Creativity's Kernel Development for Conscience Society

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Creativity is man's (in our opinion not only man's (Natural Intelligence) but an exclusive important computer's, that is, Artificial Intelligence's) capacity to produce insights, new ideas, inventions or artistic objects, which are accepted of being of social, spiritual, esthetic, or technological value. Creativity is a mental process [1]. The Piirto's Six Steps of Creativity development (acquire Knowledge, develop Curiosity, become Interested, Passion, Dedication, and Professionalism) interference and interaction with Piirto's 7i features (Inspiration, Imagery, Imagination, Intuition, Insights, Improvisation, and Incubation) which characterize highly creative people represents the Base Creativity's Kernel to be developed in Conscience Society. Tools for Base Creativity's Kernel's development are represented by both [2] it's information (adaptable environment) and its operational (adaptable system) parts
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1 Introduction

Conscience Society will be created in the period from 2019 to 2035 years. Such society will be based on the strong correlation between natural and artificial intelligences. Intelligences in Conscience Society to our opinion will possess the Piirto's inspiration, imagery, imagination, intuition, insights, improvisation, and incubation features which characterize highly creative people.

Creativity top of intelligences in Conscience Society will be touched by acquiring knowledge, developing curiosity, becoming interested, and successive culminating with passion, dedication, and professionalism as highest level of activity.

Correlation between intelligence's features and creativity levels of activity and its interactivity represent Creativity's Kernel. Case studies illustrate that adaptable tools can represent engine to develop Creativity's Kernel and it's dialects in Conscience Society.

Adaptable environment for Creativity's Kernel development in Conscience Society can be too large, beginning with the interference table [2] of Creativity's Kernel, as base for information environment (base's Creativity's Kernel of Conscience Society), and, continuing with extensions-dialects in the form of its level's adaptation (levels of Creativity's Kernel).

Connections between base Creativity's Kernel and its extensions-dialects are supported by adaptation mechanisms. The adaptation mechanisms represent engine (tools) of adaptable warehouse which develops both information (data) and operation (actions) parts of Creativity's Kernel (base and its levels).

Extensions-dialects of Creativity's Kernel of Conscience Society can be exemplified by such extensions as: "Human - Machine Interface", "The First Seven Years in Conscious Life", "Millennium's Personalities for Conscience Society", "Religion and social moralities in Conscience Society", "Ecologic Business in Conscience Society", "Beauty - a conscience's element". Using adaptation mechanisms the Creativity's Kernel's extensions-dialects can be implemented in Conscience Society based on education (social and technical disciplines) and computerized (system and application software, internet, nano-technological) supports.

2 Creativity's Kernel of Conscience Society

Creativity is a result of brain activity which differentiates individuals and could ensure an important competitive advantage for persons, for companies, and for Society in general. Very innovative branches – like software

industry, computer industry, car industry – consider creativity as the key of business success. Natural Intelligence's Creativity can develop basic creative activities, but Artificial Intelligence's Creativity, and, especially, Conscience Intelligence's Creativity should be developed and they could be enhanced over the level of Natural Intelligence.

Providing only neurological research still does not offer a scientific basis for understanding creativity but thousand years of creative natural intelligence behavior observations offer some algorithms, models, methods, guidelines and procedures which could be used successfully in Conscience Society' Creativity.

The Piirto's Six Steps of Creativity development top (acquire Knowledge, develop Curiosity, become Interested, Passion, Dedication, and Professionalism) **interference** with Piirto's 7i **(**Inspiration, Imagery, Imagination, Intuition, Insights, Improvisation, and Incubation) features which characterize highly creative people. They represent Creativity's Kernel basis for Conscience Society (Table 1). Table's cells are to be filled with creative first level of extensions-dialects intelligence knowledge (syntax, semantics, and pragmatics) for Conscience Society.

Table 1. Creativity's Kernel of Conscience Society. Basis

Creativity top versus Creative feature	**Acquire Knowledge**	**Develop Curiosity**	**Become Interested**	**Passion**	**Dedication**	**Professionalism**
Inspiration						
Imagery						
Imagination						
Intuition						
Insights						
Improvisation						
Incubation						

2.1 Encyclopedic definitions of Features which characterize highly creative people can be put on the basis of Creativity's Kernel development.

2.1.1 Intuition: the ability of consciousness to discover or feel about rational or spontaneously essence of an issue or an object, spontaneous and instinctive penetration into the essence of a thing, a sudden discovery of truth.

2.1.2 Imagination: the human capacity to dream and to create representations or ideas based on previously acquired perceptions. transform representations reflecting reality in new inventions.

2.1.3 Inspiration: consciousness ability to collect ideas, solution Emerging unexpectedly and use them to make it easy to create something phenomenal and unusual. Creative and spontaneous faculty of human consciousness.

2.1.4 Insight: the human capacity to grasp an agreement made on the basis of states on a common conception of ideas and feelings common issues. Human feeling appears after analyzing a situation, an agreement that brings compassion, support and knowledge reasoning.

2.1.5 Improvisation is the practice of acting, singing, talking and reacting, of making and creating, in the moment and in response to the stimulus of one's immediate environment and inner feelings. This can result in the invention of new thought patterns, new practices, new structures or symbols, and/or new ways to act.

2.1.6 Imagery refers to the "pictures" which we perceive with our mind's eyes, ears, nose, tongue, skin, and through which we experience the "duplicate world" created by poetic language. Imagery evokes the meaning and truth of human experiences not in abstract terms, as in philosophy, but in more perceptible and tangible forms.

2.1.7 Incubation. Latin incubate, the source of incubate, literally meant "lie down on"; (a) incubation once had the sense of sleeping in a sacred place or temple for oracular purposes; (b) the act of keeping an organism, a cell, or cell culture in conditions favorable for growth and development; (c) a temporary break from creative problem solving that can result in insight; (d) a period of interruption or rest from a problem may aid creative problem-solving; (e) maintaining something at the most favorable temperature for its development.

