



E-Journal of the World Academy of Art & Science

ERUDITIO

“A multidisciplinary forum focused on the social consequences and policy implications of all forms of knowledge on a global basis”

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Eruditio Vision

The vision of the Journal complements and enhances the World Academy's focus on global perspectives in the generation of knowledge from all fields of legitimate inquiry. The Journal also mirrors the World Academy's specific focus and mandate which is to consider the social consequences and policy implications of knowledge in the broadest sense. The vision of the Journal encompasses major challenges facing global society and seeks to examine these issues from an interdisciplinary, multi-method and value guided perspective.

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In This Issue

This edition includes some of the most compelling articles that we have ever published. These articles are designed to inspire our imaginations, challenge our moral sensitivity and enlighten our scientific and intellectual consciousness.

Alexander Likhotal is a hard-nosed historian unafraid of drawing uncomfortable insights concerning the role of science and technology and the emergent forms of social organization. In this short essay titled “[Science and Progress](#),” among the important points he makes is that in the 21st Century science is as much about us as it is for us. He makes the important point that values are not a superfluous source but represent basic intangible assets of civilization. This is an excellent piece and worth reading.

Rajendra Pachauri, former chairman of Intergovernmental Panel of Climate Change, has contributed a remarkably lucid paper on some of the selected but important problems of global political economy and dangerous impacts of climate change. The central idea that is stressed in the paper, titled “[Addressing Sustainable Development Goals and Tackling Climate Change: Scientific Realities and Options](#),” is the problem of the lack of global transparency in financial institutions and in particular impacts on global tax fraud. He raises the issue of global core responsibility and in particular, the effects of the current system on income inequality and sustainable development. Suggestions are made to improve corporate law and to promote a deeper ethic on the part of the private sector to generate carbon neutral activity and to contribute positively to universal green energy production.

In his article titled “[Complex Society and Values](#),” **Jüri Engelbrecht** has given us a short but powerfully insightful introduction to complexity theory. He has brought important insights from the hard sciences and has explored the added dimension of complexity in the context of the social process. The most important insight here is the importance of values to guide inquiry into the complexity of social organization. This is a powerful insight well within the traditions of WAAS. A former president of WAAS, **Harold Lasswell** and a Fellow, **Myres Smith McDougal**, explored precisely the question of using the analogy drawn from the hard sciences of contextual mapping, guided by the clarification and identification of values as fundamentally important to the future of humanity and the prospect of its survival. Engelbrecht should be congratulated on this excellent and insightful article.

F. J. Radermacher, in his article “[... and things are changing after all](#),” has provided us with an important update concerning the consequences of 2008 economic meltdown. The most important of the consequences concerning the positive side is the enhancement of international fiscal transparency. The practical problem with a non-regulatory, free trade regime is that financial and corporate freedom way often is engaged in criminal activity. State regulation of multi state activity will in general be much weaker in the international environment. Recently free trade has been challenged and tax fraud now requires more transparency to ensure that the tax laws are respected. Radermacher draws attention to the need for corporate law reform and in this framework indicates new solutions to the problems of climate change. This is a very interesting and useful contribution to some of most challenging problems of the current global economy, and the environmental and other challenges.

Jakob von Uexkull has contributed a recent speech titled “[History has knocked very loudly on our door. Will we answer?](#)” delivered in Hamburg in March this year. Von Uexkull is the president and founder of the World Futures Council. The Council has been a powerful leader in drawing attention to some of the most important crises and threats to human survival. The message is unmistakable: there is no human future without a supreme collective global effort to save the planet and humanity. The Council has not been content to underscore the problem, it has deployed the powerful intellectual network within its orbit. One of the most powerful statements of this article is the following:

No religious dogma is as powerful and dangerous as the dogmas of economists who assume we will all become richer even in a burning planet.

Understanding the evolution of leadership and individuality is the key to understanding the process of social evolution. **Winston Nagan & Megan Weeren**, in “[The Mind of the Leader](#),” perceptively capture the essence of the psychological profile of a leader. They discuss the importance of early childhood in shaping leadership skills and emphasize on effective decision-making as a key trait of leaders. – Comment by **Garry Jacobs**, Editorial Board Member, *Eruditio*.

Winston Nagan & Megan Weeren, in “[The Future of Higher Education](#),” identify the role and importance of thinking in learning. The authors derive a profound truth that shared enlightenment should be the purpose of education. Values is given prominence, and the role of individual and the culture of human rights is seen as central to the process of development. – Comment by **Garry Jacobs**, Editorial Board Member, *Eruditio*.

Winston P. Nagan

Chairman of the Board, World Academy of Art & Science

Chair, Program Committee

Editor-in-Chief, *Eruditio*

Science and Progress*

Alexander Likhotal

Member, Board of Trustees, World Academy of Art & Science;
President, Green Cross International

Abstract

Science has become a part of almost every aspect of our life and takes justified credit for our progress. However, the fundamental myth of progress—that it produces a steady betterment of life—is crumbling before our eyes. The experience of the twentieth century, with its civil and world wars, Gulags and Holocaust, was too tragic to support a continued belief in a kind of granted optimism of world history. Unfortunately, science development is distorted by our modern social organisation and economic system. In this model science becomes an obedient servant of the system. Science allows us to do more, but it doesn't tell us whether doing more is right or wrong. Therefore, with scientific advance, we need greater ethical vision; better judgment; and stronger analysis of how to use knowledge for good, not evil. Science should not be accused for misuses of its advances. It is not science, but ignorance, that is to be blamed. Therefore education—new universal education—is critical, and not just for those who expect to practice science but for everyone who lives in the modern world and especially, political leaders. This will require a rapid transition to a different model of development, which not only takes into account the interests of short-term growth, but provides the opportunity for sustainable and inclusive development. Change may be frightening, but it is inevitable. And, in fact, it provides an opportunity to improve our instruments, our strategies, and... possibly ourselves. The wave of technological change is far from its peak. We should be excited and filled with hope—by where it could take us, of course, only if we chart the course properly.

Is it progress if a cannibal uses a fork?

– Stanislaw J. Lec

We live in a golden age of technological, medical, scientific and social progress. Just look at our gadgets! Twenty years ago, the internet was a geek thing. Now we can't imagine life without it. We are on the verge of medical breakthroughs that would have seemed like magic only half a century ago: cloned organs, stem-cell therapies to repair our very DNA. Even now, life expectancy in some rich countries is growing by five hours a day. A day! Surely if not immortality, then something very close to it, is just around the corner...

Science has become a part of almost every aspect of our lives and takes justified credit for the great strides of His Majesty the Progress. And yet somehow, this does not feed our enthusiasm.

* Based on the talk delivered by the author at a conference held in Podgorica on Technology + Society = (?)Future by the Montenegrin Academy of Sciences and Arts on May 19, 2016.

The fundamental myth of progress—that it produces a steady betterment of life—is crumbling before our eyes. The experience of the twentieth century, with its civil and world wars, Gulags and Holocaust, was too tragic to support a continued belief in a kind of granted optimism of world history. Today, Islamic State and the refugee drama, to say nothing about the growing list of existential threats from climate change to hybrid/proxy wars erupting in many parts of the world, do not add up to an optimistic picture.

As Stephen Hawking rightly argues, the human race faces one of its most dangerous centuries yet as progress in science and technology becomes an ever-greater threat to our existence. “We are not going to stop making progress, or reverse it, so we must recognize the dangers and control them,” he warns.

Here, it seems pertinent to ask the paradoxical and provocative question: why during the last hundred years, has the idea of progress transmuted from the idea of almost a “salvation” into a dangerous factor, fraught with wars, almost ceaseless violence and existential threats to humanity?

I am not doubting scientific progress. But I do wonder about how science development has been distorted by our modern social organisation and economic system. I wonder whether real progress could have been much more impressive and tangible. I am thinking of the goals and definitions of progress.

“The idea of freedom as the foundation of progress was replaced by the idea of happiness—a fuzzy concept that could mean many different things to many people.”

1. What is Progress?

Different dictionaries state that progress is a forward or onward movement towards an objective or a goal. The concept was introduced by Enlightenment as a secularization of the Christian idea of the 8th day. Christianity believed that human development (understood as spiritual growth), routed in human ontological freedom, was the purpose of history. Most clearly this idea was expressed by Hegel: “The introduction and pervasion of the principle of freedom in secular relationships is a time-consuming process, which constitutes history”. The goal of progress was well formulated in the 19th century by Russian thinker Chernyshevsky, who said that progress is the desire to “raise a man into human dignity”, and “without freedom a man cannot be a man”. Thus human being was considered not as a perfect and complete entity, but something that always remains in formation. Consequentially progress was understood as an endless human ascension on the road of self improvement.

The twentieth century, driven by neo-liberalism and post-modernist transition, has horrendously distorted the very notion of progress. The idea of freedom as the foundation of progress was replaced by the idea of happiness—a fuzzy concept that could mean many different things to many people. The United Nations even declared the International Day of Happiness (20 March) to recognise “the relevance of happiness and well-being as

universal goals.” Predictably this idea has ultimately evolved into the hedonistic trend of seeking pleasant experiences and avoiding unpleasant experiences—building a sort of heaven on earth based on improvement not of a human being but his living standards. However, since scientific and technological development (which has always been inalienable part of progress) successfully continued, it seemed that progress was underway. It remained largely unnoticed that the idea of freedom, without which the very notion of progress becomes void, had been gradually abandoned.

“Science can only tell us what exists and not where we should head.”

Recently UNESCO proudly reported: most countries, regardless of their level of income, now see science and innovation as key to fostering sustainable economic growth and furthering their development. But do you notice the double-meaning of that statement? In fact, there is a stark difference between science and innovation. While science implies investing money in research, innovation, though, is often simply the conversion of research into money...

Striving to fulfil the ever-growing appetites for joy and happiness, progress today is reduced largely to consumer-driven, often banal improvements in technology. Sure, our phones are great, but that’s not the same as being able to send a man into the outer space, to fly across the Atlantic in eight hours or eliminating smallpox and other quantum leaps of the post-war Golden Quarter. As the US technologist Peter Thiel once put it, “We wanted flying cars, we got 140 characters” (on Twitter).

If it were not for distorted frameworks, we could be living in a world where cancer and Alzheimer were treatable, where clean power would end the threat of climate change, where the brilliance of genetics would be used to bring the benefits of cheap and healthy food to the bottom billion, and where poverty would have been a thing of the past.

It feels bitter to think in the year of the 55th anniversary of Yuri Gagarin’s first space flight, that after a century of fateful scientific breakthroughs the twenty-first century—at least its beginning—turned out to be a tremendous setback when archaism and the darkest superstitions have been reborn into the modern world where 21st century technology helps spread images of barbaric decapitations in front of the cameras, and wars have become inalienable elements of “hybrid” peace.

And it is not about making science a scapegoat for misuses of its advances. It is not science, but ignorance, that is to be blamed for both—misusing and hampering it.

However, the XXI century has made one thing clear: the scientific endeavour is as much about us as it is for us.

We have to realize that science allows us to do more, but it doesn’t tell us whether doing more is right or wrong. Science can only tell us what exists and not where we should head.

Goal setting is the function of values acquired in the course of history. This is why values are not a “superfluous resource” but basic intangible assets of civilization. Technically equipped, but morally flawed attempts to shape the future, risk turning into disastrous defeats that go beyond just restitution of the past (we see it already around us—rebirth of nationalism, the barbarisation of populations, demise and flagrant violations of international law, the dehumanising effects of pop culture).

Therefore, along with accelerating scientific advances, we need greater ethical vision; better judgment; and stronger analysis of how to use knowledge for good, not evil.

Of course, all this does not mean that we should reject rationalism. Simply there are other dimensions to humanity that must be respected along with rationalism. Many areas of life are simply too non-physical to be satisfactorily addressed by science. Love, hate, relationships, poetry, art, music, literature, and spirituality are all outside the realm of science. Any problems that arise in these areas cannot be resolved by science.

“Has anyone really looked for connections between culture, mathematics, and science? How about intuition and reason?”

To suppress and ignore these dimensions prevents even rationality from functioning properly. As Werner Heisenberg explained this in his philosophical work *The part and the whole*, “Science is made by man. This is a natural fact that is easily overlooked; another reminder of it can help reduce the regrettable gap between the two cultures—arts and humanities and science and technology”. Both emotions and morality must work alongside rationalism as parts of the living totality that is human existence.

I am not promoting the merger of science and arts. Good art and good science necessarily require high degrees of specialization. After all, there will always be things that anyone understands, but cannot explain: for example, any idiot sees that the ball is not a bagel, but you have to be Poincaré to see the problem here, and Perelman to solve it.

However, was it a coincidence that Einstein, Heisenberg, Gödel—the three geniuses who have propelled modern science from determinist universality based concept of material world into the age of complexity, relativity and uncertainty—had excellent philosophical and/or musical education? Was it a coincidence that Leibniz was a writer and a philosopher while Gauss and Fermi were renowned philologists? Is it also a coincidence that over 75% of the Nobel laureates in science have had expansive knowledge in humanities and have been proficient in music or literature?

2. How many coincidences are needed to recognise the regularity?

Has anyone really looked for connections between culture, mathematics, and science? How about intuition and reason? It was 300 years before Einstein that Shakespeare intuitively guessed about relativity of time in his sonnet 77. 100 years later Bach’s fugues provided a musical model of the modern concept of Universe. It took centuries until Einstein—who, by the way, used to say “I often think in music”—showed us how it all connects and turned the divine revelation into a scientific discovery.

Einstein directly warned about detrimental effects of science dehumanisation in 1946: “I think the root causes of a frightening world’s ethical degradation are mechanization and dehumanization of our lives. This is a fatal side effect of the development of scientific and technical thinking. It is our fault! I do not see a way out from this plight. A man cools down faster than the planet on which he lives.”

Therefore, the road to real progress, as Freud and Einstein agreed, must begin here with us, in our own attitudes. And a trip to Mars—a dream which, thanks to God, now seems to be reborn—will not make us any smarter or more tolerant and human. We need to do something with ourselves and understand something about ourselves...

I think this was exactly what Nikola Tesla meant when he argued: “The day science begins to study non-physical phenomena, it will make more progress in one decade than in all the previous centuries of its existence.”

“Ultimately, we need a rapid transition to a different model of development, which not only takes into account the interests of short-term growth, but provides the opportunity for sustainable and inclusive development.”

This will require a new type of universal education and not just for those who expect to practice science but for everyone who lives in the modern world. We need it because education is a catalyst for important, sustainable change in our society. We need it to help youth to chart the course. We cannot just train them to “succeed” in the current system—that is not real education. We must inculcate in them a broader world vision and a greater capacity for critical thinking. Political leaders, in particular, badly need to be exposed to scientific vision. The mind, once stretched by a new idea, never reverts to its original dimensions.

It is easy to dismiss the suggestion that science driven technology can save the day. After all, technological advance also requires good governance, market forces, effective universities, and more. Politics will still play its role.

Nevertheless, it’s time to recognize that governments are ill-equipped to understand the scientific determinants, sophisticated technological challenges and opportunities facing the world, and that new instruments are needed to ensure that science and technology are adequately applied to address a wide range of increasingly urgent global problems and not just to make our smartphone batteries last longer (which personally I would not mind at all).

This new universal education should enable us to master the cultural riches accumulated by humanity. And only then high culture multiplied by the achievements of scientific thought, interacting, enriching and feeding one another, will guarantee the real human-centred progress.

Ultimately, we need a rapid transition to a different model of development, which not only takes into account the interests of short-term growth, but provides the opportunity for sustainable and inclusive development and returns meaning to the lives of individuals.

Change may be frightening, but it is inevitable. And, in fact, it provides an opportunity to improve our instruments, our strategies, and... ourselves. The wave of technological change is far from its peak. We should be excited and filled with hope—by where it could take us, of course, only if we chart our maps properly...

On Christmas day in 1989 conducting Beethoven's famous and mysterious Ninth Symphony, known as Ode to Joy to celebrate the fall of the Berlin Wall, Leonard Bernstein replaced "Freude" ("Joy") with "Freiheit" ("Freedom"), allegedly reverting to the original title of Schiller's poem that he had had to change to avoid censor's recriminations. I am still wondering, was it the great Maestro's brilliant situational improvisation to symbolize the Germans' jubilation of the retrieval of the divine gift of freedom? Or was it the prophetic Omen—"the writing on the wall"—reminding us that freedom is humanity's historic invariant, abandoning which will not be without consequences.

In any case I hope that the last century of great scientific discoveries will be followed again by the Age of Enlightenment—one that will illuminate the progress of Humanity.

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Addressing Sustainable Development Goals and Tackling Climate Change: Scientific Realities and Options

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Abstract

The paper traces the history of the global dialogue on sustainable development including the outcome of the historic Rio Summit of 1992. It identifies climate change as a driver of and an important part of the unsustainable record of development pursued worldwide. There is now scientific evidence going back at least a century and quarter on the scientific basis of climate change, culminating in the work of the Intergovernmental Panel on Climate Change (IPCC) which brought out its latest comprehensive assessment in the form of the 5th Assessment Report completed in 2014.

The paper then brings out the equity dimensions of climate policy and how these need to address the challenge of sustainable development, particularly as they are embedded in the Sustainable Development Goals (SDGs) adopted by the UN General Assembly in 2015. The trends in emissions of greenhouse gases (GHGs) are alarming and the current concentrations of carbon dioxide, methane and nitrous oxide are unprecedented in at least the last 800,000 years. As a result, the impacts of climate change hold major risks to all forms of life.

Extreme events, including heat waves and extreme precipitation events are on the increase both in frequency and intensity. Projections for the future show that without adequate and timely mitigation measures, the risks from impacts of climate change would become progressively more serious and beyond the ability of human society to adapt to.

The paper lays out the critical policy imperatives of mitigation of GHG emissions and adaptation to the impacts of climate change, and including a process of sustainable development in growth strategy and policy.

The world has been through diverse trends, which have dominated policies and actions, before arriving today at the realization that economic development across the globe must be sustainable, a concept voiced by many, but understood by very few. On September 25, 2015 the UN General Assembly adopted 17 Sustainable Development Goals (SDGs), which essentially provide the building blocks of development strategies to be implemented globally in an effort to make economic development sustainable during the period extending up to 2030. The 17 SDGs were adopted as the culmination of an intensive and remarkably inclusive process followed actively since the 2012 Summit in Rio entitled “UN Conference on Sustainable Development”. But, in actual fact the articulation of what would constitute sustainability in development goes back a long period of time including what is contained

in the report of the World Commission on Environment and Development (WCED), more popularly known as the “Brundtland Commission”. The landmark Rio Summit of 1992 which was held with high expectations under the title “UN Conference on Environment and Development” also provided a turning point in thinking on issues of sustainability. While sustainability is a complex subject that goes considerably beyond protection of the environment, its genesis lies undoubtedly in concerns emanating from the degradation of the environment, which many distinguished thinkers and pioneering activists highlight as lying at the core of unsustainable development. However, acceptance of knowledge and scientific facts in this general field has been rather slow, and, therefore, even slower has been the practice of sustainability in development actions.

