

# ADAPTABILITY FOR CONSCIOUSNESS SOCIETY

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## Abstract:

**Purpose:** This exploratory paper investigates Adaptability as the Engine to create Computer Software. Adaptable Tools Advance Software for Artificial Intelligences. The paper aims to open the discussion around the impact that Adaptable Software Tools might have on Information, Knowledge Based and Consciousness Societies i.e. Homo-Robotic Societies of Information Era.

**Design/methodology/approach:** Paper employs an exploratory literature review investigating the development and current state of the art in relation to Adaptability as Engine to create Software for Computers, Systems, Networks, and Complexes of Intelligent machines in Information Era; this literature review serves as the starting point of subsequent theorizing.

**Findings:** Based on the literature review we theorize that the Adaptable Tools were used for creation Software for different Generations of Computers, Systems, Networks, and Complexes of Intelligent machines, last ones representing ROBO - intelligences with creativity, emotions, temperaments, and sentiments. In this process Adaptable Tools achieves new horizon of creation, they are transformed in a new Engine: the Robotic Adaptable Tools. To name just a few uses of Robotic Adaptable Tools, its can help in: (1) supporting definitions of new robotic intelligence entities, (2) its stratification, (3) its algorithmic representation, and therefore (4) improving robotic skills and competences as well as (5) generating requirements for new competences, and (6) promoting a collaborative environment among the Actors of Computing Industry.

**Research limitations/implications:** This paper opens the discussion around creation Software for Computers, Systems, Networks, and Complexes of machines using Adaptable Tools, as well as its succession in creation Artificial Intelligences with creative, emotional, temperamental and sensual possibilities using Robotic Adaptable Tools. Paper suggests a wide range of areas for further research in the branch of Robotic Industry.

**Practical implications:** In this paper we argue that by looking at Robotic Adaptable Tools as more than just a set of tools for improving robotic intelligences Adaptable Computing in Robotic Industry can address some pitfalls of a particular type of Homo-Robotic communication in Consciousness Society.

**Originality/value/sustainability:** The Adaptable Tools have been developed as part of Software Industry in Information Era. They have used in creating Computer Systems for different generations of computers. The Robotic Adaptable Tools are a new and very popular approach and is demonstrated that it is powerful in many areas of Artificial Intelligences Industry. This paper is novel in that it initiates a dialogue around the impact that Robotic Adaptable Tools might have on Human-Robotic and Robotic-Human Societies.

**Keywords:** Information, Consciousness, Project, Artificial intelligence, Consciousness Society

**JEL Cassification:** C88, L86

## Introduction

The purpose of the research is to find out the common moral principles for Artificial and Natural Intelligence that would serve a basis for successful interacting of robots with humans in future Consciousness Society.

Some of the next events in the robotic development process represent the common direction in the Evolution of the Society in direction of Creation the Consciousness Society, the Society which is characterized by the equality of Artificial Intelligence and

Structured Natural Intelligence  
(AI=NIstructured)

A. Japan Robotic plant with 1800 Robots and 8 Engineers (2000 year) .

B. Academician Draganescu, former Romanian Academy President and Chief in 2000-2004 years of Romanian AI Project predicts creation of Consciousness Society in 2019-2035 years, the Society with equality AI=NIstructured.

C. Cornegy Melon University research and AI Weeks announces all 7 million Human functions from which 5,5 million functions are Robotics ones.

D. European Union Committee in January 2017 decides to get Passports to Robotic Entities

D1. The last time in European Community. Publications [1-3] confirm the European Community international interest [4] for AESM research results in the Branch of Conscience Society Creation process and in its engine for the process of creation ROBO-intelligences, represented by the Adaptable Tools

D2. Robots in Homo - Robotic Conscience Society. Committee on the problems of the European Parliament endorsed the draft recommendations, as well as the administrative regulations on the civil-engineering production of robots. For that document voted PRO: 17 deputies, Against: 2 deputies, and Obtained: 2 deputies.

D3. Robot's Econometrics. According to data of the European Parliament, in the period 2010-2014 the average sales of robots was 17% annual and in 2015 has risen to 29 percent. Growth of robots developed the volume of patents in relation to robots - in the last 10 years the volume has doubled. Artificial intelligence will determine economic efficiency in such spheres as manufacturing, commerce, transport, medical service, education, case-law and agriculture.

