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Converging technologies and a modern man: emergence of a new type of thinking

Anna Gorbacheva[1] · **Sergei Smirnov**[1]

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Abstract The processes of changing the way of thinking, typical for modern people, and subsequently shaping a new "Homo clicking" individual are analyzed. The authors consider a specific mindset of "Homo clicking" illustrating it with some patterns and modes of action that characterize individuals in the human–machine interface. Under this frame, the influence of modern converging technologies upon human conduct is examined and functional redistribution between human beings and technical devices is outlined. In the literature, the latter phenomenon is referred to as "life outsourcing." This material is used to introduce several principles that form the basis for a new type of thought and actions of "Home clicking": snapping, transforming trust into knowledge, and action reduction. Reducing the traditional classic understanding of a human act of thinking to a pattern of a thinking act as a need-satisfying act is described. In the last section, we introduce an extension of Searle's Chinese room, which can be seen as a possible consequence of intensive exploitation of technologies.

Keywords Converging technologies · Life outsourcing · Trust · Knowledge · The reduction principle · Need · "Homo clicking" · "Chinese room"

✉ Anna Gorbacheva
gorbacheva.a.g@gmail.com

[1] Novosibirsk State University of Economics and Management, Kamenskaya Str., 56, Novosibirsk, Russia 630099

1 Introduction

Presently human beings are facing a challenge of a thorough analysis and interpreting the processes of ever-increasing influence of convergent technologies (NBICS-technologies) not only upon the economy and society development of cutting-edge industries, but also upon human identity, social habitat, and abilities. The issue, in our opinion, becomes especially pressing at the current stage of information society when changes take place at an exceptionally rapid pace. In the Middle Ages, the population could hardly look far into the future since changes were rather slow and a person could not experience or feel them in the course of one's life. As Umberto Eco put it in "Art and Beauty in the Middle Ages," we live in the period of incredibly accelerated processes when 5-year developments may sometimes square with the goings-on of five centuries (Eco 2011).

Today's world gives our generation a unique chance to observe first-hand the agricultural, industrial, and post-industrial societies simultaneously, providing live material to analyze and build up futurological concepts stemming from the current trends.

We are unable to characterize development of human civilization as a definitely positive or negative process. Although it brings people many benefits, at the same time, an increasing number of adverse side effects accompany it. We feel, and sometimes can prove scientifically, that human progress causes such processes as unemployment, pollution, overpopulation, climate changes, or resource depletion. Futurological extrapolations of these trends may lead to various anti-utopian forms and conceptions. In this context, Kile asks, "Has the cost of technological progress been too high to pay?" (Kile 2013).

On the other hand, the vast majority of people, regardless of their age, social status, or education, will certainly refuse to live in the world with no civilization at all. Thus, we can recognize two extremes of the human progress, an anti-utopian cyberpunk future and the prehistoric world with no signs of civilization, none of which is acceptable for the modern man. It is quite logical that if there are two extremes, there should also be some sort of a golden middle path between them—with certain key benefits provided by civilization and a reasonable number of negative side effects. This middle path has not been found yet, but if identified and properly developed, it has all chances to become a worldwide accepted ideology. In our opinion, the problem of looking for this middle path is especially acute nowadays, when various technologies are changing the world so rapidly that the consequences of these changes may be irreversible and deteriorating. One of the main obstacles on the way toward solving this problem is its complexity since the current revolutionary changes capture technological, cultural, cognitive, and many other spheres of our life. This is the so-called macroshift, the term used by Laszlo for designating these changes (Laszlo 2001).

We (the modern people) are in a more favorable situation comparing with the previous generations because we are able to observe such dynamic changes ourselves in the course of our life, while our ancestors could only read or hear about them. Indeed, ancient and medieval people had no real possibilities to perceive social transformations of any kind or analyze them from their own experience because these transformations were gradual and people usually preserved their lifestyle until death. Moreover, their parents' and children's lives were also quite similar. Today the situation is not the same: social changes are so quick that an individual experiences different lifestyles during one's life, not to mention different lifestyles of the subsequent generations.

Perhaps, in these conditions, our generation must take the responsibility for conceptualizing these changes in the modern world. Due to such rapid transformations, we have a unique opportunity to analyze the post-industrial, industrial, and agricultural societies simultaneously. Nyiri expresses this idea through the prism of the Gutenberg galaxy (MacLuhan 1962), suggesting that we are the first generation who lives in both written and digital-multimedia communication world (Nyiri 2006). Contrasting the current situation with the old times, we do not speak about such things as "communities of choice" and "communities of place," as, for instance, Shields or Borgmann, who characterized the first type of society by a possibility to change their life, while the second type destined a man to the place of one's birth (Shields 2005; Borgmann 2012). We assume the opportunity to observe the life changes in the world as spectators and to feel them as participants.

