

Ecohumanism as a Developmental Crossing

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Two radically different approaches dominate assessments of today's global situation. In a rather generally accepted view world society's development is and will be driven by the ongoing rapid economic growth of many heretofore backward societies, notably China and India. In addition, this growth will — as it is doing now — take place in a socio-Darwinistic global rivalry, in other words, according to a „growth at the cost of the environment (social and/or natural)¹” policy. And without proper knowledge about this policy's complex effects.

The expected goal of such essentially lethal globalization would be the elimination of the fundamental threats looming before contemporary humanity, like the depreciation of the natural environment and the exhaustion of rare, deficit natural resources.

The second approach — which can be shared is to see the world in global crisis (Pajestka 1989). Evident proof of this lies in

1 When I use the word "environment" it means social and/or natural environment.

the continuously progressing and ruthless depreciation of the life supporting natural environment and the increasing use of accessible natural resources at a faster pace than their alternatives can be found. Moreover, access to these valuable resources is fast becoming the object of ruthless battle (even if fought with modern-day means).

In the light of the research this crisis is the result of world society's ill adjustment to life in State of Change and Risk, in other words in a qualitatively new situation mainly created by the rapid development of science and technology. In order to overcome global crisis world society will have to achieve sustainable development, in other words, development without cyclically returning disasters and the shortsighted construction of new forms of social and economic life on the ruins of former life forms.

This will require human coexistence models that are qualitatively different from the present ones. The emergence of these new social models will be pre-condition the transformation of the rapid economic and civilizational growth of societies which until recently were behind in their development into a driving force of world society's sustainable development.

Systematic studies of the ways to overcome global crisis show that an in-depth diagnosis of global crisis and its causes is fundamental for developing new forms of interpersonal, international and intercultural life. Equally necessary is the pinpointing of the basic factors driving sustainable development, also in terms of ethic and information. Of prime importance in overcoming global crisis is the rejection of today's dominating selfishness and individualism in favour of ecohumanism.

Ecohumanism means partnership-based cooperation for the common good of all people (rich and poor, from countries highly developed and behind in development), their descendants, and natural environment - commonly supported by science and high technology.

Partnership-based cooperation along "development together with the environment (social and/or natural)" principles will require universal access to knowledge about the complex effects of human activity, including those, which take place over time and space.

The need to replace egoism with ecohumanism is a consequence of the rapid development of science and technology, which vastly changed life-conditions². The rapidly progressing changes in life-conditions brought an enormous thirst for knowledge and innovation. Simultaneously, the growth of science and technology — especially IT — made such axiological change possible.

Ecohumanism is a condition for building an information basis for sustainable development policy and economy. Such a basis will allow the formation of a qualitatively new economy guided by common good - common interest, in their broadest sense. Such an economy must be founded on a complex benefit-cost account embracing its social and environmental aspects, it should also show preference to eco-socially useful creativity.

Forms of life (life-forms): technology, axiology (dominant values), economics, diet, medicine, socio-economic infrastructure, etc.

The ecohumanistic reconstruction of the global economic system will also be necessary for the replacement of today's eco-socially highly costly globalization (Pernicious Globalization) by an ecohumanistic globalization (Inclusive Globalization, fair globalization) model³. Such a new, common- good-oriented form of globalization will be crucial for overcoming the global crisis and creating world society's sustainable development.

Thus, in reshaping the global economic system, ecohumanism will allow world society's strongest players to cease securing access to rare resources (fuel, natural, environmental, intellectual) through the physical elimination of rivals to these resources (O nowy styl rozwoju, 1979). In place of the social-Darwinistic deprivation of weaker societies of vital resources, access to them will be ensured by the partnership-based cooperation of an adequately educated world society aided by science and information technology.

2 Conditions of life : state of social-economic environment, including natural resources accessibility, natural environment quality, intellectual, science-technology and war potential.

3 UN call for fair globalization, that allow and productive employment and decent work for all. (United Nations, 2005a). See also (CIA, 2000, 2004, John Paul II 2001).

Building a sustainable development economy will also be crucial for eliminating the defensive terrorism practiced by societies endangered by the present pathological globalization model, and for global demographic control. Ecohumanism founded on knowledge about the complex effects of human activity is necessary for world society to master the developmental crossing of its limits to growth, which will precondition the fulfillment of the UN's vision of sustainable "three-pillar" world society's development⁴. Development - which combines social development with economic growth and environmental protection.

The implementation of the above method of leading world society to sustainable development appears necessary if today's huge economic growth in countries like China and India is to become a qualitatively new force behind humanity's progress.

To better show how crucial ecohumanism and access to knowledge about the complex effects of human activity are for overcoming global crisis, let me suggest a system analysis method which may be based on the System of Life reality model I authored as a developmental cybernetics project (Michnowski 1995, 2002, 2004, 2006).

In Sustainable Development and Limits to Growth Crossing, the outline of a sustainable development model in which sustainable development is an ongoing process of creating and developmental crossing limits to growth taking place simultaneously with the growth of population, science and technology has been presented.

In Global Crisis and the Dangers of its Pathological Elimination, the global crisis as the effect of humanity's ill adjustment to life are in State of Change and Risk, "overshoot" (Meadows 2004). Moreover, inability to developmentally cross limits to growth — especially to eliminate the negative effects of the moral depreciation (getting obsolete)⁵ of life-forms which,

4 Accordingly we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforced pillars of sustainable development, economic development, social development and environmental protection at local, national, regional and global levels. (UN 2002a).

5 Moral depreciation, degradation is synonym of obsolescence.

although until recently acceptable, today no longer fit the new conditions of life have been highlighted.

Is Ecohumanistic Information Society Utopia or Precondition of Sustainable Development? — The vision of a society based on the intellectual evolution and partnerly cooperation necessary for life in State of Change and Risk and aided by wisdom, science, and advanced information technology is presented. It follows some general remarks about scientific progress (also in computer simulation methods,) as a precondition of an ecohumanistic, sustainable development society, and suggests some helpful changes in the structure of the United Nations Organization. (Michnowski, 2006)

In the concluding remarks concerning the global reconstruction that will be necessary to carry out the UN's sustainable development vision are incorporated. This reconstruction will be '*a must*' if humanity is to learn to developmental cross its limits to growth — especially if it is to develop intellectual and informational tools allowing it to successfully cognize and avert threats and control the sustainable development of a world society.

The general (if somewhat Utopian) conclusions are drawn from my system studies were that, there are no limits for *Wisdom* based growth and sustainable development of "*Human society*".

