Contribution by
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Science and Technology for Development

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Nobel Laureate
Science and Technology for Development

The importance of Science and Technology for Development is undisputed, both for developing and for developed nations.
Without Science and technology, we can not solve the present and future global problems.

However, even top science and top technology are not useful unless society is ready to thoughtfully apply their results.

The societal preconditions that I have in mind are summarized by four imperatives:
Imperative 1: “Global Sustainability”

We have to recognize and respect the limits, imposed by dwindling natural resources, that need to be preserved for the benefit of future generations.

Sustainability has to find its reflections in national and international laws, as well as in basic educational efforts towards a considerate usage of global resources.
We are the Caretakers of future living Grounds!
Imperative 2: “Global Fairness”, “Fair-Share”

We need a framework of international regulations that ensures fair access or fair-share of the unfairly distributed natural resources. “Nature” has very unevenly allocated resources to individual countries.

This Imperative requests a powerful global resource management authority.
An International Agency for Global Resource Management is urgently needed!
Stages of “Global Fairness“

- Equal access to natural resources for all Nations

- Equal access to natural resources for all Citizens
  - Equal access to food
  - Equal access to water
  - Equal access to mineral deposits
  - Equal access to energy resources
  - Equal access to living space
  - Equal access to job opportunities
  - Equal access to “prosperity“
Imperative 3: “Global Governance”

Global fairness demands some form of “global governance”.

Global governance can not be implemented at once to its full extent, but requires a step-wise and well-conceived approach for those aspects for which it is indispensable.
Why

War?

Albert Einstein - Sigmund Freud

WARUM KRIEG?
Ein Briefwechsel

Erste Auflage (1 bis 2.000). 64 S. RM

Einstein

Sigmund Freud
“Thus I am led to my first statement: The quest for international security requires that each nation unconditionally surrenders some fraction of its liberty of action, of its sovereignty.”

Letter of Albert Einstein to Sigmund Freud, 30 July, 1932
Imperative 4: Intensified educational efforts, including ethical and moral education

The willingness to share that is indispensable for global sustainability, global fairness, and global governance requires educational efforts on all levels, including basic education in public schools, in universities, in life-long-learning, and in mass media.

It is necessary to develop incentives for the public to recognize the importance of unselfish generosity.
“Education is the most powerful weapon which you can use to change the world”.

Nelson Mandela
Educating Future Leaders

• Skills
• Knowledge
• Ethics
• Farsightedness
“The Global Vehicle”

- SOCIETY (Politics)
- INDUSTRY
- ACADEMIA
Egoism, the driving force
“It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.”

(The Wealth of Nations, Book I Chapter II)
Profit of Society

Me

My Work

Responsibility as driving force
A responsible rather than free market economy.

Many tendencies of today’s prevailing free market economy contradict the Four Imperatives. Self-interest and selfishness are poor guides toward fair trade.

Responsibility instead of “freedom” per se!

Imposing restrictions on unethical market behaviour is urgent for individuals, companies, and entire States in their international relations.

Those who act responsibly and are willing to share can gain astounding freedom in their behaviour, as well as a satisfaction that has no material equivalent.
We all need Role Models!
“We must be the change we want to see.”

Mahatma Gandhi
“If we have no peace, it is because we have forgotten that we belong to each other.”

Mother Teresa
“More countries have understood that women's equality is a prerequisite for development.”

Kofi Annan
“Only a life lived for others is a life worthwhile.”

Albert Einstein
“We have to fight without measuring our suffering, or what we experience, or thinking about the monstrous things we must bear in life.”
A prosperous and happy future for our children shall be our goal!
The two goals in education:

1. Helping the poor and illiterate ones towards „help yourself“.

2. Educate the „upper classes“ towards societal fairness, decency and sharing benefits.
Women will be the leaders of the next Cultural Revolution – that is urgent in our society, particularly in Swiss Banks and in the Catholic Church!
They will bring us back our lost altruism, the universal compassion and, most importantly, our human dignity.
Reasons for major responsibility of academics and scientists

1. We share responsibility of educating future generations hoping for a better world!

2. Academics are predestined to express unpopular truths that are of vital importance for our survival!
The application of science results demands ETHICS.

“What can serve us as a compass? - The anticipated danger itself!”
“The Imperative Responsibility”

Act so that the consequences of your action are compatible with the permanence of genuine human life on Earth.
Researchers should learn to operate on two levels.
“The release of atom power has changed everything except our way of thinking.

If only I had known, I should have become a watchmaker!”

Albert Einstein
“Two things are infinite: the universe and the human stupidity; and I am not sure about the universe.”

Albert Einstein
Stop using Nuclear Power!

Current technology and human greed are unable to safely handle Nuclear Power and the Nuclear Waste!
Free Enterprises are not in a position to manage high risk technology in a responsible manner!

Tight State Control is indispensable!
Politics and international relations based on selfishness
Justification instead of Justice
The Root Problem

Our limitless egoism!

Sunday
The bubble was nourished by a number of human properties, by lust, exorbitance, arrogance, vanity, exaggeration, unreasonableness, incompetence, not only at Wall Street. Authorities, governments, media, and the broad public suffer all from the same disease.
The dream of becoming rich!
The erotics of money.
Each one for him-self and against all others!