Business **incubators** help emerging growth companies survive and grow during the start-up period when they are most vulnerable. A trial process in which a fund company operates a number of funds privately with its own capital or employee capital, and only opens the top performing funds to the public. The higher performing funds that survive the incubation period are used by the fund company to generate business. The funds with unattractive performance, which would be more difficult to market, are liquidated [3].

Correlation between **steps** of Creativity development and **features** which characterize highly creative people and above encyclopedic definitions of them is presented in Table 2. Table's cells represent the correlation's (first level of extensions-dialects' **syntax)** definitions of interferences and interactivities of intelligence creativity's steps and features in Conscience Society.

Table 2. Creativity's Kernel of Conscience Society. Extensions - Dialects. First level

Creativity top versus Creative feature	**Acquire Knowledge**	**Develop Curiosity**	**Become Interested**	**Passion**	**Dedication**	**Profes-sionalism**
Inspiration	Acquire Inspiration's Knowledge	Develop Inspiration's Curiosity	Inspiration become Interested	Inspiration is in passion	Inspiration dedicated	Professional inspiration
Imagery	Acquire Imagery's Knowledge	Develop Imagery's Curiosity	Imagery become Interested	Imagery is in passion	Imagery dedicated	Professional imagery
Imagination	Acquire Imagination's Knowledge	Develop Imagination's Curiosity	Imagination become Interested	Imagination is in passion	Imagination dedicated	Professional imagination
Intuition	Acquire Intuition's Knowledge	Develop Intuition's Curiosity	Intuition become Interested	Intuition is in passion	Intuition dedicated	Professional intuition
Insights	Acquire Insights's Knowledge	Develop Insights's Curiosity	Insights become Interested	Insights is in passion	Insight dedicated	Professional insight
Improvisation	Acquire Improvisation's Knowledge	Develop Improvisation's Curiosity	Improvisation become Interested	Improvisation is in passion	Improvisation dedicated	Professional improvisation
Incubation	Acquire Incubation's Knowledge	Develop Incubation's Curiosity	Incubation become Interested	Incubation is in passion	Incubation dedicated	Professional incubation

2.2 Creativity development top of Creativity's Kernel

Creativity development top of Creativity's Kernel in Conscience Society are provided by known Piirto's steps of intelligence's development: acquire Knowledge, develop Curiosity, become Interested, Passion, Dedication, and Professionalism.

2.2.1 Acquire Knowledge

How do we develop the skills to make hard choices, to appreciate how others feel, to shape the kind of world we want to live in, to be moral and live with integrity? The fundamental question of whether virtues are taught, inherited, or passed on by some other mechanism has been attributed to Plato more than 2,000 years ago. One current theory proposes that values and moral knowledge are acquired much in the same manner as other forms of content knowledge, through real world experience [4].

Knowledge acquisition is a method of learning, first proposed by Aristotle: "… the mind at birth is a blank slate … as a blank slate it contains no knowledge of the objective, empirical universe, nor of itself.". "Knowing subject" is often the description of a mind with acquired knowledge. A "Knowing subject" … may be defined as any conscious creature capable of deriving direct and immediate sensate data from its environment [5].

Syntax, semantics, and **pragmatics** of this intelligence creativity's development step have functionally to be defined on the base of the process of acquiring knowledge (information, operation, interaction environment parts) for intelligence inspiration, imagery, imagination, intuition, insights, improvisation, and incubation features which characterize highly creative people in Conscience Society.

This **knowledge acquisition** is the first step in society's very challenging professional life. But knowledge alone is not sufficient, because it is a static concept. Most knowledge could be found in a library but there it has a static existence: nothing happens!

Acquiring of information Knowledge is concerned with collection of all the information about subject. This information will constitute the Data Base of planned business. For example**:** In the Business "Regeneration energy for Republic of Moldova" it is necessary to accumulate information about the type of energies: sun energy, wind energy, water energy, waste energy, country products (straw, tree branch, vineyard branch, other agricultural remainders) energy, etc. What is quantity of each type of raw materials in the Republic of Moldova, what is its quality, price, etc?

Acquiring of operation Knowledge is concerned with the necessary to understand that each type of accumulated data has to be operated: collection, storing, processing, distribution of subject's information. It is necessary to underline what operations can be done with each type of information, possibility to make up different calculations. For example: In Business "Regeneration energy for Republic of Moldova" it is necessary to accumulate operations about possibility to produce different type of energy for Republic of Moldova: energy's production cost, energy's warehousing, organization of energy's distribution, etc.

2.2.2 Develop Curiosity. Curiosity is a mental state or an attitude that allows you to be extraordinarily interested in something; curiosity is the ambition to learn more about a given topic, etc. … Curiosity allows us to discover new challenges and to see possibilities where others see the end of the road. … Curiosity helps us to develop a supportive interest in the tasks we are performing; we might even have the strong desire to solve the challenge in order to satisfy our curiosity. …

Curiosity is an amazing characteristic that every person possesses when being a little child. When we grow older we start to develop concrete interests and hobbies, we aim to achieve fixed goals and start to discover the myths we desire to reveal. This process slowly but steadily starts to decrease our curiosity until only a slight minimum remains within ourselves. This is a negative development, especially when we clarify ourselves the importance of curiosity of our life and our personal development. The importance of curiosity drastically increases when we start to discover that a lot of "geniuses" were extraordinarily curious and inquisitive. Albert Einstein, Galileo Galilei,