The main effect of overcoming selfishness by means of ecohumanism aided by information technology would be the replacement of the morally compromised "growth at the cost of the environment" policy by "development together with the environment".

Thus, instead of steering into an exhausting "clash of civilizations", Spaceship Earth — and sustainable development— could embark upon a journey to the stars (Chardin 1984).

Sustainable Development and Limits to Growth Crossing

(i) "Backcasting" in Cognizing Sustainable Development Conditions

On the assumption that the System of Life model is sufficiently suited to reality, I will make it a reference point for my present hypothetical conclusions regarding the factors, which condition world society's sustainable development.

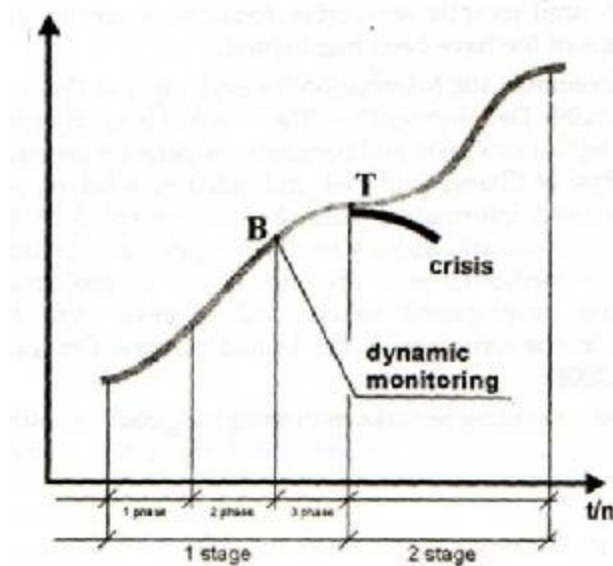


Figure 1 LS sustainable development

LS - life-system (society, other organization)

i - level of LS development (quality)

t - time

n - the number of LS elements or LS size

T - the limit to growth

B - the beginning of the limit to growth developmental crossing transformation

How, then — from the System of Life position — should sustainable development policy be pursued for humanity to succeed in overcoming global crisis and developmental crossing its limits to growth? In our search for the answer, let us use the System of Life model to carry out a system analysis of the global eco-system comprising world society and the natural environment (Lovelock 1979). For this we will resort to the „backcasting" method.

Let us split world society into two subsystems:

1. highly developed society (HDS), and
2. low-developed society, which for sundry historical reasons has fallen behind in its development (LDS).

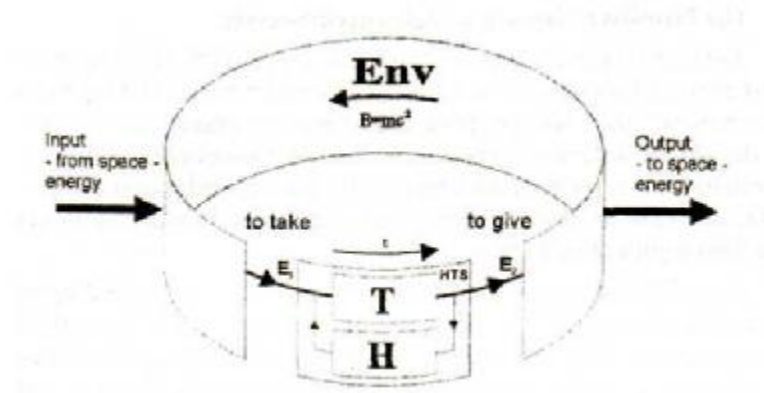


Figure 2 World society (HTS) as open system and human-technology system

Denotations:

HTS - human-technology system

Env - environment

T - technology

H - human, control subsystem of HTS

t - time

E1 - input energy (in large sense).

E2 - output energy (constructive and destructive impacts)

Putting it simply, Figure 2 shows world society (HTS) as an open system and human-technology system in which highly developed society (HDS) is a subject (H) — in other words constitutes the "Human" subsystem of HTS — and low-developed society (LDS) is an object (T) constituting the auxiliary HTS subsystem "Technology".

Let us now assume that in HDS's (highly developed society's) initial development phase the natural environment is constructive both internally and externally. This would mean that developing nature — natural environment - would fuel its developmental surpluses to world society and simultaneously develops by itself, what would be HTS's — world society's - behavior in such condition?

(ii) Primitive Growth of Advanced Society

Let us first concentrate on the behavior of HDS, the dominant part of world society. In addition, let us assume that HDS is in an "immature" and "shortsighted" development phase. In the above-described conditions — with a surplus on naturally available life resources and helped by the subordinated LDS — HDS appears to develop quite fast and simultaneously hinders the development of LDS.

Here HDS's "immaturity" lies in its low scientific, technological and ethical potential and, in consequence, an egoistic "growth at the cost of environment" policy. This means HDS has a destructive impact on its surroundings, taking more from the natural and social (LDS) environment than it can return (or give). And all HDS cares for with regard to LDS is the latter's fulfillment of its subservient role of "technology".

HDS's "shortsightedness" lies in its post-factum — or "feedback" (control system) — adjustment to environmental conditions in the search for access to vital resources. In other words, HDS adjusts to the environment only when forced to by environmental change recognized by practice.

The effects of such growth for HDS are:

- rising inertia, a result of the increasing multitude and diversity of its elements (including demographic growth and technological and organizational progress),
- an ever-faster pace of environment's change, and
- a more destructive effect on the social and natural environment.

In result of such essentially primitive — but natural — growth HDS attains the barrier for its developmental possibilities during its "immature" and "shortsighted" developmental subphase. Barrier, set by its "inertial" limit to growth.

(iii) The "Inertial" Limit to Growth

The appearance of an "inertial" limit to growth for HDS signifies the onset of a qualitatively new life situation both for HDS and world society: State of Change and Risk. It is especially caused by the high level of its science and technology. In this situation life-conditions change very rapidly. Accompanying the

new conditions is the drastically escalated moral depreciation — obsolescence - of HDS's to-date forms of life, which, although recently still acceptable, now no longer fit the new reality.

At the same time, HDS's external destructiveness is still sufficiently weak not to overshadow the environment's external (HDS-directed) constructiveness. Thus, the environment is able to help HDS in its development — and thereby continue its own development — even after HDS has crossed the "inertial" limit to growth.

Necessary for HDS to developmental cross this fundamental "inertial" limit to growth will be reconstruction, in result of which HDS will develop the ability of anticipating change in its environmentally- defined life-conditions and adjusting to them before they occur, completing the adjustment simultaneously with the emergence of its new life-conditions.