D4. Robot - legal status. It is not yet determined the legal status of robots, which soon will overwhelm us. Scientists are, as some carriers of artificial intelligence, provided with self-education capacity, separately, will need to be identified as "electronic faces" with corresponding Passport.

D5. The document will contain the framework conditions for producers and users of robots, formulated since the great writer Isaac Azimov: 3 principles - the basic conditions in humans. collaboration with robots.

D6. Isaac Azimov: 3 principles. Asimov's Three Laws of Robotics, as they are called, have survived to the present:

D6.1. Robots must never harm human beings or, through inaction, allow a human being to come to harm.

D6.2. Robots must follow instructions from humans without violating rule 1.

D6.3. Robots must protect themselves without violating the other rules.

E. Russian President Putin in September 2017 at Moscow University announce Russian AI Industry Project

F. Creativity Piirto's 7i component parts with Piirto's 6Tops its development steps.

G. Goleman's research confirm priority of Human Emotions before Human Creativity based on 6 Basic Classic Emotions

H. AESM 2008-2018 "Creation Consciousness Society" research Project demonstrates the possibility of Robotic creation using Adaptable Tools. The possibility to create Robotic Creativity, Emotion, Temperament and Sentiment New Robotic Elements in forms of Program Product were demonstrated.

I. Adaptable Tools are used for preparing first 3 stage of Robotic Program Products development. Using adaptable tools of algorithmic definitions of robotic elements are defined superior, next level elements of ROBO - intelligences.

J. Present 2018 year of research is concerned to Aura development for Robotic Entities.

### 1. Adaptability.

Adaptable Tools [1] represent our solution for Robotic problem. The adapter, as a meta-system tool, supports adaptable software and hardware flexibility: extension and reduction of ROBO-intelligences possibilities.

By the help of adapter, it can be presented pragmatics, syntax, semantics, environment, and examples of new or modified (next, 2nd, higher level) elements of ROBO-

intelligences.

**1.1. The 2<sup>nd</sup> Level IQ's elements: Adapter's general scheme:**

**\_BL\_ < Pragmatics of ROBO-intelligence element >**

**\_SY\_ < Syntax of ROBO-intelligence element >**

**\_SE\_ < Semantics of ROBO-intelligence element >**

**\_CO\_ < Context of ROBO-intelligence element >**

**\_EX\_ < Examples of ROBO-intelligence element >**

**\_EL\_ plus example of its implementation.**

**1.2. Example:** Using adapter it is defined one of the new (2<sup>nd</sup> level) ROBO's element "Inspired passion":

**\_BL\_ < Inspired passion's pragmatics >**

**\_SY\_ < Inspired passion's syntax >**

**\_SE\_ < Inspired passion's semantics >**

**\_CO\_ < Inspired passion's usage context >**

**\_EX\_ < Inspired passion's examples call >**

**\_EL**

**1.3. The 2<sup>nd</sup> Level IQ's elements: Commentaries:**

**(1) Pragmatics:** name "Inspired passion";

**(2) Syntax:** "Inspiration in passion";

**(3) Semantics:** Correlation of functionalities of the 1<sup>st</sup> level of IQ elements: "Inspiration" and "Passion";

**(4) Usage context:** Evaluation from "Inspired passion" situation "Inspiration become interested" to the next (top) situation "Inspired professionalism";

**(5) Examples** of "Inspired passion": "ROBO-intelligence became passionate by it business, it begin think to social profit."

**2. Robotic adaptability.**

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 support development of Adaptable Software and Hardware.

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. 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.

It was 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.

Human social and economic demand and supply for Adaptable Software in the Information and Knowledge Based Societies is too important.

Adaptable methodology and technology in creation and application of Adaptable Software permit to develop in the future the research process of applicability of each of the first, second, and third levels of Adaptable Processors.

Different types of Adaptable Software will have different domains of its applicability in the process of computerized human-machine intelligent interaction. This process conducts to develop Natural Language Processing Adaptable Software of human-machine interaction.

The Adaptable Software forms new industry branch of Informational technologies of the Information and Knowledge Based Societies.

**2.1. The 1<sup>st</sup> step.** To create ROBO-intelligences which possess 1st level elements intelligences, emotions and temperaments – it is necessary first of all to introduce them in robotic heart and robotic head.

This consists in creation corresponding Computer Based Information Systems for each of: Intelligences (7i), Tops (6s),

Emotions (6), Temperaments (4), and Sentiments (positive & negative)

**2.2. The 2<sup>nd</sup> step.** Next step in creation process of ROBO-intelligences consists in elaboration of their 2<sup>nd</sup> level elements based on its 1st level elements using Adaptable Tools for its definitions.