Leonardo da Vinci and Archimedes are just a small fraction of those curious characters [6].
Syntax, semantics, and **pragmatics** of this intelligence creativity's development step have functionally to be defined on the base of obtained (acquired) and accumulated knowledge (information, operation, interaction environment parts) for intelligence inspiration, imagery, imagination, intuition, insights, improvisation, and incubation features which characterize highly creative people in Conscience Society.
Develop Curiosity is based on the effect that knowledge becomes interesting when someone become curios: how can this knowledge are used? Why it is so, and how can it be modified? Curiosity brings life in a package of knowledge. But curiosity is still static; it means only that was accumulated more knowledge.
Developing information Curiosity is concerned with understanding that it is essential to obtain detailed information about interested type of business, its moral status, social benefit and personal profit, environment and place of production, creation a full Data Base for interested type of business. For example: In Business "Regeneration energy for Republic of Moldova" it is necessary to accumulate information about the **interested** type of energy: cost, quantity, quality, types of raw material shipping, its cost, saving cost of raw material and produced energy, place and warehouse costs and saving conditions of raw material and product, distribution, etc. It is created the Data Base of **interested energy** for the Republic of Moldova.
Developing operation Curiosity is concerned with turning to good account each type of accumulated data in the Data Base of interested business. It is necessary to announce operations, algorithms, procedures which have to be processed with concrete type of data from business' Data Base. Data Base has to be transformed in adaptable warehouse for this concrete business. For example: In Business "Regeneration energy for Republic of Moldova" it is necessary to accumulate operations about possibility to produce **interested** (concrete) type of energy for Republic of Moldova: how to operate raw material and produced energy (purchasing, storing, processing, distribution, etc.) for interested type of regeneration energy of the Republic of Moldova, evaluation the value of this interested type of energy through other types of regenerable and traditional energies, its ecological (air, water, earth pollution) and social (human mentality, live condition) measure, social benefit and individual profit, etc.

2.2.3 Become Interested. To be, or become interested in something: (1) **deal in**: to be interested in something, (2) **wake up:** to start to pay more attention to something, or to make people pay more attention to something, (3) **have something on the brain:** to be very interested in something, so that you keep thinking and talking about it, (4) **be big on something:** to be very interested in something, or enjoy something a lot, (5) **be struck by/with something:** if you are struck by/with something, it seems unusual, interesting, or impressive to you, (6) **live and breathe something:** to be very enthusiastic about a particular activity and spend all the time you can doing it or talking about it, (7) **can't take your eyes off:** to be unable to stop looking at someone or something that is attractive, surprising, or interesting, (8) **nibble:** to show a slight interest in an offer or idea, (9) **care:** to be interested in something and feel strongly that it is important, (10) **leap on:** to be immediately very interested in something or very keen to do or have something [7].

2.2.4 Passion (from the Ancient Greek verb *πάσχω* (paskho) meaning to suffer) is a term applied to a very strong feeling about a person or thing. Passion is an intense emotion compelling feeling, enthusiasm, or desire for something. The term is also often applied to a lively or eager interest in or admiration for a proposal, cause, or activity or love - to a feeling of unusual excitement, enthusiasm or compelling emotion, a positive

affinity or love, towards a subject, idea, person, or object.
Passion is (1) any state of the mind in which it is affected by something external, such as perception, desire, etc., as contrasted with action, (2) any strongly felt emotion, such as love, hate, envy, (3) a strong affection or enthusiasm for an object, concept, (4) an outburst expressing intense emotion, (5) feelings, desires or emotions, as contrasted with reason, (6) the object of an intense desire, ardent affection, or enthusiasm.
"The passionate are like men standing on their heads; they see all things the wrong way": Plato. "Genuine passion is like a mountain stream; it admits of no impediment; it cannot go backward; it must go forward ":Christian Nestell Bovee. George Bernard Shaw 'insists that there are passions far more exciting than the physical ones ..."intellectual passion, mathematical passion, passion for discovery and exploration: the mightiest of all passions'". His contemporary, Sigmund Freud, argued for continuity (not a contrast) between the two, **physical and intellectual**; commended the way 'Leonardo had energetically sublimated his sexual passions into the passion for independent scientific research. '

2.2.5 Dedication [8] is (1) complete and wholehearted fidelity, (2) a ceremony in which something (as a building) is dedicated to some goal or purpose, (3) a message that makes a pledge, (4) a short message (as in a book or musical work or on a photograph) dedicating it to someone or something, (5) the act of binding yourself (intellectually or emotionally) to a course of action; "his long commitment to public service"; "they felt no loyalty to a losing team", (6) an act or rite of dedicating to a divine being or to a sacred use, (7) a devoting or setting aside for a particular purpose, (8) self-sacrificing devotion <her *dedication* to the cause>, (9) a ceremony to mark the official completion or opening of something (as a building).
Examples of (adjective) dedicated: (a) wholly committed to something, as to an ideal, political cause, or personal goal: a dedicated artist, (b) set apart or reserved for a specific use or purpose: We don't need a computer but a dedicated word processor, (c) (of machine parts, electrical components, hardware, etc.) made or designed to interconnect exclusively with one model or a limited range of models in a manufacturer's line: The new tractors use only high-priced dedicated accessories.

2.2.6 Professionalism is often defined as the strict adherence to courtesy, honesty and responsibility when dealing with individuals or other companies in the business environment. This trait often includes a high level of excellence going above and beyond basic requirements. Work ethic is usually concerned with the personal values demonstrated by business owners or entrepreneurs and instilled in the company's employees. The good work ethic may include completing tasks in a timely manner with the highest quality possible and taking pride in completed tasks.
Professionalism and the work ethic demonstrated by individuals in the business environment may be built around an internal moral system or code of ethics. Morality and ethics usually represent the personal beliefs individuals display when working in business. Common traits often include transparency, honesty and integrity. These personal traits often display themselves publicly when individuals respond to various business situations. A professional work ethic may be seen as somebody "walking the walk" regarding their personal morality and ethics.

2.2.7 Conclusion
Correlation between the intelligence **features** which characterize highly creative people and steps to be evaluated by Natural and Artificial Intelligences of Conscience Society to achieve the intelligence creativity top in Conscience Society are represented in the cells of Table no. 2 by correlation's **syntax** definitions of those steps and features interferences in Conscience society. **Syntax, semantics,** and **pragmatics** of all

intelligence creativity's development steps have functionally to be defined on the base of obtained (acquired) and accumulated knowledge (information, operation, interaction environment parts) for intelligence inspiration, imagery, imagination, intuition, insights, improvisation, and incubation features which characterize highly creative people in Conscience Society. The process of **syntax, semantics,** and **pragmatics** definitions of correlation between the intelligence **features** which characterize highly creative people and **steps** to be evaluated by natural and artificial intelligences to achieve the intelligence creativity top in Conscience Society are to be done with the help of **adaptable tools**.