Such reconstruction would help HDS adjust to life in State of Change and Risk and for this end to develop "anticipativeness", i.e. the ability to foresee change in the HDS-environment system and anticipate it by the appropriate adjustment of its life-forms. Together with it HDS would learn to coordinate its work process, would develop sufficient flexibility to cope with the pace of the predicted changes, and would have to lay aside sufficient reserves of vital resources to tide it over unexpected situations. In order for HDS to meet the above anticipativeness criteria it will have to radically raise its share in knowledge, scientific and technological know-how and multiply active intellectual potential.

It all means - to build "feed-forward" (control system) into HDS,

The appearance of State of Change and Risk and with them moral depreciation (obsolescence) as the main destructor of HDS will create an urgent need for knowledge — both in order to be able to predict the effects of HDS's activity and to eliminate — by means of innovation — the multiple threats typically arising in such circumstances.

Therefore, the development by HDS of anticipativeness will depend on its stronger part's radical restatement of its attitude towards the weaker part, which has heretofore fulfilled an objective function. The subjectivization of HDS's weaker segment will be

necessary for HDS to develop more farsightedness, cognitive and innovative creativity, flexibility and reserve-generating abilities. HDS weaker part (up-date only simple work force), will have to be elevated to a subjective, intellectually creative role and granted access to existing knowledge.

Also crucial will be appropriate control over the development of science, technology and education.

Thus. State of Change and Risk will force HDS into new divisions of labour: the dominating part — the HDS elite — entrusted with the shaping, controlling and monitoring of development strategies and the weaker part with (subjective) operational and tactical tasks.

With building feedforward, HDS will acquire the ability to radically diminish the negative effects of moral destruction, whose intensification in State of Change and Risk is an essential threat to its existence. Simultaneously, this would signify the attainment by HDS of scientific and technological "maturity" (although not yet ethical).

HDS's developmental crossing of its "inertial" limit to growth thanks to its acquired feedforward ability will enable HDS to continue developing in State of Change and Risk. This, however, will still be "growth at the cost of environment", carried out on a higher, "farsighted" developmental level but still ethically "immature".

Let us now return to the globally pertinent relation between HDS, now radically strengthened by its anticipativeness skills, and LDS, until now kept from developing by HDS. Hastened by "anticipativeness" reconstruction, HDS's growth and development will drastically intensify its environmentally destructive activity. This may result in HDS's arrival at a new "defensive-environmental" limit to growth and the treat of global, ecosocial regression.

(iv) The "Defensive-Environmental" Limit to Growth

HDS's arrival at the "defensive-environmental" limit to growth will mean it has reached a level of external destructiveness, which threatens to annihilate its life-providing social (LDS) and natural environment. HDS's development at this stage will also

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another destruction factor — the dramatically spreading moral depreciation of all world society's forms of life. In order to cross this next fundamental limit to growth HDS will need to radically reconstruct its life forms, enabling the replacement of external destructiveness by external constructiveness.

Developmental crossing the "defensive-environmental" limit to growth by HDS will in the first place require it to master the ability of combining its own interests with those of the social (LDS) and natural environment and with it a new attitude towards the environment — its to-date role of environmental exploiter replaced by a qualitatively new role of "condescending guardian" (Kotarbinski).

This will be crucial, because if HDS's pathological development carries the possibility of environmental destruction, it will have to learn to "give" more to the social and natural environment than it "takes" in order to survive and grow. This is also a precondition for sustaining development of the life-providing environment and HDS's transformation of the to-date passive intellectual potential of LDS into a mutual development factor. The result will be subjectivization and a higher quality of life for LDS, and improvement for the natural environment. Together with the subjectivization of LDS, this will also raise world society's active intellectual potential. This will enable HDS to develop external constructiveness

Hence, HDS's developmental crossing of the "defensive-environmental" limit to growth will mean its rejection of egoism — the driving force of its "growth at the cost of environment" attitude — in favour of ecohumanism and "development together with the environment". Slightly differently put, HDS's crossing of this second fundamental limit to growth will bring a radical change in the method of the world society's evolutionary transformations — the replacement of the heretofore dominating natural selection (social-Darwinistic, entailing the death of the "unadjusted") by a qualitatively new selection model based on intellectual evolution.

Intellectual evolution is an anticipatory selection - by computer simulation - taking place in virtual reality and basing on the intellectual and ethical potential of humanity, science

and high technology. Intellectual evolution helps adjust forms of life to the rapidly changing conditions of life. Ecohumanism is the axiological fundament of intellectual evolution.

Therefore, HDS's developmental crossing of the "defensive-environmental" limit to growth will require its qualitative progress from "farsighted immaturity" to "full maturity" — both on the scientific- technological and ethical planes. This in turn will require HDS to further develop its ability to steer the development of science and technology as well as shape universal wisdom education. As a result of its developmental crossing of the "defensive-environmental" limit to growth, HDS will now function as a "guardian", furthering and hastening the development of LDS and supporting development of the natural environment. However, at this stage in HDS's evolution LDS will still be "immature", selfishly developing "at the cost of the environment".

Therefore, HDS's ecohumanistic axiological transformation and development of intellectual evolution mechanisms will not be enough to enable its developmental crossing of this second limit to growth. What it will additionally need is an adequate defense potential to protect HDS from the threats inherent in the possible destructiveness of LDS and the natural environment.

The replacement by HDS of its to-date defensive "eye-for-an-eye" stance towards the social environment by an environmentally-friendly ecohumanistic attitude may be viewed by LDS as weakness on the part of HDS, and not its true axiological transformation..

The global solidarity resulting from HDS's developmental crossing of the "defensive-environmental" limit to growth will help to put down the developmental differences between HDS and LDS. Given the increasing pace of change in life-conditions accompanying the growth of world society and the risks resulting from humanity's naturally insufficient knowledge about the future, it will this time be crucial for entire world society to raise its cognitive and innovational creative activity and its flexibility, and simultaneously the effectiveness of its intellectual evolution mechanisms. This will inspire the developmental reconstruction of world society's technological infrastructure into a more human- and nature-friendly model.

However, the consequences of closing the social gaps between HDS and LDS (accompanied by the activation of LDS's heretofore-

dormant intellectual potential) and the developmental reconstruction of world society's technological infrastructure will be a further speeding up of change within the world society-natural environment system and the faster exhaustion of heretofore-accessible life resources.

This brings us to the next fundamental growth barrier — the "catastrophic" limit to growth.