One of the main reasons and, at the same time, one of the main consequences of the described changes are various intertwined technologies that the research community frequently considers in conjunction using the terms "converging technologies" or "NBICS-technologies" (Nano-, Bio-, Info-, Cognitive, Social). Furthermore, the research community identifies at least two directions subjected to changes under the influence of contemporary technologies: not only such spheres as economy or industry, but also people, their social identity and capabilities. The US National Science Foundation put forward a so-called NBIC-initiative which defines two target areas for research (Roco and Bainbridge 2002):

1. Scientific and technological area: convergence and synergy of advanced technologies leading to a new level of their interconnection.
2. Anthropological, social, and humanitarian area related to development of human functionality and human enhancement.

The first area has already developed substantially and resulted in rapid emergence of state-of-the-art technologies and industries supporting mainly large business and the government. The second area requires thorough interpretation and understanding to address the following issue: what is happening to a human being—the main agent of all changes and the author of all technologies? In what direction and how does the change take place (Hongladarom 2013)? How are the patterns of thinking (Manzotti and Pepperell 2013), physical and social conditions transformed? How does functional cooperation between a man and a smart technical device occur in terms of a human–machine interface?

Various authors noticed that the process of enhancing human capabilities spreads at a fast pace owing to genetic engineering, prosthetics, the pharmaceutical industry, and biotechnology, etc. Meanwhile, development of the philosophical and sociological element of understanding this turbulent process and the possible humanitarian consequences lags behind. The main reason is that so far there is no clearly defined new image of a human being emerging on the horizon of the modern industrial civilization with the above-mentioned processes and challenges.

It should be stated that the answer to that technical challenge to a human being is already given. Heidegger did it. Once he asked, "Why did the early Greeks call art 'techne'?" And he himself found an answer: because it was manifesting and gating out revelations of the innermost and thus belonged to "poesis" (Heidegger 1954).

The German philosopher emphasized that the early Greeks had already said all about it. In Plato's "Feast" Socrates states that creation is a broad concept. Everything that causes transition from non-Being to Being is creation

and, therefore, originating any works of art and artisanship can be called creation and all originators–creators.

Heidegger interpreted this fragment in his own way: in his view Plato thought that any excuse for transition and exiting whatsoever from non-Being to presence is production (Heidegger 1954). It means that techne as creation and production makes a transition from non-Being to Being. Heidegger comments that production brings from the innermost to the openness. A production event occurs only to the extent that the innermost is transformed into non-innermost (Heidegger 1954).

Thus, in general, art or technology, techne understood in its generic capacity is the efforts to reveal the enigma of Being, opening it, exposing it out of the innermost rather than production of images and machines. In the modern language, to maintain its ontological strength technology must become a means of discovering the truth, the verity of Being (Heidegger 1954).

Heidegger endeavors to maintain the ontological sense of production—a product, technology, which by its rooting is the same, and means, on the one hand, an event (production comes true, takes place as an event, Ereignis) and on the other hand production occurs as action, an act, an exit to the opening of the innermost. A human being as the author of such a bringing out, a Design Engineer, and an Artist puts oneself in the "opening of being" and performs a leading out with oneself. Thus, the innermost lets know, utters a calling of Being as to what is the truth.

In fact, this act of leading out is the origin of creation and technical production as production. It is rooted in Being. Therefore, it makes no point arguing about technology in a narrow sense as a set of tools, a device or a method used by men to develop it, with stone or a stonecutter, or paint, or a pencil, or a computer mouse, or any smart device. But here is the real issue: does an act of creation and technology persist and preserve the origin?

Regarding the current situation, Heidegger captures an obvious reduction in techne to technology. The modern technology is reduced to supplying: "being available," production of something ready—a set of machines. For a modern individual, the world is principally exhaustible and deliverable, consumable. A human being is transformed in a supplier, deliverer of such supplies on hand: we produce and supply an enormous amount of equipment but stop being engineers and artists.