“Clearly, the contribution of these pioneering thinkers and visionary intellectuals provided the world with logic and evidence to show that the expanding production and consumption of some goods and services as being pursued by human society were clearly not sustainable, based on existing patterns.”

If we look at the problem of human induced climate change, we can certainly identify the work of Svante Arrhenius, a Swedish scientist, who towards the end of the 19th century highlighted the risks that the world would face with growing emissions of carbon dioxide, as a consequence of industrial growth and the widespread use of coal as a source of energy in industrial enterprises and in steam locomotives for transportation which expanded rapidly in that period, followed by even greater expansion of road transport using hydrocarbons as a fuel. Arrhenius used the term ‘Cosmic Physics’ while assessing physical theories that linked scientific phenomena related to the seas, the atmosphere and land. He was perhaps the first scientist to have constructed a climate model in which the influence of atmospheric carbon dioxide on the earth’s climate was assessed. His work was published in ‘The Philosophical Magazine’ in 1896, and it brought out on the basis of the model constructed by Arrhenius, that as the quantity of CO₂ increases or decreases in geometric progression, the temperature will increase or decrease in arithmetic progression. He was, therefore, able to find that the burning of fossil fuels which would lead to emissions of carbon dioxide would result in climate change. In his estimate, a doubling of CO₂ due to fossil fuel burning was expected to take 500 years, leading to a temperature increase of 3 to 4 °C. In actual fact, the world is on a trend by which doubling would take place in less than 200 years from the time that Arrhenius carried out his study and his modeling exercise.

Later in the 1960s pioneering environmental crusaders like Rachel Carson brought to the attention of society in the US the growing hazards from extensive use of a range of chemicals and pesticides, etc., which were polluting the soil, many water streams and the air in cities and industrial sites with the rapid growth of the US economy. This remarkable person faced formidable challenges and opposition from vested interests and industry leaders, who were solely concerned with maximizing profits without regard to consequences that society would face with growing use of harmful chemicals and other substances. For them the welfare of

human society, both for the present and future generations, was irrelevant—the very antithesis of sustainability as a goal or criterion in business.

This was followed by visionary economic thinkers like Nicholas Georgescu-Roegen and Kenneth Boulding who saw the reality of a closed economic system, wherein you could not wish away the growing volume and impacts of waste material being produced in the modern production system. Their major contribution, in very simple terms, was to show the world that producing waste material resulted in negative externalities, which were hardly ever considered by decision makers and were certainly not assessed and included in economic metrics for their negative economic and ecological impacts on the welfare of society. They also brought out the inevitable threat in the production of goods on an increasing scale which would lead to an equally large, if not larger, production of what was termed as “bads”. Clearly, the contribution of these pioneering thinkers and visionary intellectuals provided the world with logic and evidence to show that the expanding production and consumption of some goods and services as being pursued by human society were clearly not sustainable, based on existing patterns.

The work of the Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 and which brought out the latest of its comprehensive assessments, the Fifth Assessment Report (AR5), in 2014 has provided complete scientific assessment of the serious extent to which human actions are resulting in changes in the earth’s climate. The IPCC, particularly in its AR5, has highlighted the growing risks associated with climate change, and how actions to deal with this challenge would also require sustainability in development strategies and their implementation.

Human induced climate change should be considered as symptomatic of the breakdown of sustainability criteria in development, as we see it worldwide today. Climate change is essentially the consequence of what constitutes unsustainability of growth and development, particularly because human-induced climate change is the result of growing concentration of greenhouse gases (GHG) in the atmosphere. And, climate change in all its forms is impacting adversely on all forms of development, sustainable or otherwise. At the same time, inaction on dealing with climate change would restrict the ability of society to develop in a sustainable manner. In its unmitigated extent climate change could lead to abrupt and irreversible impacts, which would leave no room for redressal of the problems that are being caused by today’s path of development. Sustainable development also involves the principle of equity, and climate change has impacts which are largely inequitable both from the geographical as well as the social perspective.

Climate policies need to be assessed on the basis of sustainable development and equity. Limiting the effects of climate change is necessary to achieve sustainable development and equity including the eradication of poverty. If we evaluate the historical contribution of different societies to the accumulation of GHGs in the atmosphere, we see a vast range of diversity, because there are some societies which have hardly emitted anything more than a very small fraction of the total cumulative emissions of GHGs, but in several cases these are also societies which are most vulnerable to the impacts of climate change. Furthermore, it is a fact that different countries face varying challenges and circumstances and possess very different capacities to address mitigation and adaptation. These issues of mitigation

and adaptation raise questions related to equity, justice and fairness. There is also the issue of intergenerational equity which needs to be considered when evaluating a global response to climate change. Delaying mitigation shifts the burden from the present to the future generation. As it is, insufficient adaptation responses to impacts that are becoming commonplace are already eroding the basis and available space for sustainable development. In its very basic characteristics, climate change is a risk management problem, and an increase in risk to people, property, livelihoods and economic opportunities would render any pattern of development unsustainable. Mitigation and adaptation are complementary approaches for reducing risks of climate change impacts over different timescales. As the IPCC concludes, mitigation in the near-term and its continuation through the century can substantially reduce climate change impacts in the latter decades of the 21st century and beyond. Adaptation can provide substantial benefits both by addressing current risks as well as dealing with emerging risks that would occur in the future.

The IPCC AR5 has identified five Reasons For Concern, which aggregate climate change risks and illustrate the implications of warming and adaptation limits for people, economies and ecosystems across sectors and regions. It has been assessed that without additional mitigation efforts beyond those in place today, and even with adaptation, warming by the end of the 21st century will lead to high to very high risks of severe, widespread and irreversible impacts globally.

In order to evaluate the nexus between human induced climate change and unsustainable development, it would be useful to look at the historical assessment of climate change as it has occurred since the beginning of industrialization. The IPCC AR5 has found that human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history, and that recent climate changes have had widespread impacts on human and natural systems. Each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850. It also found that the period from 1983 to 2012 was perhaps the warmest 30-year period of the last 1400 years in the Northern Hemisphere, where such assessment is possible. The globally averaged combined land and ocean surface temperature data, based on calculation by a linear trend, show a warming of 0.85 °C during the period 1880 to 2012. Further, it found that ocean warming dominates the increase in energy stored in the climate system, accounting for more than 90% of the energy accumulated between 1971 and 2010 and only 1% of this was stored in the atmosphere. Ocean warming was found to be largest near the surface, and the upper 75m warmed by 0.11 °C per decade over the period 1971 to 2010. Since the beginning of the industrial era, the uptake of CO₂ in the oceans has resulted in their acidification. In this period, the pH of ocean surface water has decreased by 0.1, corresponding to a 26% increase in acidity. In the period 1992 to 2011, the Greenland and Antarctic ice sheets have been losing mass, likely at a larger rate over the period 2002 to 2011. With glaciers continuing to shrink worldwide, Northern Hemisphere snow cover has continued to decrease in extent, and there is also growing evidence to show that Northern Hemisphere permafrost temperatures have increased in most regions since the early 1980s. The annual mean Arctic sea ice extent decreased over the period 1979 to 2012 with a rate that was very likely in the range of 3.5 to 4.1% per decade. Projections for the future indicate that in a scenario which involves no mitigation actions, Arctic sea ice during September in the middle of this century would be existent.

Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with other drivers for which human beings are responsible, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century. The AR5 clearly stated that it is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by increase in human induced GHG concentrations and other anthropogenic forcings together. Overall, human induced forcings have likely made a substantial contribution to surface temperature increases since the mid-20th century over every continental region except Antarctica.

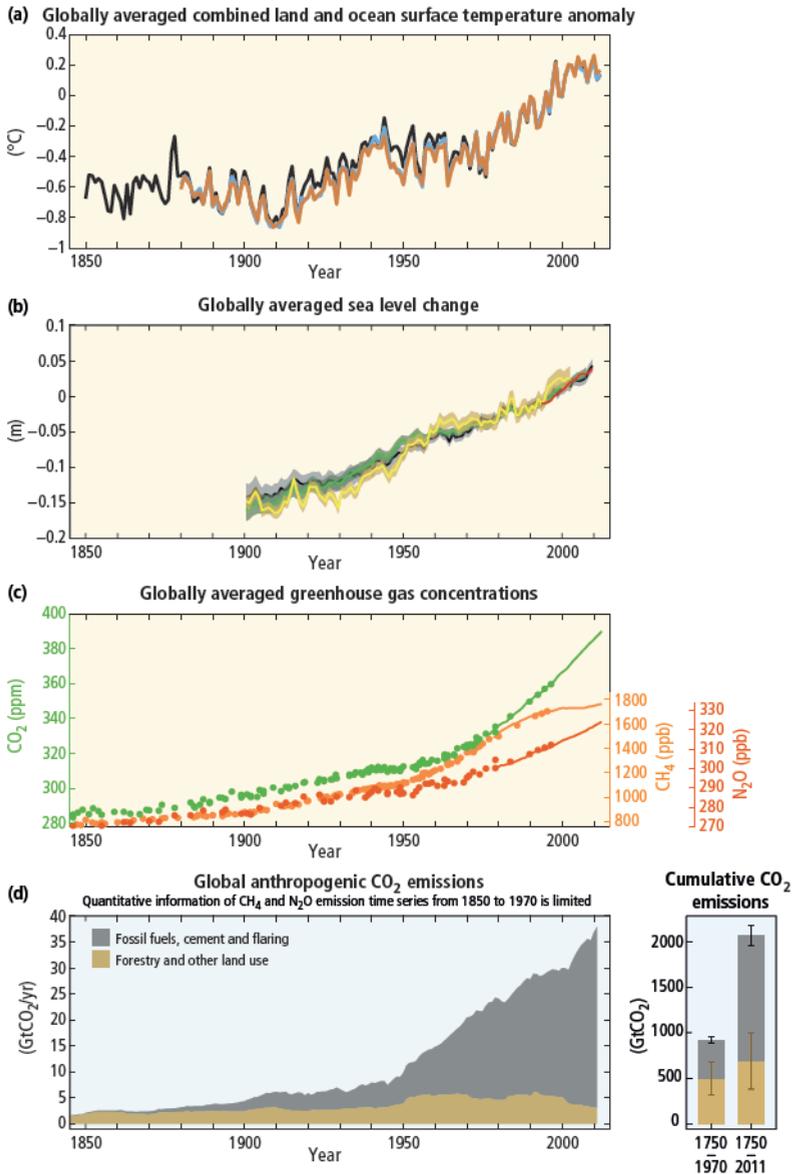
The extent of changes that have taken place since the beginning of industrialization, including changes in temperature, sea level, greenhouse concentrations and global anthropogenic CO₂ emissions are shown in Figure 1.

The impacts of climate change extend to natural as well as human systems on all continents and across the oceans. The AR5 states that the evidence is the strongest and most comprehensive in respect of impacts on natural systems. In many regions of the world changing precipitation or melting snow and ice are impacting on hydrological systems and affecting water resources in terms of both quantity and quality. These impacts exacerbate existing scarcity of water in several locations, which are the result of population growth, income increases and over-exploitation of groundwater resources as well as lakes and rivers. There are several terrestrial, freshwater and marine species which have shifted their geographic ranges, seasonal activities and migration patterns, etc. in response to ongoing climate change. Some impacts on human systems are also attributable to climate change. In the case of agriculture, several studies referred to in the AR5, covering a wide range of regions and crops show that negative impacts of climate change on crop yields have been more common than positive impacts. Ocean acidification and its impacts on marine organisms have also been attributed to human influence. As a result, food security for the world as a whole is likely to undergo adverse changes.

The IPCC brought out a report in 2011, entitled “Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)”, which found that the number of cold days and nights has decreased and that warm days and nights have increased on the global scale. It also found likely that the frequency of heat waves had increased in large parts of Europe, Asia and Australia. Further, it assessed that human influence had contributed to the observed global scale changes in the frequency and intensity of daily temperature extremes since the mid-20th century. Human influence had more than doubled the probability of occurrence of heat waves in some locations, and there was also evidence that observed warming had increased heat-related human mortality and decreased cold-related human mortality in some regions. Significantly, this report found that it was likely that more land regions had increased in the number of heavy precipitation events than those where it had decreased. Increasing trends in extreme precipitation and discharges in some catchments implies greater risks of flooding at a regional scale. Also, it is likely that extreme sea levels (for example, as experienced in storm surges) have increased since 1970, being mainly a result of rising mean sea level. The IPCC in its AR5 found that continued emissions

of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.

Figure 1: The extent of changes that took place since the beginning of industrialization



Source: IPCC AR5

The AR5 used four specific scenarios for projecting the future, and the one that represents no targeted mitigation can result in very high temperature increases, with an average temperature increase by the end of this century within a range of 2.6 °C to 4.8 °C. The scenario which includes stringent mitigation efforts is projected to lead to a temperature increase by the end of this century of 0.3 °C to 1.7 °C relative to the beginning of this century.

“Successful implementation relies on relevant tools, suitable governance structures and enhanced capacity to respond.”

The AR5 assessed that a large fraction of species faces increased extinction risk due to climate change during and beyond the 21st century, especially as climate change interacts with other stressors. Most plant species cannot naturally shift their geographical ranges sufficiently fast to keep up with current and high projected rates of climate change in most landscapes. Marine organisms will face progressively lower oxygen levels and high rates and magnitudes of ocean acidification, with associated risks exacerbated by rising ocean temperature extremes. It is also projected that coral reefs and polar ecosystems would be highly vulnerable. At the same time, coastal systems and low-lying areas are at risk from sea level rise, which will continue for centuries even if the global mean temperature is stabilized. Global marine species redistribution and marine biodiversity reduction in sensitive regions will challenge the sustained provision of fisheries productivity and other ecosystems services. For wheat, rice and maize in tropical and temperate regions, climate change without adaptation is projected to negatively impact production for local temperature increases of 2 °C or more above late 20th century levels. However, some individual locations may benefit. Global temperature increases of around 4 °C or more above late 20th century levels will pose large risks to food security globally, particularly since demand for food is likely to increase with growth in population and income. At the same time, projections indicate a reduction in renewable surface water and groundwater resources in most dry subtropical regions. This would intensify competition for water among different sectors. Climate change is also projected to increase displacement of people. Populations that lack resources for planned migration would experience higher exposure to extreme weather events, particularly in developing countries with low income. In a world where conflicts between groups of people as well as between nations create various threats to human society, the AR5 assessed the impacts of climate change in this respect as well. Climate change can also indirectly increase risks of violent conflicts by amplifying well-documented drivers of these conflicts such as poverty and economic shocks.

The Paris Conference of the Parties which arrived at an agreement on climate change reaffirms the earlier target which had been set for 2 °C as being the limit of temperature increase that the world should treat as a goal till the end of this century. However, the Paris Agreement also requires the IPCC to produce a special report to assess the impacts of climate change at a temperature increase of 1.5 °C. This decision reflects the growing concern that 2 °C may be accompanied by impacts and climate change risks that would be unacceptable. Indeed, in the Fourth Assessment Report (AR4) of the IPCC it had been assessed that sea level rise by the end of this century resulting from thermal expansion of the oceans alone

could lie anywhere between 0.4 to 1.4m. The current debate at the global level also includes the subject of loss and damage, wherein several developing countries are highlighting the moral and possibly legal claims of the most vulnerable countries being compensated for loss and damage as a consequence of climate change by countries that are essentially responsible for the largest share of cumulative GHG emissions.

Mitigation actions would require consideration of a number of important actions and policies. The AR5 has clearly stated “Effective adaptation and mitigation responses will depend on policies and measures across multiple scales: international, regional, national and sub-national. Policies across all scales supporting technology development, diffusion and transfer, as well as finance for responses to climate change, can complement and enhance the effectiveness of policies that directly promote adaptation and mitigation”. Since GHGs mix freely in the atmosphere, irrespective of their geographical sources of emission, international cooperation is critical for effective mitigation. Of course, mitigation can also have local co-benefits, such as improved air quality, higher energy security, higher agricultural yields and, in several cases, other economic benefits and higher employment. Adaptation measures on the other hand focus primarily on local to national level outcomes. The Kyoto Protocol provides useful experience in respect of the political aspects of international cooperation, the evolution of flexibility mechanisms such as the Clean Development Mechanism and the effectiveness of a global agreement with targets set for each country and monitoring of implementation measures.

The IPCC also found that mechanisms that set a carbon price, including cap and trade systems and carbon taxes, can achieve mitigation in a cost-effective way, but these have been implemented with varying effects, because national circumstances and variations in policy design are a critical determinant of outcomes. It has been found that the short-run effects of cap and trade systems have been limited because the caps specified were generally loose. In some countries, tax-based policies specifically aimed at reducing GHG emissions, along with policies focused on technology and other aspects have been instrumental in weakening the link between GHG emissions and GDP. In many countries, fuel taxes have also had effects which are similar to sectoral carbon taxes. Regulatory measures and information dissemination can also be effective. Appropriate regulatory approaches could include energy efficiency standards, information programmes including labelling of devices and equipment, which facilitate the consumers making better-informed decisions.

In general, sector-specific mitigation policies have been used to a greater extent than economy-wide policies. Economic instruments in the nature of subsidies are also sometimes applied across sectors and take the form of tax rebates or exemptions, grants, loans and credit lines. An increasing number and variety of renewable energy policies, which in several cases includes subsidies, have brought about rapid growth of RE technologies in several parts of the world in recent years. There are also in existence subsidies in sectors which contribute to GHG emissions, and reduction of these is also an important measure. There are varying estimates of existing subsidies on fossil fuels, and it is well-known that these remain very high at the global level, and in some countries are a determinant of high levels of consumption of fossil fuels.

As stated earlier, mitigation carries a large range of co-benefits which are linked with human health, food security, conservation of biodiversity, improvement of local

environmental quality, greater energy access, and generation of livelihoods and equitable sustainable development. Some mitigation policies could raise the prices of some energy services and could act as barrier in the ability of specific societies to expand access to modern energy services, particularly for under-served populations. These side effects can be offset through the adoption of complementary policies such as income tax rebates or other mechanisms for providing direct benefits to the consumer. Long term mitigation strategies would also involve the articulation of appropriate technology policy. Substantial reductions in emissions would require large changes in investment patterns, but with appropriate enabling policies and a facilitating environment, the private sector, along with the public sector, can play important roles in financing mitigation and adaptation. Climate change is a threat to sustainable development. However, the AR5 found that there are many opportunities to link mitigation, adaptation and the pursuit of other societal objectives through integrated responses. Successful implementation relies on relevant tools, suitable governance structures and enhanced capacity to respond.

“Change in behavior, lifestyles and values would have to be an important consideration in adopting and implementing policies for the future.”