(v) The "Catastrophic" Limit to Growth

The higher the pace of change in the life-conditions of both HDS and LDS, the more world society will find itself endangered by sundry and unpredictable disasters. The developmental crossing of this next "catastrophic" limit to growth — this time by entire world society — will require the completion of LDS's subjectivization and consecutive shaping of its "maturity", both in the scientific-technological and ethical sense. This will enable the full, global integration of HDS and LDS and, by increasing world society's active intellectual potential, a radical rising of the effectiveness of intellectual evolution.

Simultaneously, this will lead to the gradual expansion of the natural environment under "protective care" to embrace not only the Earth but also the Cosmos. The to-date survival battle of the strongest (or with the strongest) will be replaced by conditions conducive to symbiotic coexistence in a human-human system and, in a more distant future, a humanity-nature system.

Global Crisis and the Dangers of Its Pathological Overcoming

(i) Global Crisis — an Effect of Life "Beyond the Limits"

In light of the above analysis, global crisis appears to be the result of the pathological crossing (especially by the highly developed West) of at least the two first fundamental limits to growth: "inertial" and "defensive-environmental".

Despite its highly advanced science and technology, West has yet not developed the ability to guide itself by knowledge about the complex consequences of its policies. Western elites have not made the anticipativeness-forming axiological switch from egoism to ecohumanism, hence the West neither knows how to coordinate ecohumanistic cooperation, nor has it deemed it necessary to raise the subjectivity of its "fringe groups", the weaker part of its society

still looked upon as "talking tools" or even redundant" (Martin, Schumann 1999).

In result, world society has as yet not developed the ability to cognize and anticipate — by adjustment — the changes in human and natural life-conditions which, driven by scientific and technological progress, take place with increasing alacrity in today's world. Therefore, world society has also not learnt intercultural dialogue and cooperation, both crucial for attaining the synergy needed to overcome global crisis.

The main cause of global crisis is world society's un-adjustment to life in State of Change and Risk. World society is marked by the inability to eliminate the negative effects of the moral depreciation of life-forms like axiology, technology, economics, socio-economic infrastructure, etc., which, although until recently considered appropriate, now are in discord with the new and fast- changing conditions of human and natural life

(ii) Orweilian information society and the pathological reduction of the world's population

The result of world society's failure to recognize the essential causes of global crisis is its conservative continuation of egoistic and informationally inefficient social relations. False theories about the inevitability of huge "structural" unemployment are spread to slow down the consumption of rare, deficit resources and the destruction of the environment. At the same time, foundations are laid under a new, this time global totalitarianism resembling Orweilian information society, its aim the pathological reduction of the world's population.

This false strategy of overcoming global crisis leads to pathological globalization accompanied by the West's quest — among others through "clash of civilizations" and "pre-emptive wars" — for ways to ensure its access to rare, deficit natural resources and restore nature to a "healthy" condition.

Therefore, we may expect attempts to reduce the world's allegedly "overgrown" population by means of open or clandestine wars (Toffler 1995), and without consideration for the fact that such misguided defensiveness will only ignite defensive attitudes in the endangered weaker societies, the result being "defensive" terrorism, exotic alliances and a host of other mutually-destructive and pathological reactions.

What is in deficit today, however, is wisdom, and with it the political will for action towards the sustainable development of world society. Also failing are the knowledge, technology and time needed to develop methods of locating or creation access to alternative resources faster than the existing resources are utilized. There is also a deficit on knowledge and technology crucial for transforming the present techno-sphere into a human- and nature-friendly environment. Moreover, indeed we need production methods allowing the transformation of the waste created in the course of the manufacture, exploitation and final annihilation of products, technical means, etc. into agents supporting life of the social and natural environment.

In light of the above, sustainable development — limits to growth developmental crossing - does not mean a total deficit on natural resources or imminent environmental destruction.

Ecohumanistic Information Society — Utopia or Precondition of Sustainable Development?

(i) "Visionary Projecting"— the Essence of Sustainable Development Strategy

The fulfillment of the seemingly Utopian UN vision of world society's sustainable - "threepillars" - development will require a long-term strategy to help world society enforce this qualitatively new development form (Desai 2002). Without such a strategy it will be unable to integrate three policies which today in fact stand in opposition to each other — social development, economic development and environment protection (or appropriate environmental formation) — and do it in a way enabling an universal raising of living standards and quality of life for present and future generations of humanity.

This strategy should stretch over years and should base on the general concept of an "ideal" socio-economic and informational infrastructure operated by a world society capable of sustainable development (Nadler 1969). Such infrastructure will have to be very open to innovation, therefore world society will have to be very efficient in the information field.

Here only chosen features of such a (much-desired) future world society, however their acquisition by today's society may well bring us closer to the desired ideal of its sustainable

development. The basic characteristic of future society should be the ability of developmental transformations within the world society-natural environment system by means of intellectual evolution mechanisms.

In order for society to acquire this ability, the statesmen who map out the world's future will have to accept the reality of the sustainable development vision and the need for ecohumanism, and will have to:

- build a sustainable development economic system;
- develop social relations and a information infrastructure enabling easy access to indispensable knowledge;
- build an education system for shaping universal wisdom and information culture, and
- create a sustainable development global governance system.

Meeting these criteria will mark the emergence of a new form of globalization — ecohumanistic globalization (Inclusive Globalization, fair globalization)

(ii) Sustainable Development Economy

An economic system adjusted to State of Change and Risk should be able to:

- permanently sustain world society's economic growth (World Bank 2006);
- integrate economic growth and social development to the benefit of present and future generations;
- ensure economic growth without exhausting accessible natural resources and ruthless environmental destruction (OECD 2005);
- stimulate social and economic activity to further sustainable development;
- ensure the material resources necessary to elevate developmentally backward societies to full maturity;
- ensure material and intellectual reserves to tide society over unexpected situations and practice of developmental control over demographic growth.

This system ought to be based on common good — common interest principle, in other words: combine its own interests with those of the social and natural environment.

The construction of an economy capable of ensuring the above synthesis will require the inclusion of comprehensively defined social and natural elements in the to-date benefit-cost account. (Brown 2001, Club of Rome 2002) In addition, enabling the access of mature socio-economic subjects to the results of the social work process on principles of eco-social justice — in other words, proportionally to their share in the attainment of these results need to be included.

(iii) Access to Knowledge for Sustainable Development

Ensuring access to knowledge permitting world society to permanently support sustainable development will require society to develop more informational skills, among others by publicizing already existent knowledge (heretofore selfishly hoarded by groups and individuals) and creating a scientific system, which shows preference to such knowledge.