Heidegger clearly believes that the basis of the modern crisis is ontological: humans have lost connection with Being. They no longer perform "bringing out" of the innermost into the non-innermost, stopped open to the innermost; consider themselves something what is available, empirical individuals with a desire to have. Under this framework, science, art, and technology are reduced to applied production works on producing something. We make experiments, have children, write books, paint pictures, build houses, but in this huge mess we have transformed ourselves into a gigantic delivery conveyer. And that is why a human being is disappearing, removing. First ontologically, losing the origin, connection with the innermost; then physically, handing all works over to the machines. A human being is no longer the author of leading out from the innermost, and techne is simply reduced to a smart machine, a functional device. Following this logic, a human being oneself becomes such a device. Techne is reduced to technology—a tool which rips up an enigma of the innermost like a knife cracks a can. No "bringing out," no opening of the innermost while keeping its enigma and essence, completeness and integrity; just cracking a secret. Bam! And a secret is revealed like a detective discovers a secret of a murder or a thief finds a lockpick to a door. Opening doors, a person like a thief begins delivering, supplying for consumption everything (s)he stole from the world that is forcibly, artificially broken with a crowbar.

The stealing-consumption scenario adopted by human beings is winning: things and technology consumed by people begin losing their necessary and important qualities. Things, words, subjects are transforming into meaningless signs—simulacra. The process was described by Baudrillard (1981). A thing deprived of its ontological root loses its intent and meaning. A simulacrum is a meaningless sign. If a human being loses control over technical progress, the avalanche of produced equipment becomes an avalanche of meaningless pseudo-things, simulacra. Baudrillard goes further: simulacra not only conceal the truth but also conceal what conceals the truth. A simulacrum loses connection with the original; it is a copy without the original, and then a copy preceding the original.

In the paper, we would like to focus on analyzing the consequences of the ontological loss experienced by people. Increasingly transforming into a supplier of unnecessary, meaningless things, a human being becomes an appendix to technical devices and objects. We refer to the phenomenon of such a metamorphosis as "life outsourcing" (a human being assigning the most important works and functionalities to the machines). As a result, a new "Homo clicking" emerges and becomes an integral element of NBICS-technologies.

Despite the warnings from Heidegger and Baudrillard, contemporary scholars are not that unanimous in evaluating the impact of NBICS-technologies upon a human being. Two extreme approaches can be noticed:

1. According to the first approach, supported by the followers of various transhumanist movements, this process implies "human expansion" resulting in a complete replacement, including, literally, a

metamorphosis of the original biological nature into a new, post-human structure (cyborgs or mutants). In transhumanism, it is considered a benefit, because such enhancements might lead to immortality and overcoming the original limitations of the human nature substituting the biological "parts" with various implants. Transhumanism is a radically new approach to contemplations about the future based on an assumption that humans are not the final step of our evolution but rather its beginning. Transhumanists believe that due to accelerated scientific and technological progress the mankind is reaching a new stage of development. The transhumanist movement started in 1998, and its followers think that the quality of life can be improved with engineering solutions designed to change human body and mind. The concept comprises the following methods and directions: prosthetics, prospective cyborgization of humans, creating remotely controlled robots–avatars (Roger 2001). The main objective, according to the founder of transhumanist movement Bostorm, is digitalization of consciousness, transferring it on a non-organic carrier (Bostrom 2014). Transhumanism can be described as continuation of humanism, where it partly originates. The humanism of the Renaissance epoch wanted to make human beings better through education. Transhumanists suggest reaching this goal by employing technological means.

2. The second extreme approach considers an impact of NBICS-technologies hazardous, since persistence of human values is jeopardized by technological advances. As a result, all philosophical, moral, and ethical rules and guidelines inevitably go extinct. Since these fundamental traits serve as the pillars of human life, a new yielding type of creature, a "post-human individual," lacking these values and equipped with new ethical norms, boundaries and beliefs, becomes meaningless and should be a subject of revision.

None of these approaches is promising. A reasonable attitude toward human progress should be based neither on blind enthusiasm about all technological innovations nor on their pessimistic avoidance and restoring the patriarchal lifestyle. In such a situation, an adequate solution might be describing human transformations in our technological world and creating an ideal Future Man who is served by technologies wealth-wise, but is not enslaved by them.

The paper outlines some incipient features of a human being in the post-industrial society in terms of behavior, way of thinking, and lifestyle. To this purpose, we use some simple examples from the everyday life to demonstrate the mass character and the large-scale nature of this phenomenon. We analyze formation of a new anthropotype who employs the achievements of technological civilization for environmental well-being rather than defends one of the two extreme positions.

Let us consider the principles that form the basis for a new type of human thinking: "snapping," transforming trust into knowledge.