If we evaluate the nexus between climate change action and the 17 SDGs, there is clearly a substantial overlap in the actions required to meet the SDGs and those required to deal effectively with climate change. SDG 13 specifically mentions climate change actions, but many of the other SDGs are an important part and closely connected with climate action. For instance, the very first SDG, which targets the removal of poverty, would require both mitigation as well as adaptation measures by which the risks associated with the impacts of climate change, and which are disproportionately harmful for the poorest sections of society would require mitigation at the global level and adaptation to the impacts of climate change at the local level. The other SDGs, such as the 2nd, 3rd and the 6th, deal with the removal of hunger, good health, clean water and sanitation respectively, are areas in which the impacts of climate change would make the achievement of these SDGs far more difficult. For instance, given the growing adverse impacts of climate change on agriculture and with the prospects of the global population stabilizing above 9.5 billion and with higher incomes across the globe, food security would be affected adversely if climate action is inadequate or delayed. That would make it much more challenging for the world to meet all the SDGs. SDG 7 which focuses on renewable energy is an important part of mitigation action, as is SDG 9 which involves innovation and infrastructure. Some of the other SDGs which involve good jobs and economic growth, reducing inequality, sustainable and resilient cities and communities, responsive communication and partnerships for the goals are clearly linked very closely with actions to deal with climate change. The 14th SDG which focuses on life below water is also linked with climate change, because increased emissions of GHGs would lead to further acidification of the oceans and warming not only at higher levels of temperature but also at greater depth in the oceans. Hence, if the ecosystems and marine life existing in the oceans are to be protected and conserved, then the emissions of greenhouse gases and the consequent warming would need to be limited.

Action to deal with climate change and the attainment of the SDGs both have to be seen within the framework of ethics, intra-generational and inter-generational equity. Consequently, change in behavior, lifestyles and values would have to be an important consideration in adopting and implementing policies for the future. As the IPCC states climate change exacerbates other threats to social and natural systems, placing additional burdens particularly on the poor. Consequently, aligning climate policy with sustainable development requires attention to both adaptation and mitigation. On the other hand, delaying global mitigation actions may reduce options for climate-resilient pathways and adaptation in the future. Opportunities to take advantage of positive synergies between adaptation and mitigation may decrease with time, particularly if limits to adaptation are exceeded. Strategies and actions can be pursued now which would move towards climate-resilient pathways for sustainable development, while at the same time helping to improve livelihoods, social and economic well-being and effective environmental management. In some cases, economic diversification can be an important element of such strategies. The academic community has to come up with analysis of policies which are suitable and relevant at the local level, but which must now increasingly focus on the global imperatives of dealing with climate change and meeting the SDGs.

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Complex Society and Values*

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Abstract

Contemporary society is a highly complex system which involves many constituents starting from alliances and states to individual persons. Like in other complex systems (physics, biology, etc), the links between constituents and the corresponding interactions among them determine the behaviour of a system as a whole. In physical systems such interactions are determined by physical laws, in social systems, however, the properties of links and the characteristics of interactions are not so clearly determined. In this case one should interpret these characteristics not only by certain material quantities but also by values which determine the behaviour of the society. A short analysis of values in society is presented together with some examples.

1. Introduction

Complexity is an important notion not only in the natural sciences but also in social sciences. In a nutshell, complex systems are composed of a very large number of different constituents (elements) which interact with each other (mostly) nonlinearly. As a consequence, one cannot characterize a complex system by studying the behaviour of its constituents only because due to interactions the full system behaves in a manner which is not deduced simply by summing up the behaviours of its constituents. The contemporary studies of complexity started from ideas of Ludwig von Bertalanffy and Norbert Wiener in the mid-20th century in systems theory and cybernetics and then got active in a full swing in the second half of the 20th century in studies of chaos theory, self-organization, networks, multi-agent modelling, etc. The vast literature (see for example [1-8]) deals mostly with the natural sciences. One should stress some basic ideas emphasized in these studies:

One of the most highly developed skills in contemporary Western civilization is dissection: the split-up of problems into their smallest possible components. We are good at it. So good, we often forget to put the pieces back together again.

– **A. Toffler (1984)** [9]

Complexity science offers a way of going beyond the limits of reductionism, because it understands that much of the world is not machine-like and comprehensible through a cataloguing of its parts; but consists instead mostly

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organic and holistic systems that are difficult to comprehend by traditional scientific analysis.

– R. Lewin (1993) [10]

With new terminology applied in different fields of knowledge, one should be careful because the notions could be understood differently. Take for example Humpty-Dumpty’s attitude from Lewis Carroll (“Through the Looking Glass”). Alice asked him “whether you can make words mean so many different things?” The answer was, “the question is, which is to be master—that’s all”. Here we follow notions from the analysis of physical systems and leave aside notions like algorithmic complexity, computational complexity, etc. Given the lessons from the analysis of such systems, the further attention in this essay will be turned towards complex society. Indeed, contemporary society is a highly complex system which involves many constituents starting from alliances and states to individuals—all entangled into a whole. Without any doubt, the complex social systems are a part of a complex world as described in an excellent collection of essays “Philosophy of Complex Systems” [11]. A special analysis of social systems from the complexity viewpoint is given in [12]. However, as far as in physical, biological and other complex systems the interactions between the constituents can be described by quantitative links based on physical/physiological measures, in social systems the situation is much more complicated [13]. Yes, one can collect data from opinion polls, create databases of indices, characterize the structures (networks, etc) but as a matter of fact, the qualitative measures which are of special importance in societies are hard to be characterized. In very general terms, one can call these qualitative measures as values. In this essay the discussion will be centred on values in complex societies.

In Section 2 the main lessons from the analysis of physical systems are described. Section 3 deals with values from the general viewpoint and further, in Section 4, the problem of values in societies is discussed. Some examples which could cast more light on these discussions are presented in Section 5. Finally, Section 6 is devoted to some conclusions.

2. Complexity of Physical Systems

2.1 Phenomena

The signatures of complexity in physical systems are described in many monographs, see for example [6, 7]. Starting from simple nonlinear cases, many important phenomena characterize life in complex systems and much can be learned from them. It is even surprising that very simple nonlinear systems like the logistic equation or the three body system display rich dynamics that help in understanding more complicated cases. Even more, the simple sandpile dynamics [4] can open the door for understanding earthquakes, traffic jams and economy.

First, a few words about nonlinearity. In simple words it means that the rule of proportionality does not work and the links between inputs and outcomes are described by nonlinear rules. That means also that summing the influence of interactions is much more complicated than simple summing. Although known a long time ago,

The whole is more than the sum of its parts.

– Aristotle, *Metaphysics*

The full understanding of the importance of being nonlinear is the result of, let us say, the last half a century [14].

What follows is a brief survey of main effects which are important for understanding complexity.

- (i) non-additivity and nonlinear interactions. This is the source of chaotic motions and typical of many physical systems modelled by mappings or differential equations. A typical example of a nonlinear interaction is the gravitational force between different masses. The three-body system (Sun, Earth, Moon) analyzed by H. Poincaré already more than a century ago has revealed ideas of possible instabilities. Another iconic example is the Lorenz attractor describing simplified atmospheric motion using the system of three nonlinear differential equations.
- (ii) deterministic unpredictability. The behaviour of deterministic nonlinear systems may not be predicted and may lead to chaotic regimes of motion. A typical example is a simple logistic equation (mapping) derived for calculation of changes in the number of species. The weather is described by nonlinear Navier-Stokes equations that again do not permit the accurate forecasts for longer periods.
- (iii) sensitivity to initial conditions. Small changes in initial conditions of a dynamical nonlinear process may lead to large changes in the resulting quantities in the course of time. This phenomenon within the framework of a nonlinear simple model was discovered by Lorenz although Maxwell had already hinted to such a possibility in the 19th century and Poincaré in the beginning of the 20th century. As far as the accuracy of physical quantities is limited in their value, there exists a so-called predictability horizon [15] because for example one simply cannot determine the temperature distributions needed for long-term weather forecasts with the accuracy of many digits after comma.
- (iv) there are several typical phenomena characterizing the behaviour of nonlinear systems like bifurcations when the new solutions emerge after small changes of control parameters, emergence when new patterns arise, attractors where the solutions are attracted to a certain space of variables (phase space), multiple equilibria which are characterized by several (co-existing) attractors, thresholds which mark the borders between the various states, coherent states where effects are balanced, etc.
- (v) despite the variety of chaotic motions there are several rules which govern the processes: period doubling and Feigenbaum numbers, power laws, self-similarity, fractality of attractors, etc., and also a number of methods which allow to analyse the processes: Melnikov method, renormalization method, determination of the Kolmogorov entropy and Lyapunov exponents for determining the scale of chaotic motions, etc.

Above is only a short list of phenomena and methods in the nonlinear world. For more information one should consult the “Encyclopaedia of Nonlinear Science” [16]. One should also stress the following. The usual understanding (common sense) is that nonlinear models are just a little bit corrected linear models. The world around us, however, is deeply nonlinear and the linear models, as a rule, are simplifications. Yes, in many cases simplifications work but essential effects are nonlinear. Next, the nonlinear physical problems are intensively

studied and the ideas and methods can be used also in other fields, at least in the metaphoric sense bearing in mind that models in other fields might be more complicated and the characters of interactions are not so well described like in physical systems.

“Networks are skeletons of the complex world.”

2.2 Structures

Here we explain briefly the main structural cornerstones of complex world and processes—fractals and networks.

The word “fractal” was coined by Benoit B. Mandelbrot [17] using Latin “fractus” (broken or fractured) for describing irregular non-differentiable structures. The famous Mandelbrot fractal is generated by a quadratic mapping in the complex plane and possesses a wonderful property—self-similarity. In simple words, under various degrees of amplification (zooming) each small part of this fractal replicates the structure of the whole. It means that such objects are scale-invariant and in addition are characterized by non-integer (fractional) dimensions. Fractal geometry [18] is based on the idea of using feedback procedures with simple repetitive rules for constructing very complicated structures. The iconic fractals named after Mandelbrot, Koch, Sierpinski, Cantor, Barnsley etc., display explicitly the properties of fractals. The fields of usage fractals for describing physical phenomena cover a wide area of nature and technology: from coastlines to crystals, from describing attractors in phase spaces to Brownian motion, from fractals in biology to structure of time-series of financial markets, from characteristics of seismic activity to music, from mountain ranges and structure of lightning to heart rate, etc.

The lesson to be remembered is that the repetitive usage of simple rules generates complicated objects which possess some universal rules.

Another important notion is networks. In simple words, a network is formed by a large set of elements (nodes) which are connected through a pattern of different interactions (links). The world is full of networks: the ecosystems form networks and webs of species, our computers are linked to Internet or connected to cloud computing, public transportation forms a network starting from local connections to intercontinental flights, economics and electric grids form a global network, social networks unite persons, etc. Again, there are several universal rules which help to understand life in global networks [8, 19]. A powerful tool for describing networks is the graph theory which started with the problem of crossing Königsberg’s bridges. L. Euler showed in the 18th century that given the number of bridges it is impossible to walk over all the 7 bridges only once. Nowadays we know much more about the structure and behaviour of networks. Despite the large number of nodes and links, a small world phenomenon exists with only six degrees of separation. Networks are in general terms stable and large networks do not usually break under the failure of one node or link but in some cases domino effects and cascading failures occur. The cases of failure of electric grids are known as warning examples with large-scale effects. The power law governs the network structure but not as an ideal rule because in reality the power law might have fat tails. There are certain limits in networks, in social systems for example, the Dunbar number (which is estimated around 150) limits the number of possible active social relations. The Matthew effect (the rich get richer) seems to be important not only in economy but also in science where attention is given preferably to known names (to Nobelists, for example). Hierarchical

networks exist, possessing self-similarity and fractality. Summing up, networks are skeletons of the complex world [8].

3. Values

Values play an important role in psychology, ethics, religion, etc and field of studies into values is called axiology (Greek *axios*-worth and *logos*-theory)—see for example [20]. Human behaviours are strongly influenced by values. In general terms, the basic values accepted by society according to T.Ash [21] are: freedom, peace, justice, prosperity, diversity, and solidarity. His analysis is concerned mainly with Europe and he stresses that this skeleton of values must have flesh in order to be acceptable at all circumstances in our 24-hour, 7/365 non-stop global world. But the values are space-dependent and environment-dependent. It is no secret that the top athletes and top actors earn more than top scientists, reflecting so the attitude from the society. Values are related to culture but the personal values of people may not entirely coincide with the general norms in societies. And certainly, societies are different when we speak about values. Inglehart and Welzel have constructed a cultural map of the world [22], where survival values and self-expression values are depicted against traditional values and secular-rational values. This map shows clearly the groupings of English speaking countries and Latin America, catholic Europe, protestant Europe and Confucian countries, ex-communist countries and Africa. Another possibility [23] is to use GDP per capita as one of the scales. Depicted against happiness and overall life satisfaction, their results show that religion, tolerance and society's level of democracy play an important role in the happiness index. Religion and national pride were stronger factors in less developed countries than in developed ones. One should stress also that the level of satisfaction is more strongly influenced by economic conditions than the level of happiness. But their analysis takes also into account the temporal changes, for example the sense of free choice and subjective well-being shows clearly how the societies have changed in time. Such an analysis [23] leads to demonstrating the human development path: from economic development, democratization and social liberalization the increase in sense of freedom follows which is in a strong correlation with the increase in subjective well-being.

Recently, attention has been paid to happiness metrics which was proposed by the King of Bhutan in 1972 and later enlarged by many studies [24, 25]. The Gross National Happiness (GNH) index measures the societal well-being based on several subjective and objective measures including besides the GDP environmental wellness, social relation wellness, etc [24]. In some sense, it is a derivative of values because the factors of happiness include values as the key determinants of happiness (World Happiness Report, [26]).

4. Social Systems and Values

Society is a complex social system. It can be modelled by networks and clusters, communities and alliances and is spatially and temporarily differentiated. Society is able to function not only because of its structures but also the behaviour of its members (constituents in physical sense) and the links (interactions in physical sense) between them play the most important role. Turning to complexity of physical systems (Section 2), the interactions between the constituents are described by physical laws and can be measured at least with certain accuracy. In complex social systems the situation is much more complicated because

the links are based on accepted rules (laws), traditions, language, and governance, on economic and environmental conditions and certainly on values. This leads to an interesting question of how to combine our knowledge on complexity with “soft” qualities like values.

“Qualities (good/bad, pleasant/unpleasant, etc.) cannot be measured and the estimations of qualities are based on observations, opinion polls and subjective judgements.”

The problem is certainly old. For example, Plato believed in an objective measure of values in order to keep the system (i.e. society) in a state of harmony (see [27]). Actually his idea was related to maintaining a system with political power. In the contemporary world the situation is much more complicated. Qualities (good/bad, pleasant/unpleasant, etc.) cannot be measured and the estimations of qualities are based on observations, opinion polls and subjective judgements. Here a well-known experience from the history of science may be recalled. The Ptolemaic model of the Earth-centred solar system was based on observations. In order to explain the motions of planets, Ptolemy used combinations of epicycles which moved on a larger circle (deferent) and placed Earth out of centre of the deferent for describing the apparent speeding up and slowing down of planets. This theory proposed about 2000 years ago was used for about 13 centuries and only in the 16th century Copernicus proposed the Sun-centred system. His ideas were elaborated by Tycho Brahe, Kepler and Galileo but the explanation was finally given by Newton. The Newton’s gravity law explained the reason why planets move in such a way. By the way, the gravity law is nonlinear. So the observations were not enough, one should find the reasons.

The large cornucopia of knowledge in physical sciences can support the modelling of social systems including descriptions of phenomena and structures (Section 2). For example, the notion of hierarchical structures is useful in the social sciences but the archaeologists have added heterarchy as another important notion [28] following ideas from neural nets [29]. When hierarchies have elements which can be ranked and ordered then heterarchies have elements which are unranked or have the potential to be ranked in a different way.

When considering the effects and behaviours in social systems, the main problem is whether the observations are good enough to give the full picture of social processes or something is hidden. And another problem follows: knowing the gravity law one can predict the motion of planets but what is the predictive power of observations? And what can be overtaken from studies of complexity in other fields into modelling and understanding social systems? And what is the role of values for interactions in society?

The first important question to start with is: what are values? The next question is whether values are fixed or are changing. It must be stressed that Inglehart et al. [23] have shown by analysing the changes in certain values in society over 1981-2007 that these values are indeed changing in time. The subjective well-being (SWB) index demonstrates many changes due to changing environment. One should also understand what universals in the content and structure of values are and what priorities in values are [30]. Based on those

notions, other studies have also indicated how values are different in various cultures [31]. However, the values have inertia clearly. A detailed analysis on value system in Estonia [32] has shown that the Soviet occupation of Baltic Countries before and after WWII could not change all the inherited values. Said the authors: “in spite of the Soviet dominance of officially visible societal culture, the older Estonian generations seem to have been able to transfer a basically West-European value structure to their children and grandchildren.”

Another example on changes illustrates the erosion of values. Once I wrote an essay on the beauty of science (Engelbrecht, [33]) bearing in mind the beauty of nonlinear dynamics. It is well known that Paul Dirac and Pierre Duhem admired the beauty of physics. Writing the essay, I checked many encyclopaedias and dictionaries on the definition of beauty, starting from the celebrated Encyclopaedia Britannica from 1769. I collected many definitions such as beauty “is pleasing to the sense and intellect” and “is the combination of all the qualities of a person or thing that delight the senses and please the mind”. However, in one of the recent dictionaries the entry “beauty” has a very laconic explanation—see “cosmetics”! No comments are needed.

In order to manage organizational complexity, the notion of values has been introduced as attractors of chaos [34]. It is argued that neither rigid objectives nor instructions are effective but a shared set of values should be accepted by members of an organization. These values can be divided into ethical (honesty, integrity, sincerity, loyalty, etc) and competence (creativity, flexibility, order, intelligence, etc) values and the final state of an organization is then described as an attractor in a self-organized system.

Based on the conversation between Alice and Humpty-Dumpty (Section 1) let us remind ourselves how the concept of truth is understood by different scientists and scholars [35]. The concept of truth is related to notions: correct, valid, coherent and right. According to [35], natural scientists trust only the first two, social scientists the first and third, humanists the third and fourth. It seems that the starting question is to find the common language which may divide natural scientists and humanists like Snow showed in 1959 in his famous lecture “The Two Cultures” [36]. Kagan [35] added social scientists in his “The Three Cultures” to this pair and showed how the scientists and scholars of different fields use different wording and methods. Complexity might be a unifying area of knowledge where all three might find a common language.

The interest in complexity in social systems is growing. An overview by Byrne [12] is an excellent introduction to social systems from the viewpoint of complexity but one cannot find “value” in its index. In the large overview on complexity [11] describing many fields of knowledge is only one short subsection on values concerning the role of values in public policy resolution of complex dynamics.

5. Examples

Some examples of how the knowledge from physical complex systems has improved understanding of social systems follow.

“In one of the recent dictionaries the entry “beauty” has a very laconic explanation—see “cosmetics”!”

