

Mirrors of Development

Marina N. Sidorenko, Philosopher, linguist

*This article is devoted to my parents.
Their humanism and love to life has always exited me.*

Centuries ago, invention of a telescope let us to see the world in a new way. We had to think about whether we are so unique. It would be interesting to know what Leonardo da Vinci had been dreaming of when he had made the first drawings of a lens telescope in 1509... Almost at the same period, in 1538, Italian doctor Girolamo Fracastoro suggested the concept of a microscope, the closest relative of the telescope. This instrument helped us to see completely different world – microworld raising and hiding from us the abyss of questions till now. We seriously doubted in the correctness of our fundamental postulates. The astonishing power lenses, mirrors – they are only tools, but the worldview has changed. Possibly in the 21st century we'll make new mirrors – Mirrors of Development that could help us see our reflection in short and simple formulas. Basing on these clear formulas, every earthling of our planet will be able to feel and understand problems of human civilization and elaborate self-determination for a personal “traveling”.

The Aim of the Mirrors	A Mechanism for Achieving the Aim	The Ways
Developing a new ontology that would allow us to create harmonious relationships between human being, civilization, Earth, and the	Making a self-learning technological platform for building the models of harmonious interactions in topology <i>human being, civilization, Earth, and</i>	The individual and group, intuitive and rational search for methods of harmonious interaction between human being, civilization, Earth, and

cosmos.	<i>the cosmos.</i>	the cosmos , based on the technological platform of self-developing digital reflective mirrors.
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The importance of this mission for survival of our specie is really huge. One of the first steps to carry out this mission is to determine a harmony coefficient of our civilization. We should know:

1. Percent of **ecological technologies** used by us. /**Ecological Technologies -EcoTech/**
2. Percent of **fundamental and applied researches directed on modelling harmonious interactions in topology human being, civilization, Earth, and the Cosmos.** /**Researches in Harmony Modelling - RHModelling/**
3. Quantity of **energy used by human civilization for its reproduction.** /**Energy for Reproduction of human civilization - ER/**
4. Quantity of **Renewable Energy.** /**RE/**
5. Percent of **Artificially Natural Risks** which we have on the planet. /**ANRisks/**

Knowing this, it is possible to define a **Harmony coefficient of human civilization.** /**H coef/**

$$Hcoef = \frac{EcoTech \times RHModelling}{(ER - \Re) \times ANRisks}$$

Interdisciplinary resource of modern science can really calculate it, just like a harmony coefficient of personal self-determination. We need professionalism, ethical maturity of a correctly created team, and a high convergent accuracy for this task. As a result, clear to teenager, adults, and old men, - formulas should be created.

The first generation of reflective mirrors certainly will be imperfect and primitive like the first computer. But the fact of appearing them will work to improve the world. Development of civilization and man is impossible without

personal self-determination: it's like a plane without a navigation system. Mirrors of Development should become a digital platform for self-determination. We ought to understand steps of our civilization and our actions in this traveling.

The paradox and harmony of the mirrors is that together they will be able to solve superficially incompatible tasks: one lens will be working *rationally, analyzing global and individual development*, and the other lens answering the same questions, will be looking into the deepness of human intuition. Step by step they will learn how to interact. The task of rational lens is daily calculating a harmony coefficient of human civilization and a harmony coefficient of personal self-determination. Improving its function, rational lens will master more complex action, - the art of building formulas describing problems and solutions of global and individual development. The intuitive lens, keeping independent understanding problems and solutions, will be supporting main functions of the rational lens and creating for it new material. Together they will be working like a harmony calculator, problems analyzer, and solutions maker. Effectiveness of mirrors will be growing with the development of human intuition and thought. And maybe one day new social norms will appear: we'll get into the habit of analyzing a personal road and the road of our civilization for a clear understanding the hidden meaning of this crossing and methods of two-way traffic to harmony.

In the processes of creating the reflective mirrors, we'll possibly encounter problems which make us to be surprised again. We can calculate a neutron stars density, which is 10 – 15 times higher than nuclear density, but when it's necessary to compress concepts and categories of the Humanities, we are traditionally inclined to verbosity. Being in extremely dense state, language probably could simultaneously influence on individual and civilizational horizons of mind, but we badly know these mechanisms. Realizing the importance of this problem for evolution of our specie, we should find new methods of building and compressing the Humanities.

Reflective compression of information is important vaccines for development of culture. We started to create mental litter probably together with emergence of consciousness. We continue doing it without understanding the gift of consciousness given to us by nature. It's clear that the necessity of densely packed information will be rapidly growing in the era of information explosion and quick changes of anthropic surroundings. For conscious actions in such

conditions, information matrix should be organized in some other way. How? A continuously self-improving structure of models and methods for harmonious interactions between *human being, civilization, Earth, and the cosmos* should be foundation of information in general and mirrors of development in particular. Focusing the flow of creative energy on the harmony of the world, this topology can greatly enhance efficiency of science, education, and culture.

It is necessary to understand how **artificially managed evolution of the Humanities** could be carried out. One of the possible models is conscious changes in methods and ways of language functioning. New methods of language functioning should be designed so that they will be able to catch and support concepts-precursors, emerging ontologems (fundamental units of future ontology) and de facto form a new worldview.

The other important question is issue of self-awareness and self-determination of human civilization: who we are like specie, where we go, what we strive for, what we must do, and what we really can do here and now. Evolution of self-awareness and self-determination of human civilization should become a research subject for natural and formal, social and human sciences. Hypothetically, activity of reflective mirrors is an ideal object for such research because mirrors will be based on experiment and Math, natural sciences and the Humanities. *Mirrors of Development are self-improving, digital-based synthesis of fundamental and applied science focusing on the search for models and methods of harmonious interaction between human being, civilization, Earth, and the cosmos.* The task of this synthesis is evolution of self-awareness of an emerging planetary civilization. Software, ethically oriented, reflective, intuition and thinking-based coevolution of humans and technics is one of the tools for solving this tremendous task.