3 Adaptable tools for Creativity's Kernel development

Future and Emerging Technologies **(**FET) is the Information and Communication Technologies (ICT) incubator and pathfinder for new ideas and themes for long-term research in the area of information and communication technologies. Its mission is to promote high risk research, offset by potential breakthrough with high technological or societal impact [9].

The socio-technical fabric of our society more and more depends on systems that are constructed as a collective of heterogeneous components and that are tightly entangled with humans and social structures. Their components increasingly need to be able to evolve, collaborate and function as a part of an artificial society.

3.1 Collective Adaptable and Adaptive Intelligent Systems

A key feature of Collective Adaptable and Adaptive Systems (CAAISs) is that they comprise many units/nodes, which have their own individual properties, objectives and actions. Decision-making is distributed and possibly highly dispersed, and interaction between the units may lead to the emergence of unexpected phenomena. They are open, in that nodes may enter or leave the collective at any time, and boundaries between CAAISs are fluid. The units can be highly heterogeneous (computers, robots, agents, devices, biological entities, etc), each operating at different temporal and spatial scales, and having different (potentially conflicting)

Operating principles by which CAAISs can operate should go beyond existing control and optimization theories, taking into account the diversity of objectives within the system, conflicts resolution, long term stability, and the need to reason in the presence of partial, noisy, out-of-date and inaccurate information.

Design principles necessary to build and manage CAAISs, such as enabling the emergence of behavior and facilitating prediction and control of those behaviors should exploit the inherent concurrency and include methods for system validation.

Evolutionary properties concerning the evolutionary nature of CAAISs can be developed through open-ended (unbounded) evolutionary systems, the trade-off and interaction between learning and evolution, and the effect of evolution on operating and design principles.

Expected impact of Operating and Design principles as well as of Evolutionary properties concerning the evolutionary nature of CAAISs can be developed by new functionalities for adaptable and adaptive ICT systems enabled through novel principles, methods and technologies for designing and operating collective adaptable and adaptive systems and new insights into the general properties of large scale distributed systems of Creativity's Kernel in Conscience Society.

3.2 Adaptable, Adaptive, and Evolvable Hardware.

Adaptive Hardware reflects the capability of a system to maintain or improve its performance in the context of internal or external changes, such as uncertainties and variations during fabrication, faults and degradations, modifications in the operational environment, incidental or

intentional interference, different users and preferences, modifications of standards and requirements, trade-offs between performance and resources, etc.

The First NASA/ESA Conference on Adaptive Hardware and Systems [10] was to bring together leading researchers from the adaptive hardware and systems community to exchange experiences and share new ideas in the field. The conference expands the topics addressed by the precursor annual series of NASA/DoD Conference on Evolvable Hardware held between 1999 and 2005. This meeting was provided a forum for discussion on the generic techniques of adaptive hardware and systems, with a focus on communications and space applications, with view to its expansion and exploitation in other applications such as consumer, medical, defense and security, etc.

The paper [11] was one of the most important at the Second NASA/ESA Conference on Adaptive Hardware and Systems. It explores adaptive and evolvable hardware (AEH) solutions from three essential perspectives: (a) technology, (b) economics and (c) system architecture. The growing field of mobile robotics [12] produces various types of robot systems for different applications. Was underlined that the development of new robots often requires the design of new hardware systems which is time consuming and susceptible to errors.

Adaptation at hardware levels increases the system capabilities beyond what is possible with software-only solutions, and a large number of adaptation features employing both analog and digital adjustments are becoming increasingly present in the most elementary system components. Algorithms, techniques, and their implementation in hardware are developed over a diverse variety of applications, such as adaptable and adaptive communications (adapting to changing environment and interferences), reconfigurable systems on a chip and portable wireless devices (adapting to power limitations) or survivable spacecraft (adapting to extreme environments and mission unknowns).

3.3 Adaptable Software.

Adaptable tools represent a set of meta-system methods, models, algorithms and procedures [13] used in the process of the software and hardware systems creation and its implementation. They support human-machine interaction processes to be developed by various kind of software and hardware systems at different stages of Information, Knowledge, and Conscience based Societies ascending evolution.

Adaptors as adaptable meta-system tools represent the union of methods, models, algorithms and procedures to be used for adaptable languages and processors creation and application. They are based on definition and usage of new or modified data, operators, statements, and controls. Adaptable tools are represented by the set of adaptors of different types:

Adaptable language	**AD**	**Adaptable processor**
New data	**AP**	**New actions (operators, statements,**
	T	**controls)**
Extension definition	**OR**	**Extension call**

The adaptor as a meta-system tool supports adaptable software (language and processors) and hardware flexibility (extension and reduction-specification). Language adaptor as part of adaptable language is composed from the pragmatic, syntactic, semantic, environment, and examples of new or modified element's component parts:

_BL_ <element's pragmatics>
_SY_ <element's syntax>
_SE _ <element's semantics>
_CO_ <element's usage context>
_EX_ <element's examples call>
_EL_

Using adaptor it can be defined, for example, one of the new, first level of extensions-dialects elements "**Intuition is in passion"** which enrich the Creativity's Kernel of Conscience Society:

_BL_ < Intuition is in passion's pragmatics>

_SY_ < Intuition is in passion's syntax>
_SE _ < Intuition is in passion's semantics>
_CO_ < Intuition is in passion's usage context>
_EX_ < Intuition is in passion's examples call>
_EL_
Adaptor's component parts support flexibility of languages and of processors as component parts of adaptable systems. Adaptors permit the process of software and hardware adaptation to the home-machine interface needs. Adaptor is represented by the corresponding extender and reducer. The adaptors permit the Bottom-Up, Top-Down, and Horizontal adaptable (flexible) software's and hardware's development.

3.4 On-Off-Line adaptable software

The On-Off-Line adaptable software is composed from adaptable language and from corresponding On-Off-Line adaptable processors.
Adaptable language is composed from the adaptable basic language, language's adaptors, and derivative (adaptable) elements (extensions - dialects).
On-Off-Line adaptable processors are represented by the set of Off-Line, On-Line, and On-Off-Line adaptable processors, which implement adaptable languages. Evolution of On-Off-Line adaptable processors is based on the evolution of Off-line adaptable software [13].
Adaptable translation methods and models are used to demonstrate Off-Line adaptable processors' automatic creation. The last one is composed from the Off-line adaptable software's Basis and Off-line adaptable software' Levels.