First, let us mention that the methods derived for the analysis of physical processes can also be effectively applied for the analysis of time-series in social processes. For example, the multi-scaling of low-variability periods and multi-affinity of time-series can be used for the analysis of financial time-series [37]. Further, the same authors have introduced “good” and “bad” notions for the analysis of portfolio optimization [38] attributing these notions to fluctuations of portfolio distributions. Actually these studies belong to the fast growing field of research called econophysics (cf. [39]). A textbook describing macro-economical processes like business cycles, interregional trade, monopolies and oligopolies etc., using the language and methods of nonlinear dynamics is masterfully written by Puu [40].

One could also use network analysis for country-country and product-product links in order to estimate the structure of the world economy [41]. This analysis has estimated unexpected socio-geographic links which can be characterized as nonlinear interactions between the diversification of a country and the ubiquity of its products.

There are not so many examples where values are introduced into the analysis. One example is related to using the GDP which is usually taken only at its face value for determining the effectiveness of countries. A new metric introduced for estimating the countries’ fitness could give much more information [42]. The idea is to assess the non-monetary competitive advantage of diversification using nonlinear maps and taking into account the country fitness and product complexity. The fitness actually measures the level of the competitiveness of a country and is proportional to the sum of the products exported weighed by their complexity. Such an approach is able to understand the hidden potential of a country for development, i.e. to predict the growth. Typically, the power laws characterize the fitness [42]. The analysis has revealed the strongly heterogeneous patterns of evolution [43]. In the fitness-income plane the laminar and chaotic zones are estimated. For chaotic zones where the predictability is low, a data-driven method has proposed to assess the future developments of countries. In these studies, fitness could be linked to values.

Information and communication technology (ICT) is a trademark of the contemporary society. The World Wide Web with its nodes and links is an excellent example of a complex system. The use of the ICT has an essential impact on economy and social system but raises also ethical problems, i.e. value problems. The EU Future Emerging Technologies (FET) Flagship pilot project “FuturICT” had as one of its goals Value Sensitive Design (VSD). The basic idea of the VSD is making social and moral values central to the development of ICT [44] stressing that it is a primary goal and not a by-product. In general terms, the VSD aims at making values part of technological design, which means embedding technology into the complex society needs ethics taken into account. The “FuturICT” paid a lot of attention to a code of conduct of scientists developing the ICT: to promote human well-being, reduce vulnerability of the society, promote fairness, increase social capital and the happiness of people, protect privacy, etc [44].

6. Final Remarks

Society is, without any doubt, a complex system and the idea to use the knowledge from the analysis of physical complex systems in the analysis of societal problems is tempting. Indeed, the notions of nonlinearity, interactions, self-organization, stability and

chaos, unpredictability, sensitivity to initial conditions, etc are phenomena which could also characterize social systems. However, not everything is easy because:

“...physical and computational measures of complexity exist in abundance. These can provide a starting point for creating social complexity metrics, but they need refinement for the simple reason that electrons don't think”.

“To harness complexity,..., we must take a generative perspective and see social outcomes as produced by purposive authors responding to incentives, information, cultural norms, and psychological predispositions.”

– S.E Page (2010) [45]

As shown above, one of the preconditions is to speak in the common language. It is not the problem of cultures only [31], it is also a problem of scientific communities [35]. Another important problem is causality because the observations cannot always reveal the reasons. Forcing societies to fit in a box without understanding the reasons may lead to serious consequences like we witness in many world affairs. Interdisciplinarity is really a way the society together with scientists and scholars must move on to. There are surprising similarities in many fields of human activities and much can be learned from these [46]. Metaphors encompass often our everyday communication and can also be used in explaining the behaviour of complex social systems. Such an approach is advocated by Wheatley [47] for management and leadership. She does not enter into the technical details of chaos theory and complexity in terms of physical systems but recommends using these ideas convincingly to management of social systems and also for educational purposes.

Many phenomena in the physical world can be measured and counted. Even in social systems the counting has taken enormous pace, to be it citations of research papers or indices of productivity. However:

“Not everything that can be counted counts, and not everything that counts can be counted.”

– W.B. Cameron (1963) [48]

This saying is sometimes attributed to A. Einstein but actually it belongs to a sociologist, not to a physicist. Now the important question comes: what shall we do with that which cannot be counted but is important? In physical complex systems constraints are used in order to limit or guide the process, in social systems it seems that values are leading and guiding factors. Common sense says that constraints may have slightly negative meaning but actually they describe certain limits of processes. On the other hand, values generally have positive meaning but value systems in different communities may also be different and that may cause problems like we witness not only in Europe but worldwide. An interesting idea based on using metaphors is to determine values as attractors [4]. This means that the behaviour in a system may be attracted (trapped) in a certain space domain and not in another. However, following this idea, we might think about the co-existing attractors. In this case an external influence will move the motion, i.e. the behaviour to another space domain. Here is much to be discussed and analysed.

Besides values, the structures of systems and their interactions are also important but social systems need something more. That is why we must think very carefully how to embed values into the analysis and explanations of processes. This is where physical scientists and social scientists could meet and learn from each other [50].

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Things are changing after all

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Abstract

The global situation is getting more difficult every year. While states fortunately agreed on the SDGs and on a climate contract in New York and Paris at the end of 2015, the situation is deteriorating with a fast growing world population and increased environmental pressures. Is there still a chance for a sustainable future or will we end up in a world two-class society or an ecological disaster? At first sight, sustainability might seem a hopeless task, but there is still a chance. Because, following the world financial crisis, the coordination between states has increased considerably. This concerns the overall idea of green and inclusive economies, replacing free market and market fundamentalistic paradigms, even on the OECD level. Encouraging is a concentration on aspects of balance concerning income, and even more attacks on aggressive tax avoidance schemes and tax havens. Details are given in the paper.

“Until the global financial crisis, the standard attitude was the market-fundamentalist propaganda that the financial market was the “brain” of the world economy and that only it was capable of the optimal allocation of scarce resources.”

1. Initial Situation

In the context of globalization and in the face of many international problems the world is not in an easy situation. With regard to global governance, in particular, progress is not as fast as we might want it to be. However, some progress has been made. Ten years ago, for example, the issue of adequate taxation of cross-border economic activities was an ongoing problem which seemed to be intractable. Not even in the EU was it possible to create change for the better, among other things because of the attitude of Luxembourg and Austria. Both normally used Switzerland and Liechtenstein as their excuse, on the grounds that for reasons of competition there was nothing they could do until these countries made some changes. In their turn Switzerland and Liechtenstein always argued that they were not prepared to do anything until the EU had clarified its internal problems with Luxembourg and Austria.

Until the global financial crisis, the standard attitude was the market-fundamentalist propaganda that the financial market was the “brain” of the world economy and that only

it was capable of the optimal allocation of scarce resources. Governments and politicians were not to interfere in this. Any kind of strict regulation and taxation of these processes would burden the intelligence of the “global financial brain”, and the free market was the solution to all problems. The IMF and the World Bank argued along the same lines. With the Washington Consensus aid to poorer countries was made conditional on them pursuing a neo-liberal course. These recipes have turned out to be disastrous in some respects. As soon as the financial crisis broke out, the rich countries, headed by the USA, took the very actions which had previously been prohibited to developing countries.

The crisis was a severe burden on many countries and put the Eurozone under extreme pressure. The crisis is not over yet, but it is remarkable how the discussion has changed during this period. This is especially true with regard to the question of tax haven and tax compliance, as well as to “harmful” competition between countries in the form of very low taxation of cross-border activities. The availability of CDs with incriminating data on systematic tax fraud has come to play a decisive role in this process, too.

Major changes have now taken place in relation to themes which we, not only in the Club of Rome, the Global Marshall Plan Initiative and the Senate of Economy, have always promoted as representatives of a global eco-social market economy. We have turned out to be right, and we should remember this with regard to other topics for the future, too.

2. The pressure on tax havens has grown enormously

What has happened? The pressure on tax havens has grown enormously. The critical attitude in the US and in Europe towards this topic has intensified significantly. Not least because, for one reason, so-called ‘tax-CDs’ smuggled out of the country have made it clear that members of the ‘elite’ and top leaders in all countries have for years and decades systematically committed tax fraud on an incredibly large scale. This was not the result of carelessness, but precisely planned and implemented with great consistency.

3. Automatic Data Exchange

As a result Switzerland has now revised its ‘business model’. As before, private investors are in part still able to avoid the consequences of this change of policy by entrusting their money to professional financial management companies, but with respect to assets in private bank accounts the situation is now very different. We are moving in the direction of automatic data exchange between the banks and financial authorities of individual states, and Switzerland is participating in this process. If it was unable to inform the persons involved about upcoming legal requirements in any other way the country recently even placed sensitive information about account data on the Internet. At an earlier stage account holders had been called on to either reveal their accounts to the finance authorities in their country of residence, or authorize the Swiss bank to do this itself. If this was not implemented, accounts were closed. In the OECD there has been significant progress towards an agreement on automatic exchange of data, and 50 states have already committed to this.

4. Austria abolishes confidentiality in banking

Austria, too, has now done away with its controversial banking confidentiality. The coalition government consisting of the Social Democratic Party of Austria (SPÖ) and the

Austrian People's Party (ÖVP) achieved the two-thirds majority required in the Austrian Parliament with the votes of the opposition Greens.

By abolishing banking confidentiality, the Austrian government expects additional income from the taxation of capital gains of around 700 million euros per year via greater control options. A central register is to be introduced for this, in which all of the approx. 20 million accounts in financial institutions in Austria are recorded.

“We do not want banking confidentiality to be abused any longer,” was the reasoning for the reform. Tax fraud is theft from society. The requirements for account access are reasonable suspicion and the approval of a judge in the Austrian Federal Finance Court.

Part of the comprehensive reform is an increase in the top tax rate from 50 to 55 per cent for income of one million euros and above. The tax on capital gains will increase to 27.5 per cent, while it stays at 25 per cent for interest on savings accounts (see *Handelsblatt*, July 8, 2015 no. 128, p 9).

5. Taxation of cross-border economic activity

A second major issue is cross-border economic activity. In particular this is aimed at aggressive tax planning by companies such as Google, Amazon and Facebook, which essentially do not pay any taxes at all. Their approach takes advantage of competition between countries, the lack of transparency in the case of internal transfers within companies, and the possibility of involving intermediaries as well as the multiple transformation of legal conditions (so-called “wrapping”). The OECD is working on all these issues, together with the G20. Together both organizations are investigating the whole complex of cross-border activities and their taxation. Tangible progress is expected in this field.

6. Calling free-trade into question

In the context of the discussions on the planned trans-Atlantic free trade agreement (TTIP) it is interesting that it is now being pointed out (*Handelsblatt* 06.18.2015) that as early as 2004 Paul Samuelson, the late doyen of market-based economics in the United States and Nobel laureate in economics, shocked the representatives of doctrinal purity with the statement that “Free trade could cause lasting economic damage”. Recently former US Treasury Secretary Larry Summers wrote: “The era of free trade agreements in the classic sense is over. Further agreements can no longer simply be justified by the knee-jerk assumption that free trade is always a good thing.” In fact, the general preferability claimed for free trade with reference to Ricardo has never been universally applicable, and specific conditions are required for it to succeed. Ricardo himself was aware of this. However, the “free-trade fanatics” tended to ignore or conceal this aspect of the doctrine.

7. More transparency with regard to property in Switzerland

Piketty¹ and his student Zucman² address high transparency in the area of property as one of the reasons that taxation is not possible or cannot be implemented in some cases. Several thousand billion dollars have also been missing in international capital export budgets for many years. This is part of that lack of transparency. While half the world's assets are buildings and property is largely transparent in land registry registers there, this is not true for

other types of ownership, such as shares or assets in certain foundations or trust organisations. These are all entry points for a lack of transparency with many negative consequences for enforcing what is necessary legally or warranted in itself. Piketty and Zucman argue at this point that property should in principle be registered in registers, to which public authorities have access when required. Otherwise, no legal protection for the property should be granted. The orientation of ownership on the common good and the assumption of responsibility on the part of owners should thus be fully enforced.

The following is now noteworthy*: Switzerland has recently further tightened its transparency regulations for combating money laundering on the recommendation of the Financial Action Task Force (FATF; a working group in the OECD anti-money laundering) and in response to international pressure. The change in the law for private limited companies with bearer shares, and slightly reduced for all other private limited companies and limited liability companies, is included. The new developments already came into force on July 1, 2015 with partially applicable transitional periods of 6 months. This means urgent action for all private (or non-listed) companies in order to create the necessary structures in time.

8. Why are bearer shares problematic?

While companies keep what is called a shareholders register for registered shares, in which shareholders must register in the company with each purchase of shares and do not become shareholders until it is entered in the shareholders register, there are no comparable structures for bearer shares. Because all shareholders' rights are contained in an anonymous sheet of paper and the shareholders can pass on this paper as they like, the company does not know the holders of bearer shares.

9. What new obligations apply to bearer shares?

Bearer shares will effectively be treated as registered shares in the future. What is new is that companies must also keep registers for all their bearer shares.

10. What other obligations apply to all AGs and GmbHs?

In the future, all types of shares including ordinary shares of GmbHs will be obligated to ascertain and document the economic beneficiary for holdings of 25% and more. The economic beneficiaries are the natural persons (one or more), who are behind all holdings, interim companies, trust structures, etc. and are the actual beneficial owners of the assets.

11. Harmonization of corporate taxation in the EU

Amazingly there has been movement within Europe on another subject. Whereas so far the focus has been on the harmonization of the basis for corporate taxation in EU discussions on the topic (which, however, did not lead to any progress over the years), the much debated findings about the massive tax concessions made by Luxembourg in particular towards very large companies have meant that the subject of minimum levels of taxation in the corporate sector is now also on the table within the EU. That the BDI in Germany opposes this is difficult to understand. For every ordoliberal there should be a self-evident objective of

* artax NEWSLETTER of 30/06/2015

ensuring fairness in a common market by comparable or agreed upon levels of taxation of all companies and of preventing “freeriding” of some companies at the expense of others. This is true so much the more, as particularly small and medium-sized companies are those that are usually disadvantaged.

12. Explicit addressing of the balance of income distribution

Another key issue in the work of the Research Institute for Application-oriented Knowledge Processing (FAW/n in Ulm), the Club of Rome and others which has been raised in books and dissertations, is the question of social balance, the so-called ‘efficient inequality range’—in other words the shaping of social differentiation within societies to ensure a positive effect.[†] Accordingly it is a matter of achieving the golden mean between too much and too little balance. In the wake of the financial crisis, large international organizations such as the IMF and OECD have changed their economic position considerably. They are now arguing in favour of green and inclusive economies, instead of essentially unregulated market structures. This corresponds to the Senate’s position of an ecosocial market economy, an ecologically and socially regulated market economy. With its Better Life Index the OECD has also formulated an interesting list of criteria for sustainability, which includes an explicit parameter for the distribution of income. German political thinking has not yet reached this stage. The topic has currently gained importance due to the reflection of the important book by Piketty (*Capital in the Twenty-First Century*), as well as in continuation of relevant considerations by economic Nobel laureate Joseph Stiglitz in his book on the topic “The Price of Inequality”. The problem of increasingly input-free appropriation of ever larger parts of the annual economic output by a small group of very large asset holders and their heirs requires reforms and change, if a “productive” balance of income distribution is the goal.

“The question of income and wealth distribution is today an explicit policy issue within the OECD.”

The contention of the OECD corresponds to the position which the Senate has always held that the 80% with lower income levels should enjoy at least half of total income, and the 20% with higher income levels should have access at most to 50% of total income. As described, the question of distribution is today an explicit policy issue within the OECD. Unfortunately this is not yet the case in Germany and Europe as a whole. That needs to change. The Senate has always argued in this direction, and is now doing so increasingly with regard to potential massive future job losses in high skills areas resulting from the increasing technical intelligence of IT systems, from analytics, Industry 4.0 and the use of big data.

In cooperation with Denkwerk Zukunft, which shares our position on the issue we, as the Senate of the Economy, held an interesting conference on the issue of income distribution as long ago as 2012 in Hamburg. The subject of the conference was that a balancing parameter

[†] compare with: Atkinson, A.B.: *Inequality: What Can Be Done?*, Harvard University Press, 2015

Herlyn, E.: *Einkommensverteilungsbasierte Präferenz- und Koalitionsanalysen auf der Basis selbst-ähnlicher Equity_Lorenzkurven—Ein Beitrag zur Quantifizierung sozialer Nachhaltigkeit*, Springer Gabler Verlag, 2012

Piketty, Th.: *Capital in the 21st Century*, C. H. Beck Verlag, 2014

Radermacher, F.J., Beyers, B.: *Welt mit Zukunft—Die Ökosoziale Perspektive*, Murmann Verlag, Hamburg 2011

Stiglitz, J.E.: *Price of Inequality: How Today’s Divided Society Endangers Our Future*, Norton & Company 2012

was missing in the ‘magical quartet’ of Germany’s 1967 Stability Act, which addresses the four points of (1) price stability, (2) high employment, (3) balanced external trade and (4) adequate and steady economic growth. In the ‘affluence quintet’ of Denkwerk Zukunft the balance of income distribution is one of the 5 parameters taken into account when looking for sustainability-oriented policies.

“This pledge-based approach, which is based on voluntary, not directly coordinated and not conditionally related commitments by the participating states, will only solve half of the climate problem. However, it may solve the question of justice between nations.”

In a recent study entitled “*Why Less Inequality Benefits All*” the OECD has now once more pointed out that countries lose a lot of wealth when inequality becomes too great. This unambiguous statement is a very big step forward towards a “green and inclusive economy” philosophy. In Germany, too, at least one important step forward has been taken: the introduction of the minimum wage.

13. Towards better Corporate Law

In today’s economic system, the dominance of ownership interests towards returns on assets and capital undermine the obligation of property, within the context of the **common good** to at least pursue the objective of sustainable development equally. In particular, success in the market can be “sold” as a valuable contribution, even when it is ultimately based on burdening the common goods, that is, of global commons. This is a form of externalisation of costs of companies at the expense of the general public. In today’s competition law, set competitors cannot sue under competitive pressure of **unfair competition** but are put under pressure on the market, in the sense of a Prisoner’s Dilemma, to do the same as their competitors. The “plundering” of the commons is becoming commonplace, as can easily be observed in the climate issue, today.

To this end, there are now new scientific activities underway, intended to modify corporate and competition law, which is addressed very comprehensively in documentation from the Friedrich Ebert Foundation, “Anchoring sustainability in competition”.[‡] This goes back to the concrete formulation of the required new laws by experts from the legal sector with relevant specialisation. In particular, companies should be able to sue competitors for unfair competition if they achieve their performance in the market under false pretences, namely (only) at the expense of the burden of common goods. If their suit is successful, then the “free riders” are levied with the appropriate costs and obligations as a condition of being allowed to keep their licence to operate. In the long-term, this may be an important contribution in a world in which entrepreneurship and sustainability are better connected than today.