The construction of an informationally-efficient global infrastructure should enable easier comprehension of the statistical laws which reflect the movements of our fast-changing reality, and the faster processing of reality-reflecting knowledge into predictions of the effects of to-date, present and projected socio-economic policies.

(iv) Informationally Efficient Infrastructure

The basic condition for life in State of Change and Risk and sustainable development is the creation of a highly efficient global informational infrastructure, among others ensuring access to knowledge about the complex (and future) effects of human activity and changes in human and natural life-conditions (Kleiber 2003, Stanczyk 2005)⁶.

A crucial element of such infrastructure must be a generally accessible, constantly upgraded, integrated and territorially distributed, GRID (Utsumi 2006) global information system geared to the needs of sustainable development and enabling the dynamic

⁶ Information is the key to sustainability transformation (...) When (...) information flows are changed any system will behave differently. (Meadows 2004).

monitoring, long-term forecasting and measurable evaluation of the effects of policy, labour and other changes in human and natural life conditions (Kaku 1997).

Dynamic monitoring means the transformation of statistical data reflecting the complex process of socio-economic-natural life into knowledge about this process's quality, dynamics, and future (barring any outside interference). Dynamic monitoring provides forewarnings of threats, which stimulate countermeasures, it informs about the need to undertake intervening measures also in case of development slowdowns. By informing about the distance to limit to growth, it also enables successive evaluations of the effectiveness of sustainable development policy. In case of the inability to move, forward this limit to growth within the current socio-economic framework, dynamic monitoring would stimulate the anticipatory reconstruction of these relations with the aim of developmentally crossing this limit to growth.

This qualitatively new monitoring form would provide information about:

- regression or development of monitored societies;
- development (regression) pace;
- acceleration or slowing down of development (regression);
- the positive effects attained by to-date policies;
- the threats inherent in current policy and the environment;
- when a given society may attain its limit to growth;
- how much in advance social relations in a given society must be reformed to enable a given society to developmentally cross this limit to growth.

Alone the launching of the construction of a dynamic monitoring system should radically boost the development of science as the process will reveal numerous blind spots" resulting from failing knowledge, which will pose new challenges for research. Dynamic monitoring will also further technological progress by unearthing potential threats stimulating technology and science to produce countermeasures.

Dynamic monitoring should be primarily addressed to statistical offices reformed into statistical and forewarning centres.

Ecohumanism as a Developmental Crossing

Additionally to above IT development we need flexible automation proper development, to free humanity of intellectually degrading repetitive tasks (Michnowski 1985).

(v) Shaping Universal Wisdom

Sustainable development will require a radical reorientation of education paradigms. The present elitary education system, which leaves most of society with rather poor skills in acceding, creating and utilizing knowledge, will have to be abandoned as nonconductive to society's broadening share in intellectual and innovational creation (King 1992).

Necessary for life in State of Change and Risk will be the universal shaping of wisdom — both rational and intuitive — and its application for the effective projecting of developmental undertakings and reliable assessment of these undertakings' progress and effects.

Contemporary wisdom in State of Change and Risk means the ability to observe occurrences and follow developments in the environment, pinpoint the processes related to these developments, predict their further course, evaluate them by ecohumanistic criteria, support those that are positive and hinder those that are negative.

Agents of wisdom:

- intellect,
- knowledge (also about future);
- artificial intelligence (AI), and
- life-support activity power.

Intellect consists of:

- reason,
- intuition,
- conscience⁷.

In the light of System of Life model it is impossible to create such big super-computer that surpass wise human aided by this supercomputer or net of such super-computers). Computers, cyborgs have no intuition and conscience.

(vi) Global Governance — a Crucial Sustainable Development Factor

The attainment and support of sustainable development will require the construction of highly efficient global and local governance structures (Dror 1994). In order for these structures to ensure adequate flexibility and subjectivity of the various elements of world society, they will have to operate on a mutually supportive basis, with indirect steering based on the popularization of information about threats and countermeasures against them as the main method of developmental management.

Therefore, it is recommendable to create a World Centre for Sustainable Development Strategy — for instance as a body aiding the UN Secretary General. This subsidiarity principle based centre should contain a Sustainable Development Strategy Information Centre (Poiska Inicjatywa 1997, POLiSH COUNCIL 2003, Memorial 2003, Glenn 2005).

The Information Centre's chief task should be the development of methods of building and implementing a global information system for sustainable development and, within its framework and in cooperation with local units, the dynamic monitoring of the global ecosystem — the Earth.

Thus, the main tasks of a World Centre for Sustainable Development Strategy would entail stimulating the construction of the above-mentioned global information system, popularizing the effects of the global ecosystem's dynamic monitoring, stimulating the development of countermeasures to thus-cognized threats, and stimulating the creation of an increasingly innovative (Ignatyev) and informationally efficient global infrastructure (Morita 1986).

(vii) The Gordian Knot of Sustainable Development

Overcoming global crisis in its above-described variety will entail an extremely difficult task, one that may well be called the undertaking's "Gordian knot": the simultaneous activation of three correlated and interdependent developmental transformations. These transformations will be necessary for world society to:

- develop an informationally efficient global infrastructure;

- learn to stimulate eco-socially useful creative activity.
- attain universal wisdom, and begin to use this wisdom for the common good.

The above-described transformations will help equip world society with the farsightedness, cognitive and innovative creation, flexibility and reserve-generating abilities needed for contemporary and future life in State of Change and Risk. Humanity's mastering of sustainable development will help control demographic growth as intellectual creativeness will substitute excessive reproduction (or biological "creativeness").

Pursuit of the above anti-crisis strategy is also a condition for world society's mastering of sustainable development. How should humanity go about this highly complex which is so crucial to its survival?

Closing remarks

In the light of System of Life model, it is impossible to create such big super- computer that surpass wise human aided by this supercomputer (or net of such super-computers). Computers, cyborgs have not intuition and conscience.

In light of the above humanity is still on a crossroads with a choice between the conservative, "nowhere-leading" continuation of crisis-generating social-Darwinism and ecohumanistic civilizational change accompanied by the introduction of intellectual evolution methods.

Ecohumanistic civilizational change entails the developmental transition from:

- egoism and individualism to science- and hi-tech-supported cooperation for the common good of all people and the natural environment,
- the eco-socially highly costly and lethal "feedback-based " socio-economic selection model to anticipatory (feedforward) selection based on computer simulation,
- fear of the effects of "overshooting" seemingly absolute limits to growth (which hampers the will for defensive cooperation) to recognition of such limits and their developmental crossing, and

- treatment of the sustainable development concept as an oxymoron to the factual construction of its social, economic, informational and educational foundations.