A very slowly evolving ontology, rushing forward technology, and dormant morality are the face of our era. We ought to gather a new puzzle in which harmonious norms of interaction between human being, civilization, Earth, and the cosmos would be a base for development of planetary civilization. *Basing on ideas of a new ontology, and forming it at the same time, Mirrors of Development should become accelerators of civilizational self-reflection and catalysts for the evolution of science and technologies.*

We need discreet and intuitive models of reflection for analysis and understanding the texts of different difficulty levels. Somebody who writes a text

should have rational and intuitive technics to compare notes with the era and a personal moral code. In other words, an author ought to realize: what action this text performs in culture, for what it exists. And here it's not about the h-index. It's about methods of thinking and ontological bases of text analysis.

Mirrors of Development are a self-learning technological platform for elaboration and development of reflective practice directed to planetary harmony. New models of reflection should be created so that they will be able to advance our civilization forward, stimulate it to develop. It means that a clear idea with a high potential of converging knowledge, values, and technology should be in the basis of these models. The ontology of harmonious interactions between human being, civilization, Earth, and the cosmos is able to become such idea. We ought to develop new analytical and intuitive skills for conscious and harmonious actions in global world. The task of digital reflective mirrors is to help us to do it. The formation of the new ontology is not a quick process. But we can influence the speed if we make *mirrors for development of our civilization: an integral instrument synthesizing possibilities of intuition and logic, ethics and technics.*

But now we use the exiting device of Consciousness like Mowgli who hasn't realized his capabilities. Thinking about interaction between man and technics, we ought to create feedback in such way that humanism and creative thinking manage technology but not vice versa. This problem is solvable provided that we develop educational and social mechanisms which allow us to take humanistic ideas into account in the process of generating new technical solutions. Otherwise, we'll create the era of Mowgli of the digital generation. Technics should be reason of human development, but not human laziness. Whether we think about it when we search for new technical ideas?

How to understand and develop an explicit and hidden potential of consciousness and energy, language and intuition? How to keep desire to think independently trusting your intuition, listen to your nature opening and mastering your microcosmos? These tasks are incredibly important for our evolution. After all, the intuitive forms of consciousness are natural tools of human-being from the first steps of our specie on Earth, and we are owners of this wonderful and delicate treasure. **Let's assume for a moment that consciousness, energy, and language are universal functions of the cosmos. Then it's possible that intuition is a cosmically ancient and wise companion of consciousness and language, and its mission is to provide survival and**

development of different species. The question arises in such a case what technology modern science, existing only 400 years, is able to do if indeed it knows nothing about cosmic nature of consciousness, energy, and language of our specie... What topology of models for research and development of intuition do we have now? What topology would we like to strive for in future? Answers to these questions should be primary in modelling any forms of interaction between man and technics. Models for development of thinking and intuition in the ontological contour of rational harmony of the world could be a brilliant tool for self-perfection. One of the tasks of the mirrors is elaboration and expansion these new tools.

Second and third generation mirrors possibly will be created on the base of harmonious models of consciousness, energy, and language. And at that moment, the historical time of Fermi paradox probably will be over. The Humanities will become more exact, but formal and natural sciences will focus on harmony of human-being, Earth, and the cosmos. A history will tell us which roads and collisions the next and future generations will have to pass to reach the goal. One thing is clear: our specie is able to survive and keep the planet only turning toward the harmony of the micro and macroworld. An emerging planetary civilization has to cultivate self-awareness and self-determination, ethics and mathematics of the road because it's a fundamental condition of its existence.

Mirrors of Development are artificially-natural, self-developing system for improving relationships in topology: Human being – Civilization – Earth – the Cosmos. The primary mission of mirrors is forward modelling harmonious interactions in this topology that will allow us step by step carry out a transition to planetary harmony.

What about far future of the Mirrors?

First- generations mirrors: <i>Planetary Harmony Maker</i>	Second- generations mirrors: <i>Cosmic Harmony Seeker</i>	Third- generations mirrors: <i>Cosmic Harmony Uniter</i>
Tasks Exploring, modelling, and improving links: Human being – Civilization – Earth – the Cosmos.	Tasks The search for harmonious forms of consciousness, energy, and language of the Universe.	Tasks Integration of cosmic harmony: interaction between harmonious forms of consciousness, energy, and language of

Three generation of mirrors are united like nesting dolls: each new generation, continuing the work of the previous one, solves a new task. Elaboration of mirrors will require a very precise focusing the consciousness, energy, and language of their creators, but as a result, we'll receive a huge economy of evolutionary energy and time of our civilization.

When we look at the mirror we practically at once realize our reflection. A person and mirrors understand each other admirably accurately and quickly. Interacting with us, Mirrors of Development should strive for a constant precision and timeless symmetry. Due to the mirrors, density of sign, speed and intensity of understanding cultural context, deepness of personal self-determination, global and social coherence of human activity, undoubtedly, will be growing. But still the main mission of reflective mirrors is that they will help us understand and love our cosmic house. And maybe one day we'll at last appreciate given for us gift of self-awareness, intuition, and thinking.

In 1279, Italian monk John Peckham invented a method how to cover glass with a thin layer of tin. After 100 years, the first mirror workshop appeared in Nuremberg. In order to realize who we are, where we are going, and whether there is harmony in our way, it's time for us to make new mirrors, new lenses for analysis of consciousness and human activity. Only a mirror workshop is necessary to open now, not in a hundred years.