[‡] Friedrich-Ebert-Stiftung (ed.): Anchoring sustainability in competition. Expertise on behalf of the Department for Economic and Social Policy of the Friedrich Ebert Foundation (Authors: Johannes Hoffmann, Gerhard Hofmann, Jens Lowitzsch, Christian Pitschas, Denis Suarsana and Herwig Roggemann), Bonn, June 2015

14. New Approaches to solving the Climate Problem

Interestingly, progress is also being made with respect to the climate. For too long an attempt has been made to translate an abstract idea of justice into a global compromise. This could never succeed, in view of the very different initial situations in which countries find themselves, combined with equally different notions of justice. The debate so far has only reflected the problems of justice between developed and less developed nations. In the process there has been no mention of the achievements and inventions of the developed nations—for example penicillin or the automobile—which have benefited the less developed nations. What was also lacking was the second dimension of justice, which consists of the fact that countries such as India and Brazil now contain many rich people, while there are also a lot of poor people in OECD countries. Even more significant: unemployed people in Germany cannot be expected at their own expense to solve the climate problems of Indian millionaires. As a result two dimensions of justice need to be addressed simultaneously.

15. Voluntary Carbon Neutrality on the part of the private sector

The logic of development has meant that today, since Copenhagen, a pledge-based approach is being pursued, and hopefully this will result in a new global climate treaty in Paris. This pledge-based approach, which is voluntary, not directly coordinated and not conditionally related commitments by the participating states, will only solve half of the climate problem. However, it may solve the question of justice between nations. At the same time it opens up a large window for private climate-neutrality action on the part of organizations, businesses and private individuals, which can be financed by wealthy protagonists in particular.³ This applies to drawing legal emission certificates out of the market as well as to afforestation and humus formation in agriculture in order to absorb CO₂ from the atmosphere (negative emissions). Such measures contribute, in particular, towards the second dimension of justice to be observed.

16. Financing the Green Climate Fund

Potentially they involve indirect co-financing of the green climate fund by the rich countries to the benefit of the less developed countries. After the preliminary agreements this fund will provide at least \$100 billion a year, which the rich countries are to contribute annually from 2020 in order to support climate protection measures in poorer countries and finance measures required for adaptation to climate change. If we consider that the total budget for development cooperation (ODA) is currently (only) 135 billion dollars per year, this is an important new element in cross-financing from the fully developed countries to the remaining states. In addition, such carbon neutrality measures mean the co-financing of humus formation and in particular of afforestation in tropical countries.

This is a wealth and development programme for these countries which also promotes the environmental dimension of sustainability. It is a programme which the Economic Senate has been promoting for a long time. The World Forest Foundation of the Senate is particularly active in this field, in cooperation with the World Bank among others. Many of our senators have already adopted climate neutrality. Here, too, there is an opportunity for improved further developments.

17. Oslo Principles and an important Dutch Court Decision

It is also interesting that a group of leading philosophers and legal scholars with what are called “**Oslo Principles**” are developing a step towards global domestic law and global governance in a report on the position that the countries of the world are already obliged in currently valid international law to do everything possible and reasonable under fair conditions in order to solve the climate problem within the meaning of the 2 °C objective. There is a difference here between the obligations of developed countries and the least developed countries. It should be stressed that the right to impose economic sanctions on countries that fail to comply with the Oslo Principles is part of the programme. However, how this approach should be enforced is not discussed when strong nations such as the United States refuse to accept these legal principles. It is also not discussed how the relationship with WTO law may be if, for example, border adjustment tariffs are imposed on countries that do not abide by the Oslo Principles. Nevertheless, it is interesting that a legal position arises here which will possibly be confirmed again by international courts.

It is very interesting in this context that now for the first time a court, in this case the Dutch District Court of The Hague, in the **Urgenda case** (Urgenda is a Dutch foundation that campaigns for rapid transformation towards sustainability), has ordered the Dutch government to adopt significantly more stringent climate policies than previously planned. In addition to Urgenda, 900 Dutch citizens have also supported the suit. Specifically, the Dutch government is instructed to reduce emissions on its own territory by 25% within five years. The argument concerns the protection of Dutch citizens from the risks of climate change.

18. Europe on the road to greater unity—despite crisis

Europe is struggling to cope with the euro and the Greek crisis. But beyond Greece it is about much more—the further development of the European Union. Now an important step has been taken with the **Five Presidents Report**. The presidents of the five main EU institutions, Jean-Claude Juncker (European Commission), Mario Draghi (ECB), Jeroen Dijsselbloem (Euro Group), Martin Schulz (European Parliament), and Donald Tusk (European Council) have recently presented this report. The proposals for reform presented in it, which provide for more European integration in the financial sector, a more effective banking recapitalisation, and the beginning of a capital market union, among other things, are a step in the right direction. However, with respect to fiscal and structural reform they remain too vague.

In this context, Europe must especially recognise that the monetary union is a step away from fiscal sovereignty.[§]

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History has knocked very loudly on our door: Will We Answer?*

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Abstract

Today there can be no doubt that we live in a crucial time in human history. Our decisions and actions—or our failure to act—will have an impact on future generations for centuries, possibly for millennia, or even for geological time periods. In this article, the author talks about the challenges our next generations are going to face. A paradigm shift is needed to focus on the inter-linked threats to our shared future. Climate change is the defining issue of our time and the greatest challenge wherever we live. The climate war will not be won by General Twitter or Admiral Facebook. Social media can mobilize but the actual changes will require our live presence and commitment and changing the way we live. The World Future Council works to identify, spread and adapt the most effective laws and policies from around the world, which can provide the incentives required to change course. For, under the radar, such breakthrough policy solutions often exist somewhere and policy-makers elsewhere are keen to learn about them, but often do not have the information or capacity. The most important breakthrough policies have been brought together in the Global Policy Action Plan (GPACT), providing a coherent response to the interlinked global crises.

We may all be doing our best but, as Winston Churchill said, “It is not enough that we do our best, sometimes we must do what is required”. Today we are heading for unprecedented dangers and conflicts, up to and including the end of a habitable planet in the foreseeable future, depriving all future generations of their right to life and the lives of preceding generations of meaning and purpose.

This apocalyptic reality is the elephant in the room. Current policies threaten temperature increases triggering permafrost melting and the release of ocean methane hydrates which would make our earth unliveable, according to research presented by the British Government Met office at the 2015 Paris Climate Conference.

Long before that point, our prosperity, security, culture and identity will disintegrate. A Europe unable to cope with a few million war refugees will collapse under the weight of tens or even hundreds of millions of climate refugees.

While scientists are increasingly in a state of panic about the state of the environment, the media—prone to exaggerate other news—downplay catastrophic threats to the planet. When *The Times* provided a realistic overview on 15th April last year, it felt obliged to include the

* This article is a slightly modified version of the author’s opening speech at the World Future Forum, the 9th Annual meeting of the World Future Council, held on March 5, 2016 in Hamburg, Germany.

phone number of the Samaritans for those feeling distressed after reading it. One wonders how the Samaritans dealt with those calls!

Recently, *New York Times* columnist Paul Krugman, after noting that climate change “just keeps getting scarier,” asked: “So what’s really at stake in this year’s (US) election? Well, among other things, the fate of the planet.” A study by the US National Academy of Sciences last year concluded that claims of “de-coupling” economic growth from growing CO₂ emissions and resource consumption, i.e. that we can consume more and conserve more at the same time, have been based on false accounting, underestimating the raw materials required to create the products counted.¹

So, why have we not already formed an emergency alliance to do everything humanly possible to stop and reverse the course?

Why have we not identified a hierarchy of risks and developed a common narrative and strategy? These are questions I often hear, especially from the young.

Our world today is different from what we had a few years ago. The basic argument has since been winning. As a columnist in the right-wing British *Daily Telegraph* I wrote recently in December 2015: “Whether or not you accept the hypothesis of man-made global warming is irrelevant. The (Chinese) Politburo does accept it. So does President Xi Jinping... This political fact is shattering for the global fossil industry and the economics of energy”. What happened? The Himalayan glaciers and Tibet’s permafrost are melting, threatening key Chinese water supplies.

The coal lobby is already seeing the writing on the wall: “We will be hated and vilified in the same way slave traders were,” says the Secretary-General of the EU coal industry organisation.²

At the recent opening conference of the new WFC office in China it was very obvious that the Chinese authorities take the climate threat very seriously and are looking for solutions and partners.

The myth that climate change is a conspiracy to reduce freedom is spread by a powerful and greedy elite which has largely captured governments to preserve their privileges in an increasingly unequal world.

The real history of the past 40 years shows that the often disputed *Limits To Growth* report was prophetic, even for the USA: “The median US household income in 2014 was \$50,000. If we had maintained pre-1970 productivity growth, it would have been \$97,300”.³

As a result the USA is now facing a youth revolt, with young voters backing socialism and most of them having a positive view of socialism than of capitalism.

But in many ways this is a conservative revolt against an insecure future, opposed to the disruptions of recent decades, including globalisation, corporate “personhood” and the resulting unaffordability of their parents’ American dream.

The promised technological revolution does not excite them which is probably a good thing, for, to quote Rolf Kreibich, “there is not a single reference to sustainable development in the whole Big Data and Smart Data debate”. Techno-Stress is causing falling gadget sales,

while in Japan, “people are becoming distrustful of technologies in a broad sense, as they are now often associated with fakeness and futility.”

“No religious dogma is as powerful and dangerous as the dogmas of economists who assume that we will all become richer even on a burning planet!”

The new “satori” generation is anti-consumerist and looking for “enlightenment”.

They and their peers in Europe and the USA are “less likely to endorse the importance of democracy; less likely to express trust in democratic institutions.”[†]

This is not surprising when policy-makers decide based on cost-benefit-analyses provided by economists, whose models are ideological, serving the interest of the privileged and discounting away the needs of future generations. Their tunnel vision fails to see that our economies depend on functioning ecosystems, whose collapse does not just destroy current GDP but the natural capital on which all future GDP depends.

Thus, their widely used DICE model calculates that, even a disastrous 4 °C temperature increase would only reduce GDP by 4% and a 6 °C increase would reduce GDP by less than 10%; nevertheless, this may make large parts of the planet uninhabitable. In such models, Africa could be gone but global GDP may still increase...

No religious dogma is as powerful and dangerous as the dogmas of economists who assume that we will all become richer even on a burning planet!

This dangerous nonsense still rules and even the UN SDG strategy suffers from it. “Given the existing ratio between GDP growth and the income growth of the poorest, it will take 207 years to eliminate poverty with this strategy, and to get there, we will have to grow the global economy by 175 times its present size”—an obvious impossibility.⁴ The SDG Goal 17.1 calls for more trade liberalisation and power for the WTO—although environmental threats mandate the opposite: boarder tax adjustments to stop environmental dumping.

How is it possible that we have lived so long according to this narrative which disconnects us from our earth and now threatens our survival? In 1980 the US-based Heritage Foundation used the election of Ronald Reagan to impose the agenda still ruling the world, organizing 20 project teams involving 300 participants to develop policy recommendations for all government departments. These were published in a 1000 page book, *Mandate for Leadership: Policy Management in a Conservative Administration*. There was of course nothing “conservative” about the radical disruptions planned. But the recommendations were well argued, and many were implemented, as there was nothing available to counter them. To quote Margaret Thatcher, “Economics is the method: the object is to change the soul”.⁵

Today, even the business publication *Forbes* acknowledges that “Capitalism has... devastated the planet and has failed to improve human well-being at scale”.⁶ So the awareness

[†] See World Values Survey, 2015.

has been raised and we now need a methodology on how to end this devastation. While we do not have the resources the Heritage Foundation has accumulated, at the expense of people and planet, we will have many allies on the path to Earth Trusteeship and Earth Justice.

But we need to re-think what we have done so far, not because it is wrong, but because it is no longer a sufficient response to the Earth Emergency. Asked at a recent conference why she was talking about climate change and not about jobs, trade union leader Sharan Burrow replied: “Because there are no jobs on a dead planet!” The eco-industrial transformation will of course generate many millions of new jobs, but she understands the hierarchy of risks and dangers...

Our challenge is immense but not new. “There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order to things. Because the innovation has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new,” to quote Machiavelli’s *The Prince*, published in 1532.

As I said, we have many powerful allies:

- our living planet which can still respond and recover if we change course before irreversible tripping-points are reached.
 - the youth of the world who see that the promises of the current global narrative are hollow and are in search of a credible alternative.
 - the global unprotected who are realizing that, while the new world order claims to have no ceiling, it definitely has no floor.
 - our ancestors who have put their trust in us to ensure that their lives and achievements have not been in vain.
- and
- all future generations of life on earth who are rooting for our success as we have the historically unprecedented power to decide if and how they will live!

The WFC Global Policy Action Plan (GPACT) is our manual for responsible leadership. It summarizes key policy recommendations for people and planet, now under threat from the consequences of the Heritage Foundation policies. It aims to replace the Washington Consensus—now increasingly rejected—with a new consensus, which may become known as the Hamburg consensus!

The fallacies and contradictions of the old narrative have been exposed and changes required discussed at great length.

We must now build new alliances, moving beyond the infighting, backbiting, bureaucracies, narrowness and jealousy so prevalent among NGOs and their supporters.

Many, in business and civil society, prefer easier to achieve voluntary self-regulation. The recent first global overview of self-regulation proves them wrong, showing that in 82% of the schemes assessed, voluntary measures failed.

The level of protection delivered was much lower than a law would have delivered. A Welsh charge on plastic bags cut their use overnight by 80% while an English voluntary measure achieved a 6% drop in seven years....

In many areas, legislation will be a challenge. The easy win-win scenarios are often a myth. The Climate Legacy Initiative concludes that the taxation required to lead to adequate demand reduction will cause “significant social pain”. Politicians fear their voters rebelling, yet need to understand that nature rebelling will be a more serious matter, for we cannot negotiate with melting glaciers or spreading deserts.

The acclaimed economist Dambisa Moyo laments “an erosion of productivity around the world” which she cannot understand, describing it as “really weird”.

Considering the urgent needs of people and planet on the one hand and growing global unemployment on the other, this “weirdness” clearly has a cause, namely the perverse dogmas worshipped by Moyo and her fellow economists.

They claim that the now urgent reforms are too expensive, implying that we cannot afford to live on this planet. But if a society has the human and natural resources to produce, it can also finance.

First, we need real world accounting. The unused global renewable energy potential wastes trillions of dollars annually. Yet, while every coal mine closed is lamented as a waste of industrial capital, the immensely larger destruction of natural capital caused by not maximising renewable energy production has been ignored.

Creating (“printing”) new money by central banks to save the financial system was quickly accepted. Yet funding the urgent transition to sustainable and regenerative societies in the same way has been a political taboo, until the WFC showed last year how this can be done to fund the production of new goods and services: 100% renewable energy, retrofitting buildings, sustainable transport systems, etc.—also generating millions of jobs in the Global South, reducing the pressures to migrate in order to survive.

Our shared future requires a cohesive plan for step-by-step policy reform and the WFC GPACT is the first attempt to design one—not the usual endless wish list, but a priority policy instruction manual, building, wherever possible, on national and regional policies already working, analysed by us, according to the principles of Future Just Lawmaking already agreed by the international community.

GPACT summarizes the minimum policy reforms required to build a world where solutions can again grow faster than problems. It aims to enable such a world, not pretend that we already know all the solutions. As Martin Luther King said, laws do not move the heart, but they restrain the heartless—those who have built the dictatorship of the present benefitting them at the expense of the future of life on earth.

GPACT sets out the path and the milestones to a sustainable future:

“The unused global renewable energy potential wastes trillions of dollars annually.”

1. Environmental Education

We have identified the best law—from Maryland, USA—and are now working to spread it.

We have also identified the best programmes to teach environmental literacy in business schools and to students of economics (see futurepolicy.org).

2. Revitalising Democracy

We have identified and researched the exemplary Icelandic law, which ensures that private money cannot buy elections. Spreading this will be a huge exciting challenge.

3. Adopting Alternative Progress Indicators

Again, a small country, Bhutan, took the lead. The EU BRAINPOoL project shows the way ahead. We also need to reform accounting standards and mandate longer time horizons for credit rating agencies.

4. Ensure the Political Representation of the Needs of Future Generations

The WFC played a key role in building the exemplary Welsh legislation, based inter alia on the experiences of the pioneering Hungarian Parliamentary Ombudsperson for Future Generations, WFC Councillor Sándor Fülöp.

5. Ending Crimes Against Future Generations

We have identified pioneering judgments and the obstacles facing their implementation.

6. Re-direct Military Spending and Foster a Culture of Peace

The WFC Peace and Disarmament Commission has produced a handbook on nuclear disarmament policies for the Inter-Parliamentary Union (IPU) and initiated a broader security debate by highlighting the links between climate and nuclear risks. It has also brought the Argentinean programme for the surrender of firearms to Bosnia.

7. Incentivize the Shift to 100% Renewable Energy Production

The WFC's unique role in spreading best policies, especially feed-in-tariffs, is widely recognized, and has included over 100 hearings with parliamentarians from over 50 countries.

8. Regenerative Cities

Our best policy programme has been presented to decision-makers in Europe, Africa, the Middle East and China and we are now preparing to introduce this at Habitat III.

There are now exemplary Chinese laws, e.g. ensuring that profits from falling oil prices are retained by the government to fund conservation and anti-pollution measures.

9. Preserve Healthy Eco-systems

Ocean acidity is now increasing at ten times the highest rate during the past 56 million

years. We must strengthen and spread the Law of the Sea, as well as the exemplary other ocean, forestry and biodiversity laws from Palau, Rwanda and Costa Rica, which we have honoured with the Future Policy Award.

10. Green Tax Reform Including Carbon Taxes

We must shift taxation to what is bad and scarce. We should also work to spread policies which ensure that our financial system enables real wealth creation and no longer favours speculation and debt.

11. Liberating Enterprise

Human ingenuity and risk-taking must be incentivized to serve the common good. Benefit corporations (Maryland, USA), the TOP Runner programme (Japan) and the Cradle-To-Cradle design principles provide examples ready to be replicated.

12. Protect the Vulnerable

During the unavoidable chaotic transition which is now coming, it is vital that we protect children, women and the large and increasing numbers of persons with disabilities worldwide. The WFC has identified and honoured and works to spread exemplary policies for the right to food (Belo Horizonte) and child safety (Zanzibar Act), to protect women and girls against violence (2014 FPA winning policies) and abolishing barriers for persons with disabilities (Zero project/ WFC policies).

The benefits of tackling these inter-connected challenges jointly are obvious. But while the WFC can bridge policy implementation gaps, the bottom-up pressure on policy-makers must increase to help them to withstand the lobbyists of the status quo.

We are now working to find the resources and allies to initiate—to quote Naomi Klein, “a spasm of rapid-fire law-making, with one breakthrough after another”.