The development of science and technology — also on the organizational plane — and the rise in human potential have considerably hastened the pace of change in human and natural life-conditions as well as the progression of inertia in world society. In result, humanity has found itself in State of Change and Risk.

The high inertia and fast pace of the ongoing changes in life-conditions have created a need for their forecasting and anticipation by adjustment. This in turn calls for farsightedness, flexibility and the ability to create reserve resources to cope with unexpected situations.

It is also necessary to radical improving the coordination of social work process and extends humanity's protective care over larger parts of the environment — today the cosmic environment.

State of Change and Risk have introduced a qualitatively new dominant factor to the ongoing destruction of human and natural life — the rapidly and, in face of scientific and technological development, inevitably progressing moral depreciation (obsolescence) of humanity life-forms which today no longer comply with the new and rapidly-changing conditions of life.

Eliminating the negative effects of moral depreciation will require a broader scope of intellectual (cognitive and innovative) creativity aimed towards the development of science and technology.

In turn, the progress in science and technology speeds up change raises the risk of error and stimulates moral depreciation.

Mastering the ability to anticipate and eliminate the negative effects of moral depreciation will require the abandonment of selfishness and individualism for ecohumanism and its partnership-based cooperation, which preconditions the enormous mutual enrichment by earlier- and newly-possessioned knowledge (also about the future) and the effects of cognitive-innovative activity which is crucial for humanity in State of Change and Risk.

Therefore, today we need increasingly more human labour — wise, inspired by the common good, cognitive and innovatory — and not escalating supposedly unavoidable "structural" unemployment. Such labour, however, will have to entail sound knowledge about its effects in time and space. The more work is carried out without adequate knowledge about its effects, the faster will be the exhaustion rate of currently accessible natural resources and the pace of environmental destruction.

State of Change and Risk reveals the limits to growth problem and the threats inherent in pathological attempts to cross them.

In light of the here-discussed research there are no limits for 'Wisdom' based growth and sustainable development of 'Human' society.

Fulfillment of the U.N.'s sustainable development vision will require access to knowledge about the effects of human activity (and intentions) and other changes in the conditions of human and natural life.

Also necessary will be:

- the reconstruction of the economic system into one farsighted and founded on common good
- common interest principle (Brundtland 1987),
- the creation of an education system capable of teaching universal wisdom (including information culture), and
- the development and popularization of flexible automation,

This will allow the replacement of social-Darwinistic "growth at the cost of environment" (social and/or natural) by intellectual evolution mechanisms, including the primary selection in the virtual reality of developmental projects by means of universally accessible computer simulation and supported by an ecohumanistic value system⁸.

8 To carry out sustainability transformation and eliminate overshoot negative consequences (...) visioning, networking, truth-telling, learning and loving is proposed. Individualism and shortsightedness are the greatest problems of the current social system (..) and the deepest cause of unsustainability. Love and compassion institutionalised in collective solutions is the better alternative. (Meadows 2004).

Sustainable development will need the replacement of today's egoistic and strongly crisis-generating globalization by ecohumanistic globalization. Continuing the present shortsighted and selfish "coexistence" forms will reduce world society's social diversity, which is the basis of developmental synergy. Such pathological globalization leads to the depreciation and physical elimination of weaker societies in inevitable and mutually-destructive battles for access to deficit resources.

The sooner we reject our "eye for eye, tooth for tooth" policy and reach a friendly hand out to our recent opponents, (persons, social classes, nations, or civilizations which we have heretofore regarded as enemies or inferior objects) in a proposal of partnership-based cooperation for our common interests, the more chance we will have to overcome global crisis and transform the "utopian" sustainable development concept into a force permanently linking social development to economic growth and ensuring adequate protection (or, rather, adequate formation) of the natural environment.

If, on the other hand, the rapid economic and civilizational growth of vast and until recently underdeveloped societies like China or India continues in the conditions of today's pathological globalization, it will inevitably lead the world society to socio-economic or ecological disaster. The precondition for transforming this huge economic and civilizational development process into a driving force of world society's sustainable development is the recognition of the need for ecohumanism-based civilizational change and its enforcement. Especially urgent here will be the construction of the social, informational and educational foundations under an ecohumanistic (sustainable-development-based) political and economic system.

Creating openings for ecohumanism and intellectual evolution cannot be an ad-hoc process. The replacement of "growth at the cost of environment" by "development together with the environment" will call for wise, mainly supportive and, most importantly, global control over ecohumanistic reconstruction. Without providing access to knowledge about the effects of human activity and human intentions humanity's so frequently declared intention to adopt a more human- and nature-friendly attitude will not be fulfilled.

Ecohumanism and knowledge about the future preconditions the developmental crossing of limits to growth, which is the fundament of the sustainable development of world society.

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Sri Sadguru Sainathaya Namah

Transformative Pathways: Attainable Utopias

Transformative Pathways Attainable Utopias

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A Prologue

The book focuses on the production of knowledge and the articulation of fresh vision for social transformation in the coming era. It collects the voices of the post 1990 that have been engaged in serious introspection (and deconstructions of failures) in the building up of equal and harmonious societies. The work has focused on varied aspects of rebuilding not only of particular cultural environment, but also of a sustainable and energized global environment.

To date, our present is a conflicting mass of ideologies, obfuscating the path to rejuvenation. The emerging world scenario is presenting a new dynamics of inter and intra relationship with in and outside the identity driven systems. How can we reverse this trend has been deliberated upon by the committed thinkers and activists through this viable book-project "transformative pathways", that has viewed new future with transformed vision.

How have individuals or communities launched on this challenging path in diverse cultures? In what instances has the notional domain of Ethics attained a quantum leap at the level of a practicing ethics? This has been well addressed in the present work by incorporating discourses on defining procedural ethics of action pool as successful initiative of practicing ethics or neo-ethics that redefine pathways, even as they may selectively absorb

cultural legacies of values. The analysis on Islamic work ethics presents one such effort in the direction of understanding the intricacies of the process of transformation within this realm.

The present global society is shaped by cyber-culture, informatics, fundamentalism and violence hence; there is an urgent need to reinterpret the notion of a good and simple life. Role models, messiah figures, religious and spiritual organization are all contesting the reversal of complexities that go into the renewed notion of development by preparing a road map for future. The eternal philosophies will continue to provide inner experience to understand the depth of wisdom in future as well. The domain of spirituality within the normative periphery shows the path of eternity to create violence free world. The inner strengthening of individual self is the core of furtherance of the process, which can lead to the creation of more tolerant world.