2 "The snapping principle"

Due to easy access to various technical devices, people, facing their daily tasks, tend to think less about how to perform them. Instead, they are looking for a specific device designed for a given task to cope with it (e.g., a washing machine, a blender, a calculator). In our opinion, the reason for this tendency is that people realize the efficiency of these devices that can do tasks quicker and better than people. Thus, people start to trust technology rather than themselves.

We refer to this phenomenon as "the snapping principle" which means that in their everyday tasks people look for specific devices and feel uncomfortable if they fail to find an appropriate one or they need to adapt an accessible device for their needs. This metaphorical term emphasizes that when a person finds an appropriate device and solves the problem via it, the emotions (s)he experiences are similar to those that (s)he feels when hears a snap which signals that parts are snapped together, confirming that the task is solved correctly.

Let us consider several examples that demonstrate the "snapping principle." The first one is a TV antenna. Not so long ago many people were able to make a TV or radio antenna with wires not worrying that wires were not designed for this purpose. Now such a solution is often unacceptable not only because buying and installing a full-time antenna is much easier, but also because people will experience discomfort due to mistrust in their handmade product. Buying a manufactured TV antenna, a person is convinced in the correctness of the decision, since the product is specially designed to solve this particular problem. In other words, the use of an antenna "snaps" the task of setting channels. Having solved the problem by making their own antenna with wires, people will have doubts as they don't "hear the snap."

The second example is using household appliances with a built-in computer, such as a washing machine. When a person turns to a computer-operated washing machine, (s)he delegates their numerous decisions that used to be made consciously, such as: determining the amount of water, the intensity and the amount of detergent, and the washing time. Pressing one button, the person calms down being confident that washing should be carried out by a washing machine and it will do it correctly. Here again we

can talk about a "mental snap," which a person "hears" because of the awareness that washing machines make fewer mistakes as they are designed for this specific function.

People assembling a constructor experience similar feelings. During this process, they are looking for appropriate pieces, perfectly fitting into an already assembled structure. They experience a certain pleasure after they find the next suitable piece and add it into the structure. They are confident that everything is done correctly. At the same time, they experience discomfort if a suitable piece cannot be found or needs adjustment or adaptation. It evokes a feeling of uncertainty with regard to correctness of the previously performed actions, although everything has been done correctly.

We would like to clarify that the described tendency is analyzed with the purpose of understanding the transformations in human behavior and the thinking process under the influence of technological progress. In other words, we do not argue against the obvious advantages provided by smart devices. Introducing the "snapping principle," we emphasize that in a lot of everyday situations people seek specific tools and methods of solving their problems and may feel uncomfortable if there is a need to adapt the tools not originally intended for solving the given problems.

People are almost forced to look for "a button to click" because of active and aggressive smart devices commercials persuading them to use ready-made solutions as often as possible. Hence such qualities, for instance, as resourcefulness, nonstandard thinking and creativity become less important for success than they used to be. The rapid pace of modern life spurs an obsessive desire "to snap" the next task and run further. There is neither time nor the willingness to think carefully about other possible solutions to the problems and even estimate what one really needs.

Lorenz mentions that there is an urgent demand for immediate solutions to all problems or desires. The insatiable satisfaction of limitless needs is strongly stimulated by commerce which supports companies offering humans "amazing" devices of all kinds (Lorenz 1973). Various advertisements de facto summon to click the button and be ready that a smart device will satisfy all your needs.

3 The principle of transforming trust into knowledge

Despite a blind trust in technologies that underlies the "snapping principle," people still assign their work to technology as a result of their conscious decisions. They rationally believe that smart devices work more efficiently (quicker, better, cheaper etc.), but if it is really necessary they will be able to do the work themselves. In the above-mentioned example of a washing machine, a person, who needs to do the laundry, thinks:

- I have a pile of dirty laundry
- I comprehend that it should be washed
- I comprehend that either me or my washing machine can do it, but the washing machine will do it better, easier, etc.
- I decide to assign the process of washing to the washing machine
- I press the button on the washing machine and get the result—the clean laundry.

Making a summary of these steps, we conclude that the mental process goes as follow:

1. The normal state (no need).
2. The need (the dirty laundry).
3. The process of eliminating the need (the process of washing).
4. The technical device (the washing machine).
5. The result (the clean laundry).
6. The normal state (no need).

Assigning one's work to a washing machine, a person "snaps" the problem of the dirty laundry although there is an alternative—to wash it manually albeit with some discomfort. Here the person *trusts* the washing machine when there is a need to wash the laundry. Let us now develop this example and demonstrate how trust in washing machines transforms into the *knowledge* that only washing machines should be used for washing the laundry.