The Ego-Society
Our Beloved Free Market Economy

“Homo Oeconomicus”
FREE MARKET ECONOMY

- Maximum Profits
- Maximum Share-Holder Value
- No Ethics
- No Moral
- No Global Responsibility
Today, \textbf{Competition is more important than Cooperation.}
Hurry Sickness!

To succeed, we have to run faster every day!
Are we running in the proper direction ??
We sit in an acceleration trap!
ADD Attention Deficit Disorder

The fate of our Children!

ADHD Attention Deficit Hyperactivity Disorder
Cure or Kill by Drugs?
Who will keep our boat afloat?

We are in great need of novel, farsighted, and fair approaches!

Politics? Economy? Academic Community?
Subjects yet to be discussed

1. Today’s World

2. Politics, economy, and environment

3. Opening doors
Let’s critically observe the real world;
and then help steering by providing advice and education!
“The US cooks the dinner.”

“The EU does the dishes.”

What can Europe, Asia, and Africa contribute?

**Strengthening of International Organizations!**

- Renewal of the UN:
  - Strengthening its Competence
  - New composition of Security Council
  - Elimination of Veto Rights
  - Creation of a UN Force

- International Criminal Court

- Renewal of WTO
  - Increasing the Third World’s Rights

- World Future Council
International Organizations

Help Safeguarding a Beneficial Global Future
GLOBALIZATION AND ITS DISCONTENTS

JOSEPH E. STIGLITZ

Winner of the 2001 Nobel Prize in Economics
“We can not go back on globalization; it is here to stay. The issue is how we can make it to work. And if it is to work, *there have to be global institutions* to help set the rules.”

Joseph E. Stiglitz
Nobel Prize 2001
Idea of Unification

What has Europe contributed?

A Glimpse of Hope in a Dark World

Black Sheep in Europe
The global market is not a lemon, to be squeezed for profits, but an obligation for global responsibility!
An International Agency for Global Resource Management is urgently needed!
Greenhouse gases do not respect borders!

An International Tax on Greenhouse Gases is urgent for helping the developing Nations to adapt to the new situation.

(an initiative supported by the Swiss Government)
Tobin Tax Initiative

Tobin Taxes are excise taxes on cross-border currency transactions. The revenue should go to global priorities: basic environmental and human needs. Such taxes will help tame the currency market volatility and restore national economical sovereignty.

It's time for Tobin!

War on Want
Fighting Global Poverty
Money Mindedness corrupts!
For the payment of our CEOs:

BONUS CERTIFICATE

$ 100'000.--

TO BE SPENT FOR CHARITABLE CONTRIBUTIONS ONLY!
Free Market Economy

Responsible Market Economy (possibly enforced by law)
Pollution

Ecology
First Law of Sustainability: Minimize your dependency on unnecessary commodities, even if this might hurt economy!
Ecological Footprint / Biocapacity

Ecological Debtor and Creditor Countries
Let’s get out from our Ivory Towers!

Outreach Programs
I can assure you, in my personal experience, there is no invisible hand in the affairs of the electoral process. Pursuing one's own interests more effectively than when one constrains oneself to promote the party's interests.

He intends only his own gain, and he is in this, as in many other cases led by an invisible hand to promote an end which was no part of his intention.
Adam Smith was a moral man. However, the interpretation of his words is utterly immoral!

THE THEORY OF MORAL SENTIMENTS
by Adam Smith, 1759
Professor of Moral Philosophy in the University of Glasgow

How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it.

......benevolence.......compassion.......sympathy.......love.......
Science and Technology for Development

I can not imagine that there is much doubt in anybody's mind about the importance of Science and Technology for developing and for developed nations. Without Science and technology, we can not solve the present and future societal problems. However, even the best science and the best technologies are not sufficient when society is not ready to thoughtfully apply their results.

The readiness that I have in mind concerns the following aspects:

1. The recognition and respecting of the limits imposed by preserving the natural resources for future generations. We call this respecting of ultimate limits "sustainability". It has to find its reflections in the national and international laws, as well as in our education towards a considerate usage of global resources.

2. We have to work towards a framework of international laws that ensure a fair distribution of the very unequally distributed natural resources, in other words, correcting what "God" has done so poorly when attributing resources to different countries. I call this aspect "global fairness".

3. Global fairness is inconceivable without "global governance". Global governance can not be implemented at once to its full extent, but requires a step-wise and well-conceived approach for those aspects for which it is indispensable.

4. The spirit underlying sustainability, global fairness, and global governance requires educational efforts on all levels, including the basic education in public schools, in universities, in life-long learning institutions, and in the mass media. It is necessary to develop means of incentives for the public to recognize the importance of these goals.

Unfortunately many of the tendencies of today's prevailing free market economy contradict the mentioned goals. Self-interest and selfishness are poor guides toward these indispensable goals. In other words, we have to direct our entire economy more towards responsibility than towards mere "freedom". Imposing restrictions on unethical market behaviour are more important than warranting freedom per se. This applies to individuals, companies, as well as to entire States in their international relations. We need a responsible rather than a free market economy. Those who act responsibly can gain astounding freedoms in their behaviour and a satisfaction that has no material equivalent.
1. Recognizing and respecting the limits, imposed by the need to preserve the natural resources for future generations, we call “sustainability”. It has to find its reflections in the national and international laws, as well as in our education towards a considerate usage of global resources.
Sustainability requests from us to meet today’s needs without compromising the necessities of future generations.