Attainable prognostic constructs can be visualized and activated through several interrelated structural-functional dimensions. These mechanics may include forms of leadership; channels of ethics; concepts of growth and learning; expansion of knowledge innovations and creativity; path visualizations and expansion of self and family; managing the socio-cultural diversities.

The transformation is a conglomeration of various diversified forces which may seemingly appear contradictory in practice but philosophically presents a unified process of virtually all dimensions responsible for positive change, may it be social, economical administrative or spiritual. In the unique experimentation, such interdisciplinary influx liberates itself from unidirectionality of conditioning of mind and prepares people to develop a fresh vision. The entirety to understand the phenomena of transformation from different pathways is inevitable to have better tomorrow and therefore cannot be postponed any further. The propensity of opaque views appears to be converging into fragile systems with weakened ethical core and directionless growth. As thinkers, we have prime responsibility to remold the hovering thoughts into a variety of well-knit philosophical perspectives to create a conscious system capable of building up the society by those whose minds are free of apprehensions and inhibitions.

The inheritances from our past to some extent have blocked the ability to evolve a society, which is free of apprehensions, because the self-driven ways are dominantly controlling the social formation. The reversal of this needs confluences of such under-currents, which can transform the whole approach to view the various social phenomena shaping the society in a more constructive manner. The activation of momentum to move from conventional ways to non-conventional ways of transformation is inevitable. The generation of collaborative collection of ideas to look into the arena of attaining the finality of a peaceful world of coexistence though in the nascent form of conceptual construction but cannot be subdued. The seeds of future are sown in our present therefore; any dualism based on obsolete notions of prevailing concepts must be obliterated to transmit something within the pragmatic realm of consciousness. Do we need to have future with inherited turbulent present or do we need to have future with conflict free social structures? To make right choice is a difficult proposition because one involves inability to manage turbulences completely as these are self-created leading to parochial outlook. However, the creation of conflict free social structure needs extra-leverage to evolve right perspective by having right frame of mind to reach out to the soul of people. The ideas remain in circulation at different levels but a concrete shape can be given through presentation as documented ventures. This is one such venture, which aims at exploring the different modes of transformation varying from self to societal to learn to manage the conflicts.

The articles included in this book explain the true purpose of making available the text, which is free of notional frigidity and myopic contention to structure the future. The variety of articles is the real strength of this presentation, which directs minds of novice to certain deliberately chosen channels of thoughts into a positive aroma thereby activating thinking beyond formal conceptions. The creativity occupied the centre stage in the elaborations included in the present work.

The book is planned with the thrust areas as deconstruction of certain existent structures where an effort has been made to construct conceptual frames by presenting the alternatives in the form of models. The construction of models of social responsibility,

cosmic synergy model governance are such attempts; neo-ethics by redefining the spirituality from different angles and also going beyond recusancy to certain religiosity to understand the mechanisms of enhancing the inner strengths present a fresh analysis of ethical formation and transcending the national outlook. The contributors from different countries have provided the insights to discover the world of future by interrogating the ideologies, values, texts, structures and formulations of initiatives to evolve a new ethical frame of starting a refreshed analysis so that unmanageable do not scar the future. The socio-ethical dynamics not only has to be understood, but also has to be given a proper direction per se.

In the article "Transformation of Islamic Ethics in Turkey" Dr. Mahmut has presented the experience in Turkey by discussing the possible social, economic and political reasons as well as the background of the findings in the light of Weber's interpretations of Islamic societies. The rising Islamic entrepreneurial class in societies has been highlighted in terms of Weber's criticism. Max Weber argued that Islamic societies were not able to develop 'the spirit of capitalism' because of the negative results of oriental-despotism, warrior ethics and Sufism. From the Weberian point of view Islamic societies have three disadvantages in developing the work ethics viz. oriental despotism; warrior ethics; other worldly Sufism. The Author has made a very informative analysis by referring to the transformation of traditional Sufism to modernist, in this worldly Sufism. The modern work ethic includes most of Protestant work characteristics. It is apparent from the analysis that Muslim Turkish managers are more work oriented than their secularist counterparts due to their minority psychology and religious motivation.

In the article 'Future of Utilization Ethics: Adjusting Environment Engineering and Public Administration Perspective' Dr. Salim Sanin and Dr. M. Kemal Oktem have highlighted environment from the historical perspective by analyzing that how over the time human activities have contaminated the ecosystem and how the environmentally disastrous dogmas have been developed during the period of industrial development. Even they have failed in questioning the validity of these dogmas. In an interesting exposition, the Authors have advocated for the role of

students of Public Administration to work out the strategy together for supporting the lower levels of ecological pyramid. The discussion regarding environmental ethics centers around two main schools of thought one from anthropocentric and other from biocentrism perspectives. Arguing for the role of administrators with each community needs to be evaluated in terms of their internal balances and proposing that corruption at administrative level must be stopped. A right emphasis has been given by focusing that Public Administration, as an instrument of implementation of policies must be serious in responding to the issues of environment related issues through policymaking and implementation. They have emphasized that 'education-formal and informal'; 'control and supervision-legal, institutional, social'; 'cultural factors-artifacts, proverbs, sanctions, cognitive preparation, cooperation' are all important in the process of ethical development.

In the article 'Social Responsibility: Structure, Content, and Process' Dr. Ari-Veikko Anttiroiko views the emergence of the concept of social responsibility as the response to the corporate irresponsibility. However, he opines that this is not only left to the corporate sector to define but the role of public sector and civil society is crucial. He mentions that civil activism and non-governmental organizations have become vital instances of global solidarity. Exploring the fundamentals of social responsibility, he defines what is social in social responsibility followed by a model that depicts the social ideological and ontological aspects of social responsibility. He mentions that social responsibility is to take into account the functionality of society and its subsystem including aggregate welfare and environmental conditions of the society. This radical concept is based on ethical and ideological imperatives that emphasize the moral as a natural and fundamental part of existence and functioning of organization. Interestingly he opines that there are layers of organizational responsibility, which have been constructed to systematize the organization specific principles and actions. He relates the determination process of social responsibility to the multi-faceted chain of inter-related events having conflicts of interests in which the responsibility of a certain actor or group of actors is a set. In addition, content of social responsibility in different sectors have been illustrated. In addition to this, he mentions that information

society development is one of the mega trends of modern times, which have given the birth to the new responsibility discourse.