**2.2.1. Theorem “Creative ROBO-intelligence”**

If there are done:

- the 1st level of Creative ROBO-intelligence’s Piirto’s 7i features which characterize highly creative people,

- the 1st level of Creative ROBO-intelligence’s Piirto’s six steps of the creativity top, and

- Adaptable tools

it is possible to create all 2nd level elements of Creative ROBO-intelligence based on these IQ’s 1st level elements.

**2.2.2. Theorem “Sanguine ROBO-intelligence”**

If there are done:

- the main features, characteristics, and functions of Sanguine type of temperaments (*Figure 1*),

- the Piirto’s 7i features which characterize highly creative people, and

- Adaptable Tools

it is possible to create Sanguine ROBO-intelligence with such features of creative artificial intelligence.

**2.2.3. Theorem “Choleric ROBO-intelligence”**

If there are done

- (1) the main features, characteristics, and functions of Choleric type of temperaments,

- (2) the first level Six Steps to the Creativity top elements of Character ROBO-intelligence, and

- (3) Adaptable Tools

it is possible to create Choleric ROBO-intelligence.

**2.2.4. Theorem “Emotional Phlegmatic ROBO-intelligence”**

If there are done:

- (1) the main features, characteristics, and functions of Phlegmatic type of temperaments,

- (2) the first level Six Types of emotions elements of Character ROBO-intelligence, and

- (3) Adaptable Tools

it is possible to create Emotional Phlegmatic ROBO-intelligence.

**2.3. The 3<sup>rd</sup> step.** Each definition of ROBO-intelligences 2nd level elements is composed from definition of such it’s characteristics as: pragmatics, syntax, semantics, environment, and examples. These definitions represent the Adaptable Algorithmic Knowledge Robotic Base which help to create real ROBO-intelligence using Adaptable Tools for its development, verification, and experimentation.

**2.4. The 4<sup>th</sup> step. Measure** of ROBO-intelligence energies for each item from creativities, emotions, temperaments, sentiments.

These measures represent the Energetic Knowledge Robotic Base which helps to create real

ROBO-intelligence using Adaptable Tools for its development, its verification, and its experimentation.

**Conclusion.**

To create ROBO-intelligences which possess 1st level elements – intelligences, emotions and temperaments – it is necessary first of all to introduce them in robotic heart and robotic head. This activity is the 1st step in robotic entities creation process using Adaptable tools. This consists in creation corresponding Computer Based Information Systems for each of: Intelligences (7i), Tops (6s), Emotions (6), Temperaments (4), and Sentiments (positive & negative)

The 2nd step. Next step in creation process of ROBO-intelligences consists in elaboration of their 2nd level elements based on its 1st level elements using Adaptable Tools for its definitions.

The 3rd step. Each definition of ROBO-intelligences 2nd level elements is composed from definition of such it’s characteristics as: pragmatics, syntax, semantics, environment, and examples. These definitions represent the Adaptable Algorithmic Knowledge Robotic Base which help to create real ROBO-

intelligence using Adaptable Tools for its development, verification, and experimentation.

The 4th step. Measure of ROBO-intelligence energies for each creativity, emotions, temperaments, sentiments. These measures represent the Energetic Knowledge Robotic Base which help to create real

ROBO-intelligence using Adaptable Tools for its development, verification, and experimentation.

Measure of brain regions impulses, its frequency and amplitude, its evolution in time and space is very important for ROBO-intelligence creation process. Knowledge about all brain regions impulses are to be included in the Warehouse of Brain and Heart Impulses (WBHI). To create ROBO-intelligence's different creative, emotional, temperamental, or sensual characteristics it is enough to create corresponding algorithms which are to be implemented in ROBO-intelligence brain and heart. A lot of results of different teams of researchers demonstrate that such WBHI will be soon created.

Impulses's characteristics from WBHI, such as frequency, amplitude, time and space etc are the input data for the algorithms which adapt new ROBO-intelligence characteristics based on the characteristics yet included in brain or heart of ROBO-intelligences.

**Consciousness Society Creation Theorem:** Having the Energetic Knowledge ROBO-intelligence Warehouse it is possible algorithmically to implement in ROBO-intelligences the creative, emotion, temperament and sensual human characteristics!

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