When there were no washing machines, people coped with dirty laundry on their own. When the first semiautomatic washing machines appeared, they realized that such devices could save time and efforts. After washing machines were upgraded and became fully-automatic, there was a realization of a possibility to assign them washing chores without loss of quality (even enhancing it). Nevertheless, at that stage, one would keep in mind why a washing machine is used. It is because a washing machine makes washing easier, quicker, better, etc.

After a while, one would stop thinking about the advantages offered by a washing machine. Gradually the excitement about possessing such a smart device fades away, and an individual starts perceiving it as an ordinary instrument, like a knife, a ball pen, or paper, without any thoughts such as "How happy I am having my piece of paper which frees me of the necessity to utilize papyrus!"

As time passes, one will forget how laundry used to be done without washing machines. More importantly, the next generation, who has never experienced hand-washing or using semiautomatic machines, will not be aware of any other way of converting the dirty laundry into the clean

laundry but using a washing machine. They will *know* that it should be used, like they know that a certain pill should be taken to relieve headache.

According to Turilli et al., "trust" is a decision of a trustor to rely on a trustee to perform a certain action (Turilli et al. 2010). The decision depends on the extent to which the trustee is dependable. An assessment can be carried via life experience, reasoning or recommendations from the authorized persons. One of the founders of pragmatism, Peirce, identified several sources of trust (Peirce 1956). In any case, "trust" assumes a choice: to rely on a trustee or not. Thus, the fundamental difference between "trust" and "knowledge" in the context of our discussion is that "trust" is a conscious decision or a choice between delegating work to a smart device and carrying out it yourself, while "knowledge" leaves you no choice but to make use of a device. Even the word "delegate" is not perfectly suitable here because a process (work) becomes concealed inside a device resulting in the absence of what to delegate.

With the transformation of "trust" into "knowledge", the "process" step in the logical chain is eliminated, and the mental process becomes as follows:

1. The normal state (no need).
2. The need (the dirty laundry).
3. The technical device (the washing machine).
4. The result (the clean laundry).
5. The normal state (no need).

The desirable result (the clean laundry) is now associated with a washing machine rather than with the process of washing.

Certainly, for a person who is familiar with the process of doing the laundry without washing machines, creating self-made antennas, or making cream manually, the described transformation of "trust" into "knowledge" may seem peculiar. However, a child observing from the early age how his mother makes cream with a blender only and does the laundry in a washing machine will be aware (will know) that these particular devices are intended for delivering the required results. The child will know that to obtain the clean laundry it is necessary to put it into the washing machine and press the button and, by no means, he will wash it manually. He even will not realize what it is like to wash the laundry manually. Such knowledge will resemble the knowledge that it is cold in winter, it is dark at night, or the Earth orbits around the Sun. If washing the laundry is done in some other way (not with a washing machine), a person will be surprised, just if told that two plus two equals five or the Sun orbits around the Earth.

Taking medications, people without proper education think by analogy that one pill will relieve a headache, and another is against stomach pain. They think as follows: "pain–pill–no pain." Patients do not think how these pills work.

At this point, our discussion intersects with the research carried out by a team of psychologists. Studying behavior of preschool children who had never seen cows and had never lived in the village, the researchers discovered a similar phenomenon: surprisingly, some children mistakenly believe that milk is produced in the supermarket. They are under the impression that there are no cows or milking process, no farms, no people, milkmaids, or cattlemen. Only a house where you can come and take packed milk directly. This phenomenon of nearly mythological thinking can be highlighted with numerous other examples describing situations where children are not quite sociable or have limited communications.

4 A futurological image of "Homo clicking"

A natural futurological extrapolation of the transformation of "trust" into "knowledge" might be eliminating "the result" step from human mental process. In our opinion, even this step, probably, will be odd in the future. "Homo clicking," accustomed to extensive usage of various technical devices, will not be explicitly interested in the result—first of all, he will be interested in avoiding the need, which brings him out of the "normal state" (the state with no need).

Furthermore, the essence of human needs, probably, will change their form. "Homo clicking" will lack motivation to identify clearly the result which can free from discomfort. Instead, he will distinguish between different kinds of discomfort and intuitively click the corresponding button. The needs of "Homo clicking" will be similar to a burn, when we instinctively draw our hand back, or a feeling of itching, when we also instinctively solve this problem. A need will be perceived by "Homo clicking" as a troublemaker rather that a desire to achieve a certain goal. Intellectual work will not be necessