking place under partly inadequate conditions set by the global framework. A painful consequence of these inadequate conditions is the current **global financial and economic crisis** which, because of the resulting massive debts incurred by countries, poses a substantial threat to sustainability.

But also, the international **transfer of labour** has brought about negative effects: gains for some to the detriment of others who suffer heavy losses. The consequence has been a partial deconstruction of the welfare systems in the rich countries, a **decline of the situation of the middle-income stratum** and important losses of states' tax revenues. On the whole,

*A short version of this article titled “Tenfold increase in global wealth plus tenfold increase in environmental efficiency” was published in April 2010 in a special issue on “Sustainability” in German in *PWC* journal. This article was translated by Daniel Saudek, independent scholar in Science and Theology.

this is a development which threatens (long-term) stability through an increasingly short-term orientation, also to the detriment of the future.

The cause of the global regulation deficit is the **loss of the primacy of politics** in the context of globalization, because core political structures – in contrast with economic processes – have retained a national or to some extent, continental orientation, but not yet attained a global one. Because of insufficient international agreements on regulations and the resulting wrong orientation of the global market, the developments described **run counter to the goal of sustainable development in a massive way**. Where do the really important challenges lie here?

2. The Derestriction of the Financial Sector as an Instructive Example

Currently, the most important problem on a global scale is the derestriction of the financial sector as a consequence of globalization in the form of **digital capitalism**. Capital is roaming around the globe in an uncontrolled manner, always in pursuit of ever higher investment returns, and is putting governments under pressure, while arising from almost nothing. The **avoidance of tax payments** is becoming the most important segment for value creation for certain key-players. This is done by taking advantage of complex international legal situations and the special possibility of **off-shore financial centres** on the one hand, and by **creation of new monetary value** or borrowing through premium-debtors on the other.

The modifications of regulations for financial markets in the last few years have enabled small groups of premium-agents to generate capital **virtually from nothing** through new forms of **monetary value creation** using novel types of financing instruments. An example worth mentioning is the “innovation” of the securitization, on a vast scale, of loans, made (politically) appealing with the argument of (a better) distribution of risks. However, these securitizations also make a massive extension of the granting of loans possible while capital contributions remain equal, which has led to a massive increase in risks. The disposition of loans has led to a significant lowering of (the necessary) care in the granting of loans, because the risks are now borne by others (e.g. in the US subprime market). Loans were bundled together in great numbers, taken apart, bundled up again, (only to be once again) taken apart and rebundled, and in such a way were rearranged to less and less understandable constructs. Imagine sausages in a funfair being made into new sausages: their quality standard in comparison to the original piece of meat is probably still more transparent than the reciprocal effect between the third securitization and the original risk in the financial sector. Even being able to sell such a thing necessitates an **excellent rating**, which has been ultimately made possible through Credit Default Swaps which in turn have turned out to be **bluff packages** (the charges taken in annually were higher than the financial security deposited for an emergency). Problems in the US subprime market (less than 1% of the collateralized volume) (then) brought the complex house of cards to a collapse. Large fees were cashed in and rebates distributed for the fabrication of illusions (**voodoo economy**). And the governments of the United States and the United Kingdom have refused to even address this issue in as late a conference as the G8-summit in 2007 at Heiligendamm (Germany). For these countries had benefited too much. Here lies the ultimate cause of the mentioned problems.

Despite the current crisis, the international community has once again managed to save the system, and this has been at the cost of **exorbitantly increased debts of states**. The situa-

tion includes the socialization of the losses after having privatized the gains beforehand. How are debts ever to be written off in this way?

3. The Question of the Environment and Resources

However, the financial and economic crisis is not the only area which causes problems. For against the backdrop of an extremely rapid growth of the global population, the **global state of the environment and resources** is exacerbating significantly within very short periods of time. Humanity is moving towards the mark of **ten billion** people. In addition, hundreds of millions of people are becoming accommodated to lifestyles marked by high resource consumption. Can this work out well by any means, and is there any sort of prospect for the future?

Firstly, it holds true that, as a consequence of the growth processes described, **access to resources and the strain on the environment** thus brought about are increasing dramatically. There is no prosperity without the availability of resources! However, overuse leads to collapse. Who should be able to, and who should be allowed to access a given resource, and to what extent? War or peace can depend on the answer to this question. A bottleneck for the **feeding of the global population** may therefore ensue in the next few decades, despite a massive increase in food production. The prospects for the field of energy and climate look equally dismal. There is a threat of gravely problematic situations and conflicts. In a historical perspective – compare the example of **Easter Island** – there is a threat of a collapse of entire societies. And a large part of the elites all over the world are still used to thinking in terms of **competition of nations** rather than in terms of **international cooperation**. What is called for, instead, is a way of thinking committed to the global common good, i.e. to a universal principle of sustainability, marked by a supranational, intercultural and inter-generational orientation. **Global leadership** is what is called for here!

4. Technological Progress and the Boomerang effect

The question of the **limitation of the usage of non-renewable resources** and the **limitation of the strain on the environment on a global scale** while at the same time enabling a **high growth rate**, occupies before the background described, the centre stage among all attempts to arrive at sustainable solutions. Technological progress is of key relevance in this context. The goal is a factor 10, i.e. the reduction of the strain on the environment per unit of value creation produced to one-tenth of today's values (**dematerialisation, increase in eco-efficiency**). This is being discussed and implemented in many fields today – in real estate, e.g. with **green buildings**, passive houses and even positive-energy houses.

However, it must be cautioned that technology alone does not solve the problems – neither today nor in the past. Technological progress, unless accompanied by the setting of adequate rules leads to more, not less, overall strain on the environmental systems because of the so-called **boomerang effect** (an example is the supposedly “paper-free office” – the place with the highest

“We need innovation in technology and governance simultaneously, in order to attain a double factor of 10.”

paper consumption in the history of mankind.) However, each demand for limitations, e.g. of CO₂ – emissions, immediately poses the global and to this day unanswered **problem of distribution of emission rights** in its full urgency. This is an issue of **global governance**. And this is why we need innovation in technology and governance simultaneously, in order to attain a **double factor of 10**.

“The question is, however, whether a high level of prosperity for ten billion people is even thinkable.”

5. Double Factor of 10

The challenge which the world is facing today may be sketched out as follows: starting from the current global financial and economic crisis, and while facing the threat of climate and resource collapse, the task is to create a **future worth living for 10 billion people** over the next 70 years. If high global prosperity together with a high level of social adjustment and balance, also between countries, is achieved, then global population can be expected to drop rapidly from about 2050 onwards. The question is, however, whether a high level of prosperity for ten billion people is even thinkable. Can we escape the current crisis without all having to tighten our belts?

At the moment there are an increasing number of people who all but despair of the current situation and demonize growth as the root of all evil. There is also the idea of completely reorganizing public finance, to the point of abolishing interest and compound interest. Such approaches underestimate the amount of vitality which the world needs in order to create sufficient wealth for 10 billion people. A “programme of going back” is not acceptable for most, especially not in democratic processes. At the most, this might be acceptable following catastrophes or lost wars, but one ought not to play with the thought of these kinds of developments.

However wrong today’s ill-reflected concept of growth may be, the demonizing of growth and the **underestimation of the potential of innovation** are equally perilous. We do not find ourselves within a zero-sum game in which it is necessary to distribute scarcities. At the most, this holds true for resources, but not for what we are able to obtain from them when proceeding in an intelligent manner. A reasonable future is conceivable only if we succeed in bringing about a **substantial and continuing global growth** with significantly different respective rates of growth for the rich world and for the developing world over a long period of time, while maintaining **consistent protection of the environment and resources** on a global scale. **Protection of the environment and resources** comes first; growth enters the picture only when this condition is met. Such growth must be part of a Global New Deal and because the environment needs to be protected, this must be a **Global Green New Deal**.

In this process, the creative power of market processes, creative destruction **in the Schumpeterian sense**, and the power of innovations need to be made use of. Simultaneous innovations in both technology and governance are called for in order to avoid the boomerang effect, in which context the governance must of course be of a supranational character.

How is this to be envisaged? How can one imagine a double factor of 10? And what needs to be done to that end? The starting point is the so-called **future formula 10 ~> 4:34** of the

author. This basically says that the world, if the correct procedures are employed, can become 10 times as rich in 70 years than it is today, in which context today's rich world can become four times, and today's developing countries 34 times as rich. The size of the population in the poor countries thereby doubles. The social balance on the globe will then be roughly equivalent to that found in Europe today. The scarcity of resources is handled through appropriate assignation of rights, price developments, new technologies and alternative life-styles. **Qualitative growth** is the actual challenge. The (typical) life-style of the future would then be much less demanding in resources than today's, especially since resources will be more expensive. High-quality creative services in turn will be much cheaper.