The moral revolution which ended slavery was not achieved just by petitions, nor will the transformation now needed be won by General Twitter and Admiral Facebook. You cannot fight massively entrenched power with statistics or appeals to reason alone. Our opponents are poisoning our common well—a capital crime for our ancestors.

To quote the US PR expert Frank Mankiewicz, “The environmentalists are going to have to be like the mob in the square in Romania (which quickly ended the Ceaucescu dictatorship) before they prevail.”

We also need to project a powerful and attractive vision of our shared future as earth citizens, in a world of scarce resources. As Chandran Nair said, it will be a world of “fewer car races and more dancing competitions”, but a vibrant and flourishing world of education, arts, music, research, sports, spiritual quests and social interaction. My biologist grandfather envisaged that in such a world, life’s meaning would not “be sought behind the objects but behind the subjects”.

The choice is up to each one of us. History has knocked very loudly on our door. Will we answer?

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The Mind of the Leader*

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Abstract

The mind of the leader as a scientific matter, emerges with the development of modern psychoanalysis, modern psychology and contemporary political psychology. The focus on the mind as a scientific matter in the social sciences led to the salience of understanding the psychology of human behavior. It was Freud who provided us with an insight into the structure of personality that in various forms continues to be important. It was Harold Lasswell, a former President of the World Academy of Art & Science who adapted the Freudian categories to the study of personality, structure, and leadership. Central to the individual is the human perspective which comprises of components of identity, the expression of human demands, and the restraints of morality and cultural expectation. These issues were formulated in terms of homopoliticus. This type of personality represented the perspectives of private motives, displaced on public objects and rationalized in the public interest. The paper then proceeds to discuss the importance of early childhood and leadership and illuminates various forms of leadership styles from narcissist to democratic. The paper then discusses the thinking skills that leadership decision-making requires for constructive social performance. Performance is identified with decision making and the architecture of decision making.

The study of the mind is a science whose advances are most recent in the history of the human species. We owe a great deal to the psychoanalyst Sigmund Freud and his followers who developed the study of mind as an important component of the study of personality. The direction on Freud's work, and of many of his followers' work, was aimed at the therapeutic implications for medically treating patients requiring a better understanding of the human personality.

The term 'personality' is used to designate the principal traits displayed by an individual as a participating member of society. In the scientific exploration of personality it seemed apparent that every public and private relationship of the individual required exploration.

Therefore, the implications of Freud's work also generated broader concerns and applications of its insights that could be applied to the emerging fields of the social and behavioral sciences. Among the most important scholars on seeking to explore the broader

* The article is based on the author's lectures for a post graduate level course on "The Essence of Leadership" from March 30-April 3, 2015 at the Inter-University Centre, Dubrovnik, Croatia.

implications of a deeper understanding of personality was the political scientist and jurisprudence scholar Harold D. Lasswell.

“A central thing in Lasswell’s thinking was the role of the individual in social process, in the process of power arrangements, in the processes of constitutional architecture and the centrality of the individual in world public order.”

Lasswell was a Fellow of the World Academy of Art and Science as were several of his colleagues and collaborators. Indeed, Lasswell emerged in the World Academy at its founding, and later became a president of the Academy. It is impossible to say what Lasswell’s single most contribution was to scholarly enlightenment. Scholars who know his work have said that when they pause to expand on his insights, his presence was not there, he had already moved to another challenge and another frontier of the social and behavioral sciences.

However, it may without a doubt be asserted that he was in essence the founder of a distinctive field of the social and behavioral sciences, namely the field of political psychology. Although he had moved his interests into world politics, world public order, human rights, the law of space, oceans and the law of war, a central thing in Lasswell’s thinking was the role of the individual in social process, in the process of power arrangements, in the processes of constitutional architecture and the centrality of the individual in world public order. A focus on the individual self-system in the context of world public order requires an understanding of the functions of personality, its constructive potentials and its destructive capacities.

The question of a deeper understanding of the mind provides us with a deeper understanding of the role of the individual in the system of public order. Additionally, observation will disclose that human communities often reflect complex forms of stratification. Some human beings gravitate to the top and hence provide scope for the study of a segment of society identified as the elite. Those segments that are not among the most conspicuous or influential, and are not in the position of the elite, are the non-elite.

It is certainly a matter of great interest to know what types of personalities gravitate to the position of the elite and the influential and what types of personalities are not so fortunate.

Lasswell opened up a distinctive line of inquiry to explore these issues in one of his earliest books, *Psychopathology and Politics* (1930); *World Politics and Personal Insecurity* (1935); *Power and Personality* (1948); *Power and Society* (1950). In these books Lasswell was trying to broaden and deepen the emerging science of political science. In what follows are a selected number of quotes from *Psychopathology and Politics*, which provide an orientation to the role of mind in the study of leadership:

- *“Political science without biography is a form of taxidermy.”*

- *“Political man [displaces] private motives... on to public objects [subjecting the former to] rationalization in terms of public interest.”*
- *“Political movements derive their vitality from the displacement of private affects upon public object.”*
- *“Political crises are complicated by the concurrent reactivation of ... primitive impulses.”*
- *“Political symbols are particularly adapted to serve as targets for displaced affect because of their ambiguity of reference, in relation to individual experience, and because of their general circulation.”*
- *“The political methods of coercion, exhortation, and discussion assume that the role of politics is to solve conflicts when they have happened. The ideal of a politics of prevention is to obviate conflict by the ... reduction of the tension level of society by effective methods of which discussion will be but one.”*

In this book, Lasswell utilized methods of clinical psychology to generate provisional but potentially significant insights that had both general and leadership implications of personality. The intellectual background against which he was writing stressed the institutional and structural components of political life and not the salience of human personalities in these institutions and structures. The conventional approach excluded the salience of the human personality and the importance of human perspectives within the framework of culture and civilization.

A specific focus on leadership would require a focus on the mind and personality of the leader, in short, the human dimensions of leadership. These dimensions must perforce be person-centered as a key orientation. Indeed, the person-centered approach makes the life history of a leader an important source of insight into the political leader, the business leader, the rectitude leader, intellectual leader, or indeed, any other social context within which leadership is needed and required.

There were two aspects of Freud's work that Lasswell found particularly important: an understanding of the unconscious and an appreciation of free association as an important blade in the armory of human thinking. Lasswell's work with patients confirmed his understanding of the importance of the unconscious, although the line between the unconscious, the semi-conscious, and consciousness Lasswell saw as permeable. The implications were that a great deal of memory is removed from consciousness and stored in the unconscious. It is in the unconscious that the powerful impulses that drive the personality to strive for leadership and more may ultimately be found. The roots of these impulses may be found in the experience of deprivation and the pre-adult's effort to overcome it. In simple terms, if the child is hungry it will express itself by crying incessantly to draw attention to itself, and receive the gratification of feeding.

If the deprivations that the pre-adult experiences are sustainable and intense, these deprivations will shape the unconscious in ways that in later life may well produce mental illness. On the other hand, if the deprivations experienced are in some measure moderated, they will leave the residue of emotional impulses that may later express themselves in striving for achievement and for possible leadership roles. Lasswell's great insight here was

that the personality's cognitions, feelings, and impulses are in reality not matters of conscious awareness, but an unconscious psychodynamic force of emotional energy.

In general, the individual person spends much psychic energy forcing thoughts from the unconscious to remain there as repressed unconscious impulses.

Since these impulses cannot be expressed directly, they are often expressed indirectly and one of the most important ways indirect emotional impulses are managed is by the process of rationalization. In short, the individual has a feeling and the individual provides a conscious rationalization of that feeling, although in reality the feeling is there as a function of the storage of unconscious emotions.

Accepting the general form of the history of personality from the Freudian tradition, Lasswell adapted Freud to the purposes and objectives of the social sciences. He adapted it to describe the developmental history of the political man. It is explained as follows:

$$p \} d \} r = P$$

- The first "p" represents the private motives of the individual as they evolve and are organized in relation to the family and early years.
- The second term "d" describes the displacement of private motives from family orientation to public objects.
- The third symbol "r" signifies the rationalization of the displacement in terms of public interest.
- The formula, therefore, reads as follows: private motives displaced on public objects, and rationalized in the public interest constitute "homopoliticus," the political man.

We would say that the formula has broader implications for leadership than the purely political arena.

1. Personality Structure and Leadership

From the time that Lasswell wrote *Psychopathology and Politics*, psychoanalysis provided advanced thinking, which came in the form of the psychology of the ego. This led to Lasswell's formulation of the perspective of the individual in society. In Lasswell's view, the perspective of the individual is composed of three identifiable components:

- I – a perspective of identity (influenced by the id)
- II – the perspective of claim or demand (influenced by the ego)
- III – the perspective of expectation (influenced by the super ego)

In effect, the perspective of a person will be significantly influenced by the unconscious characteristics of that person, which Lasswell characterized as the perspective of identity. This is not a static notion, however, since the perspective of identity implicates the id and the unconscious of psychoanalysis, it has a significant influence on the behavior of the person. Indeed, Lasswell's political formula provides a strong foundation for the influence of the unconscious on the evolution of the power-centered personality.

The second aspect of perspective is the perspective of claiming or demanding, access to the shaping and sharing of the basic values of coexistence. The perspective of demand is essentially the ego's rational orientation to the environment in order to secure the satisfaction of value wants and value needs. It will be obvious that the energy driven by unconscious impulses will have an impact on the expression of demand-value objectives. In this sense, the perspective of demand will perform some kind of guidance role on the direction of energy impulses emerging from the perspective of identity.

The perspective of expectation in a sense collapses the perspectives experienced in cultural norms, standards, morals, and ethics. In this sense, both the direction of identity impulses, the direction of value demands or claims are tempered by the expectations inherited from cultural expectations and rules that include morality and ethics.

The perspectives of identity, demand, and expectation reflect diverse components of the personality system. All of these components are affected by, or influenced by, the signs and symbols that emerge from the environment within which the self-system interacts. Understanding the behavior orientation of the individual, according to Lasswell, requires us to take note of what he called the "triple appeal principle." In short, communications from the environment will influence the pattern and level of intensity of the identity system, it will influence the consistency and tenacity of the demand for values and it will influence the perspective of expectation, which in turn will influence the other aspects of personality as the other aspects of personality are influenced by the signs and symbols of the environment.

2. Defining Perspectives

Identifications: Self-definition of the individual as a member of particular categories or groups of individuals. Demands: Expressions of desired outcomes, based on values. Demands range broadly in terms of their intensity, from mild preferences to assertions of inviolable rights; Expectations: Beliefs about past, present, or future states of affairs, apart from demands or identifications.

3. Early Childhood Development and Leadership

In the cultural framework of child caring and rearing, society often overlooks the fact that an infant's sense of time is radically different from that of an adult. This means that an innocuous deprivation is a radically different experience between adult and a child. This implies that in the ordinary experiences of child caring and rearing, there may well be overlooked and serious elements of deprivation, which will affect the child's behavior. In order to get a response to the deprivation, the child may be energized to use whatever techniques it has at its disposal to draw attention to itself. Built into the psychology of the child will be the notion that access to gratifications requires the discharge of strong emotionalized impulses.

Therefore, we must confront the uncomfortable fact that leadership is a matter of emotional impulse and intelligence that finds its roots in some measure of deprivation in the child rearing experience.

Another complex aspect of the evolution of the infant is the complex identity pattern, which influences the identity of the child and relations to the parents. In classical Freudian terms,

progress from infancy to maturity requires the internalization of the mother figure as a love object and later as love object lost. The love object lost phase is accompanied by the internalization of the father figure as a symbolic representative of society and culture (the oedipal complex). Such a person has a capacity (and therefore maturity) to seriously regulate the untrained impulse bent on gratification of some sort, including political gratification. With regard to the environment of signs and symbols, Lasswell himself provides us with an excellent summary:

“The environment of the infant and child is teeming with words of ambiguous reference, which take on positive or negative significance long before there is enough contact with reality either to define their frames of reference, or to distinguish those whose frames of reference are wholly interdeterminate. As an “adult”, the individual continues to respond to these articulations in many childish and juvenile ways, often imputing some special and even awesome significance to them. Such words are ‘law and order’, ‘patriotism’, ‘a gentleman and a soldier’, ‘truth’, ‘justice’, ‘honor’, ‘good’, ‘patriotism’, ‘bad’, ‘loyalty’, ‘duty’, ‘Germans’, ‘French’, ‘Negroes’, ‘national hero’, ‘good citizens’, ‘national interest’, ‘king’, ‘constitution’; but these words do not stand alone in primitive concentrations or irrelevant affect. The whole of our vocabulary, plus our non-verbal symbols, is caught in the mesh of early structuralizations of this kind, so that the inner meaning of our symbols is never revealed except through the technique of free fantasy.”†

It is worth noting the importance of the developmental stages of personality, these are as follows:

- Infancy
- Childhood
- Juvenility
- Adolescence
- Young Adulthood
- Mid-Adulthood
- Old-Adulthood

If we accept the principle that leadership in the personality system is connected to the impulse—directed at the acquisition and exercise of power as in Lasswell’s “*homo politicus*,” we might also consider that leadership may be directed and sustained by impulses and emotional intelligence in other directions in the social process. Here, it could be business leadership, academic and intellectual leadership, scientific leadership and indeed, leadership in terms of functional roles implicating all the values in society.

The political leader acquires perspectives, emphasizes the demand for power, expects power to exert a decisive influence on value outcomes, justifies power in terms of common values, acquires skills sufficient for at least a minimum degree of effective political participation.

To pin leadership capacity on the element of deprivation in the shaping of the personality system in early years means that without a deeper appreciation of the psychobiography of

† This quote is abstracted from Lasswell and McDougal’s unpublished manuscript dealing with law, science, and policy

a leader or potential leader it cannot be assumed that there will be a predicted good or bad leader. This is a challenge.

The salience of resolving the period implicating the Oedipal complex is when the relationship of the child to family authority undergoes relatively rapid and decisive crystallization. It is a time when the physical and personality development of the child has prepared him to expand his activity. He is on the verge of moving outside the immediate ken of his nurse-protector, thereby enlarging the scope of his mobility and independence. At this point a conflict breaks out between the tendency to stay in the older and safer grooves of conduct, and to launch out beyond them. The conflict betrays itself in many ways, notable shrinking from new opportunities, and remaining closely attached to key figures in the primary circle. In this period the Oedipal conflict must be resolved, or distortions of growth occur.

When this conflict is successfully resolved by the child a new set of goals is adopted in place of the demands for immediate body contact and for continual protection and supervision; and also in place of the destructive demand to annihilate the rival. The new goals implicate a wider context of human beings, and in general many more objects in time and space.

Specifically, they include the copying of adult patterns of conduct and the sharing with playmates often sub-culture of children that stays in touch with though remaining distinct from the world of adults. Directing energy toward progressive goals of this kind, the child is able to hold his destructive tendencies in check and to forestall acute internal crises of anxiety in which guilt and fear predominate. The Oedipal phase has successfully surmounted the personality that has achieved a major consolidation, and is able to acquire the culture of his community at an accelerated rate.

The salience of this phase of development for the power leader personality is the light it exhibits for understanding the totalitarian personality and the features of prejudice and discrimination that drives it. Moreover, the first cousin of the totalitarian personality is the prejudice-prone authoritarian personality. The totalitarian personality reproduces a dangerous leader. The authoritarian personality, similarly, inflicts on society a dangerous form of leadership.[‡]

Returning to *homopoliticus*, we undoubtedly see that what emerges from the construction of personality in leadership terms represents a formidable challenge of understanding. Lasswell's summary of the developmental theory of political man is as follows:

Political man is an expansion of the conception of the political man in terms of private motives displaced upon public objects and rationalized in terms of a common good.

We now speak of power demands in the primary circle as being directed to secondary circles and justified in terms for "displacement" and "rationalization" and we use "defense" of the self against low self-appraisals. It is clearer that the "public objects" are the institutional patterns of power in a given social process.

Since Lasswell wrote, we have a deeper understanding of the wide range of personality types whose behavior may be conditioned by the level of deprivation experienced in early years. We can isolate approximately seven distinct personality types:

[‡] These materials are abstracted from the unpublished manuscript of Lasswell and McDougal on law, science, and policy.

- I – the narcissist
- II – the obsessive compulsive
- III – the Machiavellian
- IV – the authoritarian
- V – the paranoid
- VI – the totalitarian
- VII – the democratic

“Good leadership has the intellectual capacity to identify what a problem is and why that problem may be a problem of importance to the social process and the public order.”

Many of these categories represent some forms of psychopathic disorder. Narcissism, for example, is a psychopathic disorder but they frequently straddle the line between egregious behavior and behavior that can be tempered. However, political psychology has identified all of these categories as reflected in modern political leadership.

The critical question is the extent to which such leaders may, under appropriate environmental circumstances, displace their private pathologies on public objects so that those public objects become a realistic part of the personality system. Indeed this may be achieved if these public objects can secure a compelling rationalization, a justification as representing the public interest. In short, leadership requires emotional impulse and intelligence, requires a judicious displacement if possible on defensible public objects and can be secured by a rationalization consistent with a public interest.

Some theorists recognize the importance of emotion in leadership and stress the salience of emotional intelligence. This includes self-awareness, self-regulation, motivation, empathy, and social skill. Other theorists consider that there is a distinction between behavioral leadership and positional leadership. Here, the example is given of Nelson Mandela, who falls into the behavioral leadership category. Mandela’s emotional intelligence lay in his capacity to express collaborative verses totalitarian behavior and a capacity to never give up against seemingly impossible odds.

In today’s leadership industry, many promoters of leadership maintain a pocketbook of precepts that are the recipes for good leadership. Success in leadership requires that the leader creates and maintains a vision, creates goals for the realization of the vision and provides for strategic and tactical direction to achieve the vision.

Good leadership requires followers to be influenced and good leadership will be receptive to the influence of followers. The leader must think practically about the specific tasks, which need to be implemented to secure a vision. These tasks must be utilized to their full capacity for as long as possible until the vision is secured.

4. Problem Solving, Leadership Roles and Intellectual Skills

4.1. Problem Identification

What we expect of good leadership is that good leadership has the intellectual capacity to identify what a problem is and why that problem may be a problem of importance to the social process and the public order. In order to identify a problem of importance to social process the leader has to recognize that the problem itself is an outcome of human interaction. This would still require a fairly disciplined method for identifying and contextually locating the problems that represent a challenge to leadership responsibility. This means that we must have some shorthand manageable method for mapping the context out of which the problems emerge.