The future without vision will not lead to the desirable future. Dr. Lech Zacher in his article "Some Repetitive Reflections on Visioning the Future" assumes that there are three types of futures viz., Possible Future; Probable Futures and Desirable Futures. Elaborating the concept further, he opines that Possible Futures are extremely capacious and our talents, creativity, imagination can produce within these space Utopias, visions, ideas. However the Probable Future has calculable probability which is based on investigation of trends, potentiality of change, and elaboration of policies, behavior of people, market research etc. The Desirable Future is based on the extrapolation of differentiated needs, aspirations, ambitions and other such external influences further strengthened by globalization. He visualizes that in the perspective of knowledge societies the knowledge about possible, probable and desirable futures has to constitute a growing part of societal knowledge, he therefore suggests that a more learned thinking about future is needed.

The inevitability of issue of development as prime mover of shaping the dynamics is understandable. Dr. Leslaw Michnowski in his article "Ecohumanism as Developmental Crossings" opines that two radically different approaches are dominating the assessments of today's global situations. One approach accepts the view that world society development is and will be driven by ongoing economic growth. However second sees the world in global crisis. The science and technology is creating new situations and crisis therefore rejection of today's dominating selfishness and individualism in favor of Ecohumanism is of prime importance. Elaborating the Ecohumanism he points out that it refers to the partnership-based cooperation for the common good of all people (rich and poor, their descendants) and natural environment—commonly supported by science and high technology.

. The future perspectives are important to be explored. Dr. Jacek F. Maczynski in his article "The Multiple Shocks of the Future in the 21st Century" has examined how the shocks of 20th century were so terrible that whole world try hard to forget them, however, the positive changes have contributed vastly to the well-being and to the richness of our life. He has tried to find out why the

necessary measures are not applied to look for the solutions of problems. Through computer modeling, reasonably adequate forecasts are possible hence; it can be applied to explore the possibilities of scientific solutions. The technology, science, economy, environment, politics, human habitat, human beings are posing multiple shocks for future so are the variegated solutions. In an interesting way he questions will people try to create some sound political engineering science? And train their politician in this discipline. He makes a very authentic observation that education happens to be intensive social stabilizing factor. In the concluding remarks, he establishes the fact that future will not be devoid of multiple shocks. The Postmodernists idea of indiscriminate equality of cultures will be supplemented by some unbiased evaluation criteria.

The concept of Leadership is ever growing field of study. For future transformations, we need transformational leadership who can generate the awareness of the mission or vision of the organization. Dr. Semra Guney, in her article "Women Leadership in Turkey" argues that women make up half of the work force and number of women graduate is increasing but the ratio of women managers is still low especially for top managerial positions. She advocates that though women have transformation and intellectual capacity to run their business effectively but they do not get the rights they deserve. Interestingly she has analyzed sex differences in transformational/charismatic leadership styles. The traits are not the attributes of men but women also show high on these qualities. In Turkey, there are so many transformational women leader, managers displaying three kinds of styles successfully. She has also focused on meaningful relationship between gender and leadership style. She points out that traditional Turkish socio-cultural context is changing due to free market economy and trends towards Liberalization and Globalization. She proposes that exclusion of women from informal networks that aid advancement must be prevented by the organization. The Turkish working women must occupy place in male's network.

The education is important sector that can transform the personalities. The formative years are crucial bench-march in the life journeys of individuals. The educational institutions nurture the cognitive abilities. These institutions have enormous capacity

to build values and shape visions with right focus. A right frame of mind can be evolved through education. Dr. K.L.Sharma in his article "Some Reflections on Higher Education, State and Social Hierarchy in India" puts forward the premiss that since society is diversified and inequalitarian; the social opportunities are also incongruent vis-a-vis education. He visualizes the role of education as agent of change in the Indian society which is a sum total of continuity and change, absorption and assimilation, give and take, unity and diversities and vice-versa and is also grand synthesis of cultures, languages, region and religions. Hence, education in true sense is antithetical to market civil society and a desired type of citizenry is concomitant with quality of education. He advocates that higher education must aim at rediscovery of the humanizing vocation of the intellectual, the power of thought. Hence, we must acknowledge what he says that knowledge is not a mechanical activity but a creative enterprise.

The education capacitates people with different skills but for sustenance the transformation, skill utilization is through economic sector. The economical transformation provides special impetus to the development in the right direction. The phenomenon of globalization has opened up new vistas for the process to understand different dimensions of human resource management.

Dr. Raymon Bruce along with his team has presented the research results of the two Research Workshops on New Comparative Economics, one jointly held by the Department of Economic Theory- Interim Center for Management and Economic Development, V.N.Karakiv National University, Ukraine and University of Texas at Arlington and another was held by School of Public Administration, Renmin University of China. Two Research Workshops one in Ukraine and one in China conducted a review of the Institutional Possibilities Choices (IPF) framework presented in the World Bank policy paper no. 3054 "New Comparative Economics" by Djankov, et al. The research workshops then examined the practical aspects implementing institutional possibility choices and in developing additional dimensions to the IPF framework in making the transition from Command and Control national economy to a free market global economy in applying the IPF Framework model. The paper's conclusions include the notion that each nation can learn from each other and

so that the framework is applicable for the larger community as well.

The enhancement of inner strengths is the key to have focused future. The strengthening of ethical dimension with morality and spirituality will restore the human dignity, which may have been violated through invasions of psyche in the present times. The transformation without ethical core will add to the miseries of humankind. The articles addressing to this issue have interestingly surfaced the variety of interrelated notional analysis and presents a more inclusive view of the whole vision.

In highlighting the normative dimension Dr. James R. Heichelbech in his article "Normative Analysis: A Vision for Ethical and Spiritual Growth" has made an effort to share an empirically grounded view of ethics research and clarify the implications for public services. He suggests that empirical research is necessary for successful implementation of ethics policy and that it helps us to connect with one another as human beings living together in an increasingly fragmented world. According to him, two methodological foci are essential, an understanding of ritual context through ethnographic work and an understanding of subjective experience through phenomenology. He then has described that how both contribute to an empirically grounded vision of ethics research, normative analysis with practically focusing on the tasks of understanding and improving normative infrastructure. The 20th century includes continuous effort towards reintroducing value into the study of human interaction and in new millennium with methodological resources to support the agenda of empirical research toward ethical and spiritual success.

The sanctity of administration lies in providing governance with precise focus of service. Dr. Sangeeta Sharma in her article "Cosmic-Synergy Model of Governance" sketches the conceptual framework of governance with spirituality. This model presents an alternative to the present condition of turmoil by proposing infusion of spirituality into the governmental system. Five variables have been identified to construct the Spirituality Grid, which helps in locating the spiritual content amongst the employees. It also suggests the mechanics of conversion of concept into reality. The proper synergy of various inputs and other ambient factors

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