3.5 Adaptable software's Basis

Adaptable Software's Basis is represented by the adaptable basic language, language's adaptors, and derivative elements in community with the adaptable basic system: Definition, Fixation, Calling, and Reduction adaptable sub-systems. It were represented the schemes and proved the axioms of automatically creation of Off-line basic adaptable processors.

3.6 Adaptable processors of the first level of translation complexity.

There are distinguished three different types of the **first level of translation complexity** Off-line adaptable processors. Were invented next creation methods: (1) the Extension's Time Implementation Method (E-T-I-M), (2) the Extension's Level Implementation Method (E-L-I-M), and (3) the Processor's Type Implementation Model (P-T-I-M). With the help of E-T-I-M were created adaptable pre-, inter-, and post-processors. The E-L-I-M was used to create level-level (L-L), level-direct (L-D), and level-level-direct (L-L-D) adaptable processors. Were demonstrated the theorems of automatically creation of adaptable processors by the help of the E-T-I-M and E-L-I-M processor's creation methods.

3.7 Adaptable processors of the second level of translation complexity

There are distinguished three different types of the **second level of translation complexity** adaptable processors: the adaptable processors of the ELIM-PTIM type, of the ETIM-PTIM type, and of the ELIM-ETIM type. The adaptable processors of the ELIM-ETIM type, for example, are represented by the L-L-Preprocessors, L-D-Preprocessors, and L-L-D-Preprocessors. Was demonstrated the possibility of automatically creation of Off-line adaptable processors of the second level of translation complexity: Off-line Pre-, Off-line Inter-, and Off-line Post-processors and of Off-line: Off-line L-L-, Off-line L-D-, and Off-line L-L-D-processors.

3.8 Adaptable processors of the third level of translation complexity

The system part of third level of Off-line Adaptable Software is represented by such types of processors as Off-line-L-L-Pre-, Off-line-L-L-Inter-, Off-line-L-L-Post-, Off-line-L-D-Pre-, Off-line-L-D-Inter-, Off-line-L-D-Post-, Off-line-L-L-D-Pre-, Off-line-L-

L-D-Inter-, and Off-line-L-L-D-Post-processors. It was demonstrated [Tod-07] the process of automatically creation of these Off-line adaptable processors of the third level of translation complexity.

3.9 Conclusion

The Ms Office and Ms Windows Systems are developed by Software' shell methodology. Microsoft Office for Mac has for long been criticized. Adaptation at hardware levels increases the system capabilities beyond what is possible with software-only solutions.

The methodology of the On-Off-line adaptable processors supports development of Adaptable Software and Hardware. It were demonstrated that adaptable tools as base for creation, application, and development of adaptable software are characterized by a set of advanced linguistic' and processors' features.

On the base of adaptable processors of the first level of translation complexity Off-line adaptable processors it is possible to demonstrate the process of automatically creation of the first and second levels of translation complexity On-line and On-Off-line adaptable processors.

On-line and Off-On-line first level [14] adaptable processors can by created by the help of the P-T-I-M using Off-line adaptable processors developed on the base of E-T-I-M and E-L-I-M processor's creation methods.

It is easy to demonstrate the process of automatically creation of On-line and On-Off-line adaptable processors of the second level [15] of translation complexity.

It is possible as well to demonstrate the automatically creation of On-line and On-Off-line Adaptable Software of the third level [16] of translation complexity.

The demonstrations of automatically creation of On-line and On-Off-line Adaptable Software of the third level of translation complexity can be obtained on the base of first and second levels of translation complexity of adaptable processors.

4 Creativity's Kernel Extensions-Dialects

The extraordinary power of human information processing can be seen as a product of the third great thrust of neural development that Paul MacLean has called the "neomammalian brain" – culminating in the structure of the human neocortex. The quest for coherence in the world, the search for a pattern to sequential events, is a reflection upon a long series of evolutionary changes in brain organization and complexity. These changes have brought us to the point where we can study in others, and admire in ourselves, a level of thinking far beyond anything that can be achieved in even the closest of our nonhuman relatives.

4.1 The First Seven Years in Conscious Life.

To a newborn human infant, the world is a long way from being coherent and predictable, but it is also far from "the great blooming, buzzing confusion". We now know that newborns have a much better-developed perceptual system than we have ever realized.

Facial expressions, for example, can be imitated by infants as young as two to three weeks old. It is true that a child "belong less to himself than to every object which happens to catch his notice", but there is also a rapidly growing sense of priority and attentiveness. Out of this accumulating sense of perceptual coherence come a sense of competence and a sense of self.

By the age of three, most children have the seeds of a conscience. A two-year-old may know when he's misbehaving, and may feel uneasy about it. He may also grasp the concept of justice, or fairness, especially when he feels hurt or denied. But learning to resist temptation, or to feel sorry after doing wrong, is an ability children acquire during the preschool years, when they develop both a sense of fairness and the ability to act on it. Still, most preschoolers occasionally yield to temptation. They're just beginning to develop a sense of empathy, or an awareness of how others feel. Because empathy is something children learn through example

and through interaction, a conscience takes years to develop.
The views on how early children show signs of conscience have varied. The early psychoanalytic theory and the theories influenced by it emphasized the preschool age as the time of the emerging superego. The cognitive theories considered young children essentially amoral and selfish.
There are five interrelated domains of child development [17]:
Social - Refers mostly to the ability to form attachments, play with others, co-operation and sharing, and being able to create lasting relationships with others.
Physical - Development of Fine (small) and Gross (large) Motor Skills.
Intellectual - The process of making sense of the world around them.
Creative - The development of special abilities creating talents. Music, Art, Writing, Reading, and Singing are all ways for creative development to take place.
Emotional - Development of self-awareness, self-confidence, and coping with feelings as well as understanding them.
The Creativity's Kernel can evaluate using experience of "the first 7 years of life of a human" evaluation.