Many people have difficulty imagining a double factor of 10. A tenfold increase in global economic performance within 70 years without additional exploitation of the environment, no extra consumption of resources because of an increase in eco-efficiency by a factor of 10 – all these, for many, are beyond possible. But that is exactly what is being aimed for today in the field of **Green Buildings**. And the market as a high performance innovative system is up to this task, especially when returns on financial assets are not too high. Suffice it to recall that in the seventeenth century, there were only one-tenth of the number of people living today, that 90 percent of people worldwide and more than 50 percent in Europe were working in agriculture, and that Germany as well as Europe went through recurrent famines nevertheless. And now, we have ten times as many people in the world, only 3 percent still work in agriculture in the rich world, and globally, we are producing food for 13 billion people. Half of this, however, is being processed through livestock units (especially cattle), while 24,000 people starve every day – a regulation deficit due to the lack of a **global social system** (e.g. minimal daily allowances for those in need co-funded globally) which would provide everybody with a minimum supply of the purchasing power needed to avoid starvation.

6. The Power of Innovation is the Key to a Good Future

If we use the power of innovation and consistently implement the restrictions on the usage of resources, which presupposes global coordination and internalization of adequate prices into the global economy, then we have every chance of a global economic miracle and of prosperity all over the world. The goal of **Muhammad Yunus**, the Nobel Peace Prize laureate in 2006, is to overcome poverty on this globe, which can be attained. We can combine sustainability and wealth, but this calls for a greatly improved global governance and its implementation in terms of compliance and Corporate Social Responsibility in view of solving global problems. This is the noblest task of the economy and of global leadership: serving the people, solving social problems, and supplying the necessary goods and services. And all this in such a way as to consistently protect the environment, save resources for future generations, and make the dignity of every human being count.

7. Eco-social Instead of Market-radical

The programme described can be implemented. The way of getting there is not anything new; it is well known from the sphere of the nation-state. But the issue must be put on the agenda anew, and at the **global** level. The answer to today's crisis and lack of direction is the eco-social and at its core ordoliberal approach of regulated markets typical of Europe (**social**

market economy) and a few Asian national economies (**network economies**). For this economic ordering model at a **global** level, the following equation applies:

$$\text{Market Economy} + \text{Sustainable Development} = \text{Eco-social Market Economy}$$

This model would need to be established in the context of the global economy, and at the end of the day would translate, within the framework of a **Global Contract**, the requirements of a global ethic and of intercultural humanism into a form of **global domestic policy** of a **global democratic character**. The European Union constantly demonstrates the efficacy of this approach in its enlargement processes. The **Montreal Protocol** is also worth mentioning as a successful example of international cooperation, which was agreed upon following the same logic. A contemporary approach for advancing such a pathway globally is represented by a **Global Marshall Plan**, which links the building up of structures and the implementation of standards to the co-financing of development.

“ *In every crisis there lies an opportunity.* ”

8. Is There Any Hope?

In every crisis there lies an opportunity, although one usually also pays a high price during (such) a crisis. Today, this high price consists in the significantly deteriorated situation of states which are now facing very high debts. Working off such mountains of debt is **not** going to succeed through tightening the belts in the area of social welfare – the scale of such an undertaking would demolish democracy. Instead, the practical approach is to finally **tax** the global economic processes, and especially also the value creation processes in the financial sector adequately. This is necessary for reasons of regulative policy and is a question of both justice and prudence, but would also slightly increase the friction in certain trading processes, which are too fast by now, thus bringing about more stability, and furthermore, would improve transparency in addition to the ability to manage such processes in the widest terms. Tax harmonisation is of central importance, but so is **keeping tax havens in check**, not only through increased transparency, but also through minimum taxation levels.

Today, the considerably more difficult situation of nation-states promotes considerations in the direction described. The transition from **G8 to G20** is significant. Especially questions about the global social situation, resources and climate pose themselves differently at the G20-level than at the G8-level. Two-thirds of the global population and 90 percent of global economic performance are represented by the G20. This is a considerable approximation to a more democratic global governance structure.

There is hope that the G20 will consistently address the issues of tax havens and better governance of the financial sector. And perhaps there is hope too in the field of climate change. At least at the concrete level of facts the problems concerning the future can (in principle) be brought under control. We are in a good starting position as regards capacity, knowledge, methodology and the necessary financial, human and technical resources. We only need to realize that the **current situation calls for a broad cooperation of states**. There is a way we can walk together now in order to attain a reasonable future: a double factor of 10 made possible through an adequate global governance system – **eco-social instead of market-radical**.

More information at: www.faw-neu-ulm.de, www.oesf.de, www.oesfo.at, www.senat-der-wirtschaft.de or www.globalmarshallplan.org.

It is possible to subscribe to the weekly newsletter of the Global Marshall Plan Initiative at the latter address, free of charge. Books can also be ordered there.

Author Contact Information:

E-Mail: radermacher@faw-neu-ulm.de

Website: <http://www.faw-neu-ulm.de>