The contribution of WAAS Fellows to this task was the development of what they called a “phase analysis” at any level of abstraction and inclusivity. The phase analysis represents the markers of social interaction among human beings, implicating values and value problems. The markers essentially would represent from this perspective particularized contextually located problems. For example, the first marker would be the **identification of participators** and it would be important to know who the participators are and what the problems are of participation. The second marker would include the **perspectives of the participators** and we would like to know what the problems are of the perspectives of identity, demands for values, and the demands relating to expectations. The third marker would identify the **basis for power** and or authority available to the participators and therefore, includes a concern for the problems relating to the basis for power. Social interaction is located in situations of space and time these situations therefore could be special, temporal, institutional, or pervaded by the conditions of crises. We therefore need to know the **problems related to situations**, which is the fourth marker. The fifth marker would relate to the **strategies** and the problem generations by the utilization of diverse strategies. Strategies can be persuasive or coercive; they could include strategies of economic coercion or persuasion, strategies of diplomacy and communication, strategies in the deployment of propaganda and influence peddling as well as strategies of major and minor coercion. The sixth marker would relate to the problems relating to the **outcomes** of value shaping and sharing. The seventh marker would look at the longer-term **effects on the social process** generated by these outcomes and their problems.

One of the most important leadership qualities which can be facilitated by this methodology is the critical function of predicting problems before they happen for the leader. This is an underappreciated leadership skill of the mind, but we would submit it as a critically important skill.

4.2. Problem Solving

The decision-maker as leader would have an advantage if he were able to master some of the identifiable intellectual tools that guide the process of problem solving (these skills may be employed additionally by the leader’s advisors).

The first of these tasks is the task of goal or **value clarification**. The problems that emerge from the various aspects of social process invariably implicate claims for values or claims for the denial of these values. This requires the leader to have a clear picture of what values are at stake in the context of problems that he seeks to regulate.

Trends in decision relevant to the problem before the leader. A leader would be advised to understand what the relevant trend in leadership decision making was, with regard to the particular problem in the particular context. In short, the leader has to represent a perspective that accounts for history.

“Lasswell saw the importance of both the unconscious and the element of creativity reposing in the thinking process of the mind that function apart from logic, namely free-fantasy.”

The leader would have to look at the trend in decision in terms of the **conditions/cause and consequences**, which inspired the trend in the first place. This concern for cause and consequences would require the leader to engage in at least a rudimentary form of scientific inquiry. The leader decision-maker will then have to consider what the implications are of an expected decision making intervention, under the present framework and trends of conditions. Here, the leader would be advised to cultivate a sense of the capacity to **predict or forecast**. In short, the leader may indulge in a forecast conditioned or formulated as a developmental construct. In short, what is the worst-case scenario that might emerge from a given set of trends and conditions? Second, what is the best-case scenario that can emerge from that situation?

With the guidance of a developmental construct indicating the best and worst case scenario, the leader decision maker may well have to consult within himself the idea of a creative or alternative mode of thinking that provides him with a creative solution, which approximates the best case and avoids the worst. Here the mind may well be guided by the creative and possibly constructive possibilities that may emerge from the disciplined use of free fantasy.

As earlier indicated, Lasswell saw the importance of both the unconscious and the element of creativity reposing in the thinking process of the mind that function apart from logic, namely free-fantasy. A capacity to develop the free-fantasy aspect of thinking, Lasswell believed, would open up the consciousness to constructive and creative possibilities reposing in the mind’s framework of free-fantasy and the psychic resources to which it can have access.

4.3. The Thinking Skills of Decision Making

The skills of decision-making will be enhanced if the thinking skills that constitute the architecture of decision making are both understood and utilized. WAAS Fellows Lasswell and McDougal identified seven thinking skills that are implicated in decision making. These thinking skills in effect constitute the architecture of decision-making. The leader would be advised to understand the leadership role in decision-making and that requires some knowledge of the workings and interrelationships of the key identifiable functions relating to the architecture of decision-making. It is possible that leaders intuitively incorporate these ideas into the structure of decision-making but if they were more consciously understood,

the possibility of improved decision-making could be enhanced. The following are the seven identifiable functions:

- I – Intelligence
- II – Promotion
- III – Prescription
- IV – Invocation
- V – Application
- VI – Termination
- VII – Appraisal

It may well be argued that the deeper the understanding of these decision functions, the more effective would be the discharge of decision making roles in the good leader. In conclusion, the tools that the leadership in WAAS has provided are a useful toolkit of thinking skills that would benefit the mind of a good leader in the discharge of leadership responsibilities.

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The Future of Higher Education: The Role of Basic Values

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Abstract

In this paper the author identifies the importance of the development of thinking skills in the exposure to higher education. It underscores the intellectual procedures necessary for identification and the solving of problems across disciplinary lines. The paper also explores the problem of the is and the ought in the processes of higher education. It underscores the central issue of shared enlightenment as a major purpose of higher education. It specifically focuses on the role of the individual and the culture of human rights in the context of higher education values. The paper provides a summary of the most important contemporary conceptions of human rights and justice. The paper then outlines the values encased in the International Bill of Rights and its importance for the future of higher education. The paper provides a clarification of the most basic values implicated in the contemporary higher education process.

Education, and particularly higher education, imparts to the participants in education fundamental thinking skills that with extended immersion in educational processes are fundamentally concerned with human thinking and how to improve the human capacity for thinking in terms that are socially and personally constructive. Thinking skills are intimately integrated into the human subjectivity of human perspective. Human perspective in turn, is intimately connected with purpose of human activity. Purpose of human activity is overwhelmingly implicated in the pursuit of human values. The educational process that seeks to improve the methods of human thinking are therefore inextricably bound up with the training of human perspective and human perspective is intricately bound up with the pursuit of human values.

The fundamental idea behind all educational processes is still the challenge of education to understand how human beings think, and how to improve on the process of thinking. The thinking process that evolves as a component of human subjectivity is significantly directed at the need of the individual self-system to identify, understand, and, ultimately, solve problems. The importance of problem solving in the context of the future of higher education is complex since the knowledge-generated fields are organized in terms of discreet disciplinary methods and procedures. Problem solving must therefore find the method

and the means of exploring, comparing, contrasting and integrating a universe of multiple disciplines all of which are relevant to the evolving human subjectivities of the participators in higher education.

“Creativity seeks to advance knowledge and understanding across disciplinary lines and fearlessly embracing new paradigms of knowledge creation and the social responsibility for innovation.”

Dewey in his famous book, *How We Think*,¹ sets out the challenge that all human beings from infancy through life have to develop the thinking skills necessary to successfully identify the problems they encounter, and to develop increasingly sophisticated intellectual procedures to solve the problems that have been identified. Problem solving involves a critical faculty in the self-system of the human being. This faculty is the faculty of making choices about the implications of values and problems of importance to the individual and society. In effect, this means that choice itself is a matter of the individual exercising the challenge of informed decision making, hopefully in the interest of the individual and the common interest of the community.

Dewey and later Lasswell sought to clarify the precise intellectual procedures that an individual may acquire and refine in order to be a successful participator in solving personal and social problems.

1. Intellectual Procedures for Problem Identification, Problem Solving and Decision Making

These intellectual procedures and skills are each distinctive and, at a sophisticated level, involve methods and procedures of increasing skills and sophistication. These thinking skills require immersion in knowledge—generating disciplines as well as integration of that knowledge in terms of problems and solutions in the form of decision making that challenge the intellect in terms of decisions that are good for the individual, good for society and for those that reproduce the opposite result.

The intellectual tools identified by Dewey, Lasswell and their associates are as follows:

2. Five Intellectual Skills Critical to the Future of Higher Education²

The Relevance of Values and Goals³

– The clarification of values and goals (the relevance and challenge of values)

The Description and Relevance of Trend⁴

– The description of trend (historical description and analysis)

The Relevance and Examination of Scientific Conditions⁵

– The analysis of conditioning factors (the focus on the causes and consequences shaping existential phenomena)

The Relevance and Saliency of Projection of Future Developments⁶

– The projection of future developments (the relevance of predictive forecasting)

The Relevance and Consideration of Alternative Basic Policies in the Production and Distribution of Values (Creative Thinking)⁷

– The invention, evaluation and choice of value priorities and alternatives

It will be apparent that problem identification and problem solving are crucial features for the future of higher education. Creativity is a major challenge to conventional higher education with its focus on disciplinary autonomy. Creativity seeks to advance knowledge and understanding across disciplinary lines and fearlessly embracing new paradigms of knowledge creation and the social responsibility for innovation.

The fundamental question that we now pose is: What is higher education for?

The answer is that higher education is for the defense and promotion of the basic values that are crucial for the wellbeing of the individual and all members of society. A major emphasis of higher education is the reproduction of shared enlightenment on the most inclusive scale that is institutionally possible. Enlightenment of course means the generation of new knowledge as well as the responsibility of how new knowledge is transmitted under conditions that sustain high ethical and moral standards of responsibility. As Einstein once suggested, new knowledge should be a blessing and not a curse to humankind. New knowledge also implicates the fundamental values inherent in the autonomy of the university as well as the saliency of academic and intellectual freedom. This of course does not tell us precisely what the values are, how they are to be ascertained and clarified and how we are to secure and advance rational choices directly concerned with problem solving that improve the individual and aggregate value positions.

One of the important insights about values and human beings is that all human beings participate in the social process and are asserters of value demands which they need to survive to improve their life situation and to contribute in general to aggregate social wellbeing. Thus, human beings are not in a position of trying to find their values, they already have them. But their understanding of how these values are given content and operational saliency is more complex.

“The very act of posing the question in general terms about the importance of values is an indicator that the person posing the question comes with ideological beliefs that may characterize the particular social context.”

Struggling with this problem may explain why dramatic shifts in value orientation are rather unusual. A change in value orientation may be the result of being exposed to a wide range of conflicting social configurations. Such configurations may generate deep internal conflict in the personality. One such example is Gautama Buddha’s transformation from a conspicuous and wealthy prince to having a career of deep contemplation and teaching. In general, students in higher education may also be confronted with new configurations, which reshape their value orientations. Rapid advances in knowledge and technological generation intensify the challenge of sustaining a value orientation or changing it among the participants in higher education.

Higher education will challenge personal beliefs and generate value conflicts and intensify searches for both value content and value procedure.

3. The problem of the “is” and the “ought”

The fundamental problem concerning the content and the clarification of values is the determination of why a value should be preferred and given high deference over other values. In effect, this is a search for understanding the truth of a value proposition. Technically speaking, the method used by philosophers is that a value is entitled to its currency as a value when it is justified by reasons external to the statement maker. Even with this it is difficult if not impossible to adequately justify statements of higher general preference like the deference to be given to the principle of human dignity. In this sense the justification of values by transcendent religious experience can sometimes be a strut to support the human dignity principle. But, justification by divine rule, or some other transempirical source does not provide an objective validation of the principle. In this context, a statement maker proposing value and relying on divine revelation has a burden of objectively proving the divine source of the value.

To overcome the problem posed by the “is” versus the “ought”, WAAS theorists provided a clarification not only of thinking in terms of the “is” and the “ought” but also other forms of thinking such as trend thinking, futuristic thinking and creative thinking. Since five different modes of thinking are required to understand and solve value problems, the problem solver has to integrate the five intellectual tasks generated for problem solving. With the guidance of these procedures, the gap between the “is” and the “ought” is avoided by the relevance of human choice and decision-making. In short, the “is” and the “ought” and other methods of problem solving are crucial to the enhancement of rational choices in the interest of the individual self-system and the common interest of the community as a whole.

This has left theorists to postulate the principle of human dignity as the overriding goal value that should direct the future of higher education. The challenge to this approach is that postulation may be used in an arbitrary sense as well. However, pragmatic theorists have argued that since human dignity is a relatively self-evident postulation, it can serve as a guide to the teaching and the generation of knowledge in higher education circles. By making the postulate explicit, the postulate may be subject to criticisms as part of rational debate. In the absence of compelling critiques, the human dignity value should continue to guide and direct the future of higher education in terms of shared enlightenment, teaching, research and responsibility. If we assume that shared enlightenment is an aspect of the human dignity general principle, we are still challenged to delineate what it specifically means as a contextual reality in the context of higher education.

4. Shared Enlightenment and the Future of Higher Education

Since shared enlightenment is a component of the social process, it will be very important to know the specific context of conditions and factors within which the problems and the potentialities of shared enlightenment occur. To contextualize this process requires an identification of the critical dimensions of contextual reality in the context of higher education. What follows is a brief summary:

- Contextual reality related to shared enlightenment must identify the participators and are challenged to determine the level of inclusivity of **participation**.

Perspectives of Subjectivity

- Shared enlightenment will affect the process of thinking of the participators in higher education. It will specifically affect the processes implicated in the processes of identity. Identity may indeed be broadened and become more inclusive. It will also impact upon the perspective of value demand of the student, and in a sense, sharpen and accentuate claims for value in society. Finally, shared enlightenment will have an effect on perspectives of expectation and change of those who participate in higher education. Shared enlightenment may have profound effects on human subjectivity of participators in the future of higher education.
- Participation happens in **situations** and these situations may be brick and mortar or virtual. Situations may be vital to a realistic understanding of realizing the goal of inclusive participation.
- Enlightenment may serve as a **basis of power** to increase the shared level of enlightenment. Enlightenment in scientific research and other technological developments may significantly increase the influence of the institutions of enlightenment. Indeed, specialized knowledge, access to grants, review of new knowledge are all laced with issues of enlightenment as a base of power.
- The fundamental issue of **strategies** is that enlightenment favors strategies that promote the growth and dissemination of knowledge.
- The **outcomes** of shared enlightenment in general favor the accumulation, storage and retrieval of valid information. The enlightenment preference favors inquiry into fundamental knowledge of man and nature and a complete exploration of the creative potentials of the human person.

5. Specification of Values

- I. This facilitates a clarification of the general context of deferred value.
- II. The next task is the specification of the values implicated in the human dignity principle. From a scientific point of view, specification of values involves a synthesis of definitional or syntactic specification as well as an exercise in semantic specification.

In this paper we do not stress semantics and syntactics in the specification of values because there is a long tradition of this as a conventional approach to the problem in both religion and philosophy. Syntactics and semantics implicate a method or exposition that has been described as derivation. To a large extent, derivation has a starting point in the existence of a god or some other transempirical source. The traditions include Confucianism, Buddhism, Catholicism, Calvinism, German Idealism and Dialectical Materialism.

6. The Rise of the Individual, Human Rights & Higher Education Values

The role of the individual as a transformative agent in society and the demand by individuals are essential to the development of human rights. It is suggested that human

rights emerge out of struggle in social process at all levels. That struggle is the struggle for the recognition of basic rights and essential dignity. Additionally, an essential linkage is made between rights and opportunities, and insists that values require processes to secure the satisfaction of human wants and needs.

“At the root of the multiple crises confronting humanity today is a crisis of values that must be resolved before there can be any hope of lasting solutions to the problems facing humanity.”

The founding of the World Academy of Art & Science was inspired by a conviction that knowledge and technology alone are an insufficient basis for human development, unless guided by and subordinated to the pursuit of universal values inclusive of all humanity. The founders were cognizant of the challenges of complexity and interdependence consequent on the increasing flow of goods, services and people resulting from rapid globalization. They recognized that rapid social evolution was undermining traditional notions of sovereignty, giving rise to new conceptions of global responsibility and human rights. Concerned about the social consequences and policy implications of these radical changes, they searched for new principles of global governance based on the common interests and rights of all humanity.

The current crises confronting humanity today reinforce the importance of global values as the essential basis for global social progress. Unregulated markets that serve the few at the expense of the many, undemocratic institutions of global governance, rising levels of inequality, unsustainable exploitation and destruction of our natural resource base, rising alienation of human capital from productive employment and rising levels of social instability are signs of a social fabric increasingly divorced from and insensitive to the welfare and well-being of large sections of humanity. At the root of the multiple crises confronting humanity today is a crisis of values that must be resolved before there can be any hope of lasting solutions to the problems facing humanity.

Concurrently, we are compelled to recognize the enormous progress humanity has made over the past few centuries in enhancing the values by which we live—the unprecedented freedom consequent of the expansion of democratic forms of governance, the unprecedented security resulting from rising levels of economic development, the greater recognition and enforcement of human rights, the gradual emergence of principles of a global rule of law and justice governing relations between nations and global society, which until recently dominated almost exclusively by power of politics and military power. Each of these changes is partial and certainly incomplete, but the direction is evident and the will for progress is still growing. Thus, we must reconcile our growing sense of dissatisfaction with the absence of values with a perception of their increasing importance. Jasjit Singh attributed this paradox to the fact that aspirations and expectations are rising faster than ground level social realities.⁸ The concern for global values, their meaning, and salience have also been a concern for the Club of Rome (CoR). The Club’s own interests in rational global economic policy and

practice in the common interest represents a challenge to better understand what the common interest actually is and what it implicates. Both WAAS and CoR have felt a compelling need for a deeper and wider trans-disciplinary inquiry into fundamental questions relating to the values in the global system. Such an inquiry is essential for understanding the present state of the world order to which we have arrived as well as for charting a better collective future for humanity based on universal values for sustaining a world order in the common interest. Over the past two years, the World Academy and the Club of Rome have been exploring the root causes of the crises facing humanity relating to the international financial crisis, unemployment, growing inequality, ecological destruction, global governance, international security and social stability. It soon became evident that the problems we face are rooted in the ideas and values that underpin the current global system and the effective lasting solutions to these problems will require fundamental changes in the normative foundations of global society in the 21st century. In order to validate this premise, the Club of Rome convened an eclectic group of 18 individuals from diverse cultural, intellectual and moral frameworks to participate in a two-day workshop in Bristol, UK. The meeting was conducted in association with the Alliance of Religions and Conservation (ARC) to reflect on the impact of myth, narrative, and values on social evolution and to provide insights into the values needed by the global community to support constructive development of all humanity in an increasingly cross-cultural, value pluralistic world. The group included four Fellows of the Academy, including the lead author. Following two days of very stimulating creative discussion, participants were requested to submit answers to the following questions summarizing their insights into the role of values and narrative in the past, present and future development of global society.

1. What are the key stories that have brought us to where we are culturally today and, which have been creative and which problematic?
2. What do you see as being the key values that could shape the future and where would they come from?
3. Which value, e.g. Liberty; equality; compassion—is the crucial one for you? Could you do a brief piece on both why and also on how it has changed its meaning in the last couple of hundred years?
4. Going back to your roots, what were the key stories and values that shaped you? How have these changed and how have they, and do they, shape the present?

These questions produced a number of wide-ranging responses reflecting the professional and cultural diversification of the group. Since the World Academy currently has a major emphasis on Individuality, our initial contribution provided a perspective of the Academy, which focused on the evolution of individuality and its implications for values fundamental to the global social process. We summarize the central points from the responses that was submitted by Jacobs and Nagan stressing the evolution of a narrative of individuality from a global perspective. In this regard, they suggested that the present is on a trajectory launched far in the past and moving well into the future. To know where we are going, we must first understand where we have come from and how we have arrived at the present. Viewing the past few centuries in the light of four value-based narratives offers important insights regarding humanity's recent achievements, current problems and future challenges.

7. The Individual and Contemporary Conceptions of Human Rights and Human Justice

“The individual, in taking responsibility for a successful life, is essentially a transformative agent in the social process..”