4.2 Millennium's Personalities for Conscience Society

Research in conscience branch is done with the goal of creation of **Conscience Society** in the near (20-30 years) future [18].
Present research includes analysis of about 100 famous people that changed the world with their glories. Their conception about evolution of literature, music, science, culture, politics, exploration and philosophy helped humanity to develop society. Many generations find their own ways in this big and dangerous world using conception of these famous people.
It was divided information about these personalities in 7 categories: literature, music, science, culture, politics, exploration and philosophy [19].
Who are those personalities which changed the world? This list of 100 famous people changed the history and the life of billion people. The open question is: **What are their influences for Conscience Society's creation process?** How to introduce their experience in the process of creation the Creativity's Kernel using adaptable technology?

4.3 Religion and social moralities in Conscience Society

Morality (from the Latin moralitas "manner, character, proper behavior") is the differentiation between intentions, decisions, and actions between those that are good (or right) and those that are bad (or wrong) [22]. A moral code is a system of morality (for example, according to a particular philosophy, religion, culture, etc.) and a moral is any one practice or teaching within a moral code. The adjective moral is synonymous with "good" or "right." Immorality is the active opposition to morality (i.e. good or right), while amorality is variously defined as an unawareness of, indifference toward, or disbelief in any set of moral standards or principles.
"The world has achieved brilliance without wisdom, power without conscience. We know more about war than we know about peace, more about killing than we know about living."
General Omar N. Bradley
This quote motivate to search for the answers to the question: How can we contribute to our society? This answer lies in the capacity and willingness of each heart to serve the common good [20]. Can we take the possibility to build future society on the bases of conscience? What aspects does it have? All this issues are worth investigating Social and Religion morality in Society, their interference and their correlation with the goal of creating the best Society – the Conscience Society.

4.3.1 Social morality

How are we to behave toward one another? Morality is a social phenomenon. Think about this. If a person is alone on some deserted island would anything that person

did be moral or immoral? That person may do things that increase or decrease the chance for survival or rescue but would those acts be moral or immoral? Most of what we are concerned with in Ethics is related to the situation in which humans are living with others [21]. Humans are social animals. Society contributes to making humans what they are. For humans there arises the question of how are humans to behave toward one another.

Social morality rules represent the basis of life and the basis of laws in society. Next 8 rules represent the basis of morality [22] in Conscience Society as well: (1) Accept differences in others; (2) Respond promptly to others; (3) Leave some "free" time; (4) Care about others as if they were you; (5) Treat everyone similarly; (6) Never engage in violent acts; (7) Have an inner sense of thankfulness; (8) Have a sense of commitment.

Although humanity has no generally accepted definition of conscience or universal agreement about its role in ethical decision-making, three overlapping approaches have significantly addressed these issues: (1) Religious views, (2) Secular views, and (3) Philosophical views. These approaches will create the bridge in understanding that the global morality in Conscience Society will constitute basis of community of social and religious morality principles.

4.3.2 Religious views of conscience

Religious views of conscience usually see it as linked to a morality inherent in all humans [20].

Many religions have narratives, symbols, traditions and sacred histories that are intended to give meaning to life. In many places it has been associated with public institutions such as education, the family, government, and political power. Religion often makes use of meditation, music and art. They tend to derive morality, ethics, religious laws or a preferred lifestyle from their ideas about the cosmos and human nature.

Religious groups as well as non-theistic systems differ greatly in their beliefs and practices but each of these systems of belief has some moral codes and examples of the ethic of reciprocity. Examples of moral codes include the Five Precepts and the Noble Eightfold Path of Buddhism, the ancient Egyptian code of Ma'at; the ten commandments of Judaism, Christianity, and Islam; Judaism's Noahide Law, the yamas and niyama of the Hindu scriptures; the ten Indian commandments and the Golden Rule.

4.4 Ecologic Business in Conscience Society

A little number of people thinks about the connection between **business and conscience,** but we are sure that everyone thinks about each question separately [23]. Everyone is able to see the enormous changes in world's ecology, and its present situation, that the nature is destroyed day-by-day. Water, air, soil is polluted, many kinds of animals and birds continue to disappear, resources are continually come to the end, o-zone sphere became smaller, on the earth and even around the earth are accumulated more and more garbage … etc. This is just a part result of human activity!

Throughout generations, as people grow older, they remark that morals in society have degraded compared to when they were younger. Perhaps this is because as people grow older they view all the corrupt, thoughtless, and inhumane acts people commit. Or, perhaps this is true, that morals in society have indeed become worse.

A **business** (also called or represented by company, enterprise or firm) is a legally recognized organization designed to provide goods and/or services to consumers. Businesses are predominant in capitalist economies, most being privately owned and formed to earn profit that will increase the wealth of its owners and grow the business itself. The owners of a business have as one of their main objectives the receipt or generation of a financial returns in exchange for work and acceptance of risk.

Ethics is the study of right and wrong and of the morality of choices made by individuals. An ethical decisions or action is one that is "right" according to some standards of behavior. **Business ethics** is the application of moral standards to business situations. Business people face ethical issues daily. These issues stem from a variety of sources. While some issues arise infrequently, others occur regularly. Fairness and honesty in business are important ethical concerns. Besides obeying all laws and regulations, business persons are expected to refrain from knowingly deceiving, or intimidating others. Lying is also a business problem. According to a Roper Public Opinion Research Center poll, 72 % of US surveyed sometimes lie. Also, 54 % of the respondents believe that people are less honest than they were 10 years ago.

It is sometimes tempting to place personal welfare above the welfare of others. Relationship with customers and coworkers often create ethical problems since confidential information is expected to be kept secret and all obligations are expected to be kept secret and all obligations are expected to be honored. A bribe is anything given to a person that might unfairly influence that person's business decisions. All bribes are unethical. Business communications, especially advertising, can present ethical question. False and misleading advertising is unethical and can infuriate costumers. Sponsors of advertisements aimed at children must be especially careful to avoid messages that are misleading. Advertisers of health-related products must take precautions to guard against deception.

Ecological economics is a trans-disciplinary field of academic research that aims to address the interdependence and co evolution of human economies and natural ecosystems over time and space. It is distinguished from environmental economics, which is the mainstream economic analysis of the environment, by its treatment of the economy as a subsystem of the ecosystem and its emphasis upon preserving natural capital. One survey of German economists found that ecological and environmental economics are different schools of economic thought, with ecological economists emphasizing "strong" sustainability and rejecting the proposition that natural capital can be substituted for human-made capital.

4.5 Correlation: business competition & ecological conscience

The Ecology and the Economy – Can we find harmony in these two? A linguist will tell us that both Ecology and Economy stem from the Greek word 'oikos' – meaning 'House'. Ecology, derived from 'oikos' combined with the word "logie' – meaning "the study of the house". And Economy means "management of the house". Therefore, we can rightly deduce that the environment is our house and the two words are as result strongly connected today.

And yet, although needing to work in harmony, their relative perspectives rarely seem to connect. Whereas Ecology evokes images of energy, green landscapes and open freedom, Economy leads to thoughts associated with money and mass production, of technologies and gain dressed in stuffy attire. But in reality these two are becoming caricatures of themselves. Economy is harboring more in the way of relationships, and Ecology, is increasing its commercial interactivity. Both are now heading into unfamiliar territory. Ever increasingly we begin to realize our economy is based on the natural world, but it is also destroying it. Steadily we all come to the realization that we've been living an unsustainable lifestyle. We're using resources far faster than the planet can replenish them and expelling waste much faster than the planet can absorb.

The biggest application on the green agenda will surely be to make green technologies available to those who would otherwise not have them at all in those economies of the developing world. Going ethical may save our conscience – and today, it will help us to turn a profit.

4.6 Ecologically pure production in Conscience Society

The idea of this project [24] is to organize the ecological business in the Conscience Society. This is a brief business plan for roast sunflower seeds production. The production will be oriented for the Conscience Society's consumer; it means that it will be ecologically pure.

Almost everyone likes to enjoy some roasted sunflower seeds till walking, or having a rest. Nobody can tell us how much centuries ago people invented this kind of snack. They're also a good resource of energy. That's why our company will work in this sphere. Using special frying technologies this company is going to achieve the tastiest goods. People will be able to consume sunflower seeds of the highest quality & on the most convenient price! Also a very important matter is that we're passing to the era of the conscience society. That's why it is very important to produce the ecologically pure product; it will be useful for consumers and won't make any harm to nature.

4.6.1 Place. Taking in consider all advantages & disadvantages it is decided to found the production near to the raw materials, in the southern part of the country. There're a lot of rich fields of sunflower. The sunflower seeds from this region are well-known by their quality because of the good climate conditions, soils & high qualified professionals.

4.6.2 Production & distribution. The most important fact is to buy the modern equipment. This equipment should provide not only high quality of the production, but and be safety for the environment. It shouldn't produce any toxic substances. For our production it is need: sunflower seeds washing equipment, sunflower seeds cleaning equipment, sunflower seeds roasting equipment, packaging equipment. One more thing is that instead of polythene package the company is going to use the paper one. It will keep all the useful qualities of seeds and is ecologically pure.

4.6.3 Price. In order to establish the price of product it's necessary to find the self-cost of 1 kilo of roast sunflower seeds. In order to find the self-cost of 1 kilo of roasted sunflower seeds the company decided to sum the cost of raw materials, expenses for public utilities, credit rate

4.6.4 Promotion. In the promotional policy we are going to use all available promotional tools. Like advertising, sales promotions, public relations (especially publicity) & so on. The company is going to advertise its production widely through the newspapers, TV& internet. It is also planned to create the firm's site with all the necessary information for its production's future consumers. But publicity is also a very important fact in promotion, because it's based on the product's quality & consumer opinions.

4.7 Beauty - a conscience's element of Creativity's Kernel

A world without **Conscience…** is: (1) Wealth without work, (2) Pleasure without sense,

(3) Knowledge without character, (4) Commerce without morality, (5) Science without humanity, (6) Worship without sacrifice, (7) Politics without principles. Shakespeare: "… a man with a guilty conscience is dead, even while living".

Nowadays society lives within an extinguishing world: with Violence, Crime, Trouble, Miseries, Indifference, Discrimination … The person who loses his conscience has nothing left worth keeping. When will our consciences grow so tender that we will act to prevent human misery rather than avenge it? Our greatest happiness does not depend on the condition of life in which chance has placed us, but is always the result of a good conscience, good health, occupation, and freedom in all just pursuits.

Emphasizing moral values we will be able to plant in everybody's soul the golden seed of conscience, we will release the truth and confidence in our society and will open the huge , locked for us, gate of happiness. Happiness is the meaning and the purpose of

life, the whole aim and end of human existence (Aristotle). Conscience is the perfect interpreter of the life (Karl Barth). So give a sense to your life, live it! Living with conscience means living with heart!

Bringing to life the extinguishing world, is possible only through its conscience elements:

Truth, Courage, Justice, Equality, Beauty, Ethics, Nobility, Willingness, Generosity, Charity, Goodness, Peace, Freedom [25]. All these elements represent golden seeds that are needed to be plant in everybody's soul.

Beauty- a Conscience's element: "The ability to see beauty is the beginning of our moral sensibility. What we believe is beautiful we will not want to destroy". (Sean Parker Dennison)

A thing of beauty is a joy forever: "Its loveliness increases; it will never. Pass into nothingness; but still will keep. A bower quiet for us, and a sleep Full of sweet dreams, and health, and quiet breathing". (Keats John: "Endymion")

Beauty is studied as part of aesthetics, sociology, social psychology, and culture. An "ideal beauty" is an entity which is admired, or possesses features widely attributed to beauty in a particular culture, for perfection.

5 Conclusion

Adaptability [26] is strong and efficient technology in creation Conscience Society beginning with Creativity's Kernel basis construction and continuing with creation of its upper levels.