The role of the individual in the theory of human rights and justice is reflected in the recent work of Ronald Dworkin.⁹ Dworkin starts with the relationship of ethics and morality to individual action and responsibility. The ethical question for the individual is “what does it take for a life to go well?” This ethical principle is a focus on the nature of self-respect. Self-respect requires that the individual takes his own life seriously and appreciates that it is ethically important to make one’s life a successful experience rather than a wasted opportunity. This principle therefore reinforces the individual responsibility for self-respect and authenticity. The individual must be self-aware of the ethical responsibility to identify what counts in life as a success. The moral principle, which is derived from this, and which has global implications, is, if my ethical principle of self-respect is important to a life that it is not a wasted opportunity, then that is a principle that I can support with regard to all non-self others on the planet; in short, a principle of morality and justice for all of humanity. Both of these theories of justice root the essential dynamism of it in the individual as a starting point. There is a recognition, therefore, that the individual, in taking responsibility for a successful life, is essentially a transformative agent in the social process. For Sen, individuals have capabilities which they should recognize and the need for the demand for opportunity to fulfill those capabilities. Dworkin frames the issue slightly differently but in a way that is not incompatible with Sen. According to Dworkin, “we need a statement of what we should take our personal goals to be that fits with and justifies our sense of what obligations and duties and responsibilities we have to others...” Dworkin also requires capability and process freedoms, if life is not to be a ‘wasted opportunity.’ There is a genius in joining opportunity and capability with a responsibility to take one’s life seriously as an aspect of both personal and community morality. The idea that each individual has a right to a life of self-respect and authenticity—which must be given operational effect by capability and opportunity freedoms—moves from that of an ethical commitment to that of a moral principle, in the sense that self-respect, authenticity, capability and opportunity freedoms are encapsulated in the universal principle of human dignity. Dynamism is rooted in the responsibility and obligation of the person to respect oneself. Such respect is sustained by the idea that the self is truthful to the self and, therefore, expresses to the self its self-validating authenticity. This means that the subjects of the idea of justice are meant to be active participants in the shaping and sharing of justice, and, moreover, to be active participants in the transformational dynamics of the principle of justice.¹⁰ These views about the essential relationship between human rights values and the idea of justice effectually require the individual human being to be a subject of justice and a stakeholder in the promotion of the idea of justice implied in the fundamental human rights values. These insights are important matters for any discussion of the future of higher education and the values that it ought to promote and defend.

8. The International Bill of Rights: Global Values and Higher Education

1. Broad agreement exists about production and distribution of the core values in the UDHR and these values implicate both individuals and aggregates.
2. The values in the human rights framework cover both the so-called “negative” rights that purport to limit the abuse of power and the “affirmative” rights that implicate more directly the guidelines of responsible social change. Expectations in this latter category are styled “aspirational” rights.
3. While the word “universal” in the UDHR cannot be taken too literally, the nature of the rights in the Declaration has a more generalized character, a kind of “practical” universality.
4. The operative sphere of human rights is the socio-political conditions of interdependence and inter-determination. This means that rights are frequently “absolute,” when they are contextually prescribed and applied. A cruder version of this point is the simple dictum that A’s right or entitlement ends where B’s like right or entitlement begins.
5. Human rights frequently give empirical specification to basic or fundamental interests. The approach to value clarification that we have outlined above may be usefully compared to the UDHR. The UDHR has been said to encapsulate three distinct generations of human rights: “first generation” civil and political rights; “second generation” economic, cultural, and social rights; and “third generation” solidarity rights. This common approach is stated in general terms. Since the rights are interdependent, this is not an approach which we value; nevertheless, the approach is conventional wisdom. First generation rights are represented in Articles 2-21; second generation rights are represented in Articles 22-27; and the third generation of solidarity rights are said to be represented in Article 28.

The second generation rights are the ones most controversial to constitution-makers, and the solidarity rights, with their transnational internationalist implications, may also be seen as far afield from conventional frames of constitutional law discourse. The rights expressed in Article 28, viz that “everyone is entitled to a social and international order in which the rights set forth in this Declaration can be fully realized” have been developed in various international law influencing fora to refer to a more equitable distribution of global resources, the right of all nations to political, economic, social, and cultural self-determination, and “the right to economic and social development.” Additionally, the right to a viable eco-system, the right to peace, and the right to humanitarian aid during emergencies also are reflected in Article 28’s mandate. This bare outline of the fundamental values attending the contemporary conception of human rights obscures a great deal of complexity, historical understanding, the pervasive and critical importance of normative insight in human experience, as well as the impact of science and change upon the human prospect. In short, human rights may have been influenced by trans-empirical or spiritual values, but their modern genesis is rooted in human experience. The human rights codes are actually given life and dynamism by the human element. We may describe this element as the element of dynamic humanism. The human element in dynamic humanism is the element of individual and associational choice. In short, human rights, as an aspect of dynamic humanism, are given momentum and relevance by

the processes of human decision making. To illustrate this point with a specific example we may refer to the Polish Lawyer, Rafael Lemkin. Lemkin had an intelligence predicate for the scope of the Nazi atrocities and proceeded to dedicate himself to the creation of a universal crime of genocide. The term 'genocide' is a neologism which he coined. However, the process of getting an international agreement on the idea of a universal crime for a major human rights violation encountered considerable resistance. It is possible that the leaders of sovereign states understood that the defendants in such a situation would be the state decision makers themselves. In any event, Lemkin's tenacity in pursuing the creation of the international crime of genocide is an inspiring example of the success of individual activism in the success generated by the adoption of the Convention that outlaws genocide. Indeed, I do not believe that we would have had the universal, international crime of genocide without the humanistic advocacy of Lemkin. Additionally, the seeds that would ultimately emerge from this initiative may well be the inspiration for the creation of the International Criminal Court. Today, we have countless illustrations of organizations which mobilized ordinary citizens' concern, activism and the corresponding influences on decision making with regard to human rights issues in all parts of the planet. For example, recent studies have shown that the global anti-apartheid movement was largely inspired by ordinary people's activism which in turn forced their governments to take stronger action against the apartheid state and which was a significant factor in the transformation of that country into a new political order. Similarly, tremendous indecision in the international community regarding the scale of atrocities of the conflict in South East Europe also generated citizen advocacy to reshape the dynamics of international intervention in that region. More than that, it was again citizen advocacy that led to the creation of the ad hoc tribunals for former Yugoslavia and Rwanda. Today, civil society, human rights organizations operate with global reach and are one of the most important sources of human rights intelligence. These organizations, directly or indirectly, train citizen investigators, citizen reporters, citizen advocates and citizens as human rights transformational agents. Moreover, such organizations have been skilled in utilizing modern technologies to strengthen global human rights mobilization. For example, Amnesty International has a sophisticated urgent action network, which permits it to have instant communication with thousands of members who focus on urgent human rights actions. This can be expeditiously done because of the speed with which a crisis can be communicated worldwide and generate an equally expeditious response.

9. Human Rights: The Social & Psychological Sciences & the Specification of Basic Values of Importance to the Future of Higher Education

Values today generate a discourse that is at times intellectually confusing, and critics might even suggest that they generate incoherence. It is therefore important to get to the basics of what we mean by social process, the role of values and social process and the challenge to social process of creating a constructive public order significantly influenced by the process of shared enlightenment generated from the processes of higher education.

Early in the last century the great anthropologist Bronisław Malinowski conducted observer participant studies in islands in the Pacific. Among his publications was a famous book *Crime and Custom in a Savage Society*. What Malinowski identified in terms of operational rules and customs in the community was the linkage of these rules and customs to the existential needs of community member participants. Later, the British anthropologist,

Radcliffe Brown connected the notion of community needs to community institutions, that with whatever efficacy were specialized to realizing these needs. After the war, Lasswell and his associates began to re-conceptualize the notion of needs in terms of values that human beings sought in their social interaction in community with other human beings. Thus, they merged the idea that social process comprises human beings in pursuit of desired values in the community for the satisfaction of human needs and human aspirations. The critical task of the social scientists was the identification of values, the identification of institutions and to determine how well or poorly values were secured and distributed in the community. With the publication and adoption of the Universal Declaration of Human Rights, value analysis became much more explicit and identifiable as correspondingly with institutions specialized to the securing, realizing and distribution of the basic values in any social process. The breakthrough for social theory emerged with an elegant description of social process, almost the equivalent of Einstein's $E=MC^2$. Social process is a process of social interaction between human beings and community. This process of interaction involves human beings seeking to secure basic values, through institutions based on resources. The human personality is thus a demander of values, and an activist in pursuit of values. This places the human being and human subjectivities and perspectives at the center of the social process, be it local or global. To complement these insights the psychologist Maslow created a hierarchy of human needs:

1. Physiological – hunger, thirst, bodily comforts, warmth
2. Safety/Security – out of danger, order, law, stability
3. Belongingness and love – affiliate with others, be accepted
4. Esteem – to achieve, be competent, gain approval and recognition
5. Self-Actualization – realizing personal potential, self-fulfillment, seeking personal growth and peak experiences

10. Values and Social Process

The central importance of values to policy-making is highlighted by a perspective which recognizes values as an essential element in an integrated social process, as described by Lasswell and McDougal. To give values a foundation of social realism, we may describe the Global Social Process as comprising the following:

$$\text{Social Process} = \text{People} + \text{Values} + \text{Institutions} + \text{Resources}$$

Lasswell postulated eight fundamental values driving the social process:

1. Power – The making of decisions enforceable by severe deprivations or high indulgences; making and influencing community decisions.
2. Enlightenment – gathering, processing and disseminating information and knowledge.
3. Respect – Freedom of choice, equality and recognition.
4. Well-Being – Safety, health and comfort.
5. Wealth – Production, distribution and consumption of goods and services; control of resources.
6. Skill – Acquisition and exercise of capabilities in vocations, professions, and the arts.

7. Affection – Intimacy, friendship, loyalty, positive sentiments.
8. Rectitude – Participation in forming and applying norms of responsible conduct.

The above approach may have some value for this discourse because it comes in a form directly related to the policy-making arenas of concern to the World Academy of Art and Science and the Club of Rome. The approach outlined above provides us with eight value categories and provides us with a marker, which targets the institutions that control and regulate the production and distribution of these values. It has an added element, namely, that rather than isolating economics from society and social realism, it shows that economics can influence every other value, and every other value may have an influence on economics. That is an important insight for the CoR. Second, the values identified here are the values that had emerged from the secular give and take of global politics. These values have extraordinary traction, although in the area of economics this has not been widely recognized in recent decades due to the strenuous but failed attempt of neoliberal economics to mimic the objectivity of natural sciences. According to this perspective, human beings do not invent values; we simply present the formula or the relevant myth and the accompanying narrative relevant to our time. The importance of the categories of values is their clear connection to identifiable institutions whose efficacy may well be questionable at this time. This approach provides a pointer to focus on critical inquiry into institutions crucial to human progress, and with a possibility of recommending reform or improvement.

We now extrapolate on the value scheme implicated in human rights and of vital importance to higher education. In this we should recognize that shared educational and enlightenment values, which are at the heart of higher education are one of the most important bases of power for bringing science, reason, wisdom and deep understanding to the political culture of any community. The following is the current value scheme:

1. **The value of life:** This is a centrally valued human subjectivity. It is referred to not in the “pro-life” sense (that a pregnant woman must bear a child), but in the Bill of Rights sense (that a person has right to personhood and autonomy). The value of life, therefore, includes the respect and deference given to the individual in the global community.
2. The status of the value of **power and security:** Should it be narrowly or widely shared? Is the common interest of all honored in a system that seeks to secure the widest possible participation in all key areas of the power process? One of the central values identified in the Atlantic Charter was the freedom from fear. This concern for freedom has evolved so that today no one denies that there is a critical interdependence between the concept of peace as a human right and all the other values in the UDHR. Peace and security might well be included under the functional category of power. However, peace is recognized as a complex preemptory component of the human rights value system. It is of value to again recognize that there are complex ways in which all human rights values have an influence on peace and security, recognizing as well that peace and security at all levels are critical conditions for the effective mobilization of human rights values. A central aspect of the values of peace and security relates to the connection between the mobilizing force of strategy for the realization of human rights goals and the realization of these goals themselves. For example, is it appropriate to deploy violent strategies

of action to achieve human rights objectives? Is it appropriate to disengage the value discourse involving strategy and struggle on the one hand and idealistic value objectives on the other hand? Gandhi, for one, insisted that the morality of struggle was even more important than the morality of distant idealistic objectives. Indeed, he also insisted that a disconnect between struggle, strategy, and goals was morally indefensible.

3. The **status and value of economic and wealth processes**: Is the common interest of all better secured by optimizing the capacity to produce and distribute wealth or the opposite?
4. The status and value of **respect and equalitarian values**: Should invidious discrimination be fully prohibited (covering all areas of race, gender, alienage, etc.)? Can equality be meaningful if it is only a formal, juridical idea without regard to the legacy of exploitation, repression, and discrimination?
5. The status and value of **educational and enlightened values**: Should these values be widely produced and distributed or narrowly experienced?
6. The status and value of **skill and labor values**: The centrality of labor and skills values to the human condition indicates that these are central and fundamental values implicated in the rights and expectations of those who seek to create and sustain these rights and labor values. Should these rights and expectations be widely shaped or narrowly shared?
7. The status and value of **health and well-being values**: The delivery of reasonably formulated and accessible healthcare and social services to all is now widely regarded as crucial entitlements, if the most basic standards of decency in politics and society are valued. Today, unemployment aid, social security, medicare, and other social services are considered crucial to a society that cares for its people.
8. The status and value of the **family and other affective values**: Because the family is the basis of collective existence and is central to the human rights of children, the public policies of a society that destroys family (and other affective ties) pose a problem for the wide generation of affective values including the loyalty values of patriotic deference.
9. The status and **value of moral experience and rectitude**: A system that endorses the centrality of moral experience to the legal and political culture and seeks to maximize the spiritual freedom of all is yet another of the central themes of the human rights perspective.
How do we translate expectations of care or fundamental moral experience into the practical prescription of law and policy?
10. The status and **value of cultural and aesthetic experience**: The term ‘cultural’ includes the concept of the aesthetic. In fact, the word “cultural” could encompass all the value preferences that we might extract from the UDHR. There is, however, a narrower meaning that the term culture might carry. That meaning ties in with the notion of human rights as also emblematic of the diversity of human experience, experience that reflects the cultural richness of humanity as a global community. There is great controversy about the issue of culture and tradition, culture and creativity of the present, culture and the elaboration of the aesthetic, which may capture and nurture the cultural

narrative of creativity and beauty which may in fact be the critical psychological view of how the glue of social solidarity promotes creativity. The boundaries of this discourse are controversial. Sensitive matters of sexual regulation which may differ widely may be justified by culture and yet here the culture of tradition may not be compatible with the culture and creativity of the present or the future in human rights terms. For example, female genital mutilation justified by cultural tradition is not justified by either religion or by the science of human sexuality. Human rights thus provide a process by which these boundaries may be appropriately protected and expanded according to the normative challenges of human dignity. The current discourse often suggests that universality trumps cultural relativity or vice versa. This is not necessarily helpful unless one sees these ideas as only the starting point for value clarification and application from a human rights perspective.

11. The status and **value of the eco-system**: Today, we recognize a complex right to a viable eco-system on what theorists have seen as Spaceship Earth. The values embedded in the protection and promotion of a healthy eco-system, are, like many other values, issues of complex inter-dependence and inter-determination. However, implicit at least, in the concern for the integrity of the eco-system is clearly the notion that there are no human rights if there is no environment in which human beings can survive and possibly even improve the human prospect. But this insight suggests an even higher level of moral consciousness in the sense that the eco-system (with its plant life and animals, wild and domesticated) is part of a complex cycle, in which human beings are both custodians and also utterly dependent as individuals and as society. This means that we now see in nature not something irresponsibly exploited and destroyed but central to our identity as a sentient species. To take a simple example, for all the vaunted technology of human progress and human egotism, no one has seen a dog or a cat or a rat or indeed the most elemental of recognizable life forms outside of this lonely and unremarkable planet called Earth. Thus, as humanity, we now look at life even in its most humble forms as not only indispensable to the interconnected chain of life on this planet but we see in it something new and utterly connected to the very consciousness of being human and being alive. In short, we know that our dogs identify with us. We may now know those ordinary pets in terms of how they and all other living forms have shaped our identity both psychologically and physiologically.

11. Human Rights Values as a Dynamic Humanistic Challenge for Dignity in the Future of Higher Education

In setting out the issues and problems that limit the scope of contributions that academics can make to the human rights agenda, the core ingredients of a solution to the dilemma can be identified. The solution requires a theory for inquiry about human rights. The theory must have a decision-making focus to have practical relevance, since only effective decision making—formal or informal—will apply human rights perspectives and operations to particular situations and contribute to a human rights-conditioned future.

A theory about human rights, that is policy decision-focused, must self-consciously concern itself with the policy process itself by integrating actual human rights problems that require

policy responses; both the problems and the decisional responses to them must occur in a disciplined contextual setting and the decisional responses must employ processes that meaningfully clarify the policy basis of human rights prescriptions. Theoretical inquiry about this kind of emphasis must embrace cross-disciplinary tools of inquiry, or multiple methods, to give scientific credibility to the enterprise. This requires fidelity to at least four essential features of a theory about human rights inquiry from a humanistic policy perspective.

1. **Comprehensive Mapping:** Fundamental to an inquiry is the expression of a comprehensive map of value problems specified in terms of functional value categories and which permit continuing refinement and elaboration. A systematic expression of these problems will underline the difference between value deprivation and human rights realization. The lexical formulation of human rights as rights is frequently the tail end of a process that needs illumination.
2. **Relevance of Context:** Factual, theoretical, historical, and political contextual relevance must drive the theory. All human rights, in the sense of process, must be seen in relation to every relevant community context, from local to global.
3. **Relevance of Advocacy, Policy and Decision:** These are matters alien to academic culture. The focus on policy and decision requires the identification of past, present, and future decisional mechanisms at every level of community that may be relevant in clarifying, specifying, protecting, and enhancing human rights. We should of course keep in mind that policy and decision do not function in a vacuum. Frequently what triggers a policy response is a problem that emerges from the social process context. That problem will emerge in the form of a dynamic humanistic claim for a human rights value and an aspect of social process that will respond by resisting that claim. Therefore, the quality and sustainability of interest articulation and advocacy will be an important foundation for a response that is authoritative and controlling to the problem that is eventually presented for decision. These areas are crucial to the responsible exercise of higher education tasks.
4. **Relevance of Key Intellectual Tasks for Inquiry:** The relevance of the identification and use of appropriate intellectual tools is necessary to clarify the rational, theoretical and factual basis of the context of human rights, as well as the procedures for their realization in fact. The key discrete intellectual tasks are: goal and value clarification; the historic study of relevant trends; the scientific study of causes and consequences of human rights failures or successes; the concern for predicting possible future scenarios in terms of approximation to desired human rights goals; and the creation of alternatives to better approximate the desired human rights goals.

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Notes

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