Conscience elements represented through Truth, Courage, Justice, Equality, Beauty, Ethics, Nobility, Willingness, Generosity, Charity, Goodness, Peace, Freedom represent ideal support in completion the "cells" of Creativity's Kernel level's extensions-dialects of Conscience Society using Collective Adaptable and Adaptive Intelligent Systems.

References

[1] R. Mihalcea, I. Gh. Rosca and D. Todoroi, "Sisteme informatice in Societatea Conştiinţei," in Analele ASEM, Editia a VIII-a, Editura ASEM, 2010, pp. 341 – 360.

[2] R. Mihalcea, I. Gh. Rosca and D. Todoroi, "Discovering and managing Creativity in Conscience Society," in Analele ASEM, Editia a IX-a, Editura ASEM, 2011, pp. 225 – 239.

[3]http://www.investopedia.com/terms/i/incubation.asp#axzz1nxU9J6it

[4]http://www.accessexcellence.org/LC/SER/BE/how.php

[5]http://en.wikipedia.org/wiki/Knowledge_acquisition

[6]http://www.planetofsuccess.com/blog/2010/how-to-develop-curiosity/

[7]http://www.macmillandictionary.com/thesaurus-category/british/To-be-or-to-become-interested-in-something

[8] http://www.thefreedictionary.com/dedication

[9] http://cordis.europa.eu/fp7/ict/programme/fet_en.html

[10] The First NASA/ESA Conference on Adaptive Hardware and Systems (http://ehw.jpl.nasa.gov/events/ahs2006/ahs2006-1st-call4participations.pdf)

[11] A. Stoica and R. Andrei, "Adaptive and Evolvable Hardware - A Multifaceted Analysis," in Adaptive Hardware and Systems, Second NASA/ESA Conf., Vol, Issue, 5-8 Aug. 2007, pp. 486 – 498.

[12] M. Merten and H.M. Gross, "Highly Adaptable Hardware Architecture for Scientific and Industrial Mobile Robots," in IEEE Conference on Robotics, Automation and Mechatronics, 21-24 Sept. 2008, p. 1130-1135, Chengdu.

[13] D. Todoroi, S. Nazem, T. Jucan and D. Micusha, Transition To A Full Information Society: Stage Development. Working Paper No. 98-2, UNO, Omaha, USA, March 1998, 38 pg.

[14]. D. Todoroi, M. Kudlek, Z. Todoroi, T. Jucan and D. Micusa, "Crearea **primului nivel** de procesoare adaptabile utilizînd formalismul E-T-M de interacţiune translatorică a procesoarelor adaptabile," Informatica Economica, Bucuresti,Vol. VIII, Num. 3/2004, pp. 108-116.

[15]. Z. Todoroi, M. Kudlek, D. Micusa and

D. Todoroi, "Crearea automatizată a procesoarelor adaptabile de **nivelul doi** bazate pe nivelul unu cu utilizarea T-formalismului de interacţiune translatorică," Informatica Economica, Bucuresti, Vol. IX, Num. 1/2005, pp. 47-55.

[16]. D. Micusa, M. Kudlek, D. Todoroi and Z. Todoroi, "Crearea automatizată a procesoarelor adaptabile de **nivelul trei** in baza formalismului E-T-M de interactiune translatorica a procesoarelor adaptabile," Informatica Economica, Vol. VII, Num. 2/2003, p.103-109.

[17] Z. TODOROI, D. TODOROI and H. LOBANOFF, "Education in Conscience Society, " in Int. HUMBOLDT-KOLLEG "Knowledge, Culture, Science – the Fundament of Quality of Life in Society", Timişoara, November 23-28, 2010 (To be published)

[18] M. Draganescu, Conştiinţa, frontierã a ştiinţei, frontierã a omenirii, comunicare la sesiunea Comitetului Român pentru Istoria şi Filosofia Stiinţei şi Tehnicii, Academia Românã, 18 octombrie 2000, publicată în Revista de filosofie, XLVII, Nr.1-2, 2000, pp. 15-22. http://www.racai.ro/~dragam/Constiinta.html

[19] D. Todoroi, E. Lobanov and I. Obada, "Conscience Society creation premises. World Personalities and … the First 7 years at home," in Proc. of International conf. "Competitivitatea şi inovarea în economia cunoaşterii", Sept. 24-25, 2010, Editura ASEM, Vol. 1, 2011, p. 322 – 326: ISBN 978-9975-75-549-8

[20] X. Eriomenco, Cond.şt., D. TODOROI, „Religion and Morality in Conscience Society," in Simp. ştiinţific internaţional al tinerilor cercetători, Ediţia a IX-a, Aprilie 14-15, 2011, Editura ASEM, Chişinău-2011, pp.248-249.

[21]http://www.qcc.cuny.edu/socialsciences/ppecorino/intro_text/Chapter%208%20Ethics/Mores_Law_Morality.htm

[22] http://en.wikipedia.org/wiki/Morality

[23] D. Todoroi, T. Parlicova and V. Stadnic, "Some guiding marks of ecological business in Conscience Society," in Proc. of International conf. "Competitivitatea şi inovarea în economia cunoaşterii, Sept. 24-25, 2010, Editura ASEM, Vol. 1, 2011, pp. 326 – 331: ISBN 978-9975-75-549-8

[24] T. Parlicova, Cond. şt. D. Todoroi, "The Golden seed" The Ecologically pure production in Conscience Society (Production of the roasted sunflower seeds)," in Simp. internaţional al tinerilor cercetători, Ediţia a VIII-a, Aprilie 28-29, 2010, Editura ASEM, Chişinău-2010, pp. 394-396

[25] M. Uzun, Cond. şt. D. Todoroi, "Beauty – A Conscience's Element," in Simp. internaţional al tinerilor cercetători, Ediţia a VIII-a, Aprilie 28-29, 2010, Editura ASEM, Chişinău-2010, pp. 398-400.

[26] D. Todoroi, D. Micusa, "Conscience Society in Information Era," in Proc. of The 34th Annual Congress of ARA, Bucharest, Romania, Presses Internationales Politechnique, Montreal, Quebec, Mai 18-23, 2010, pp. 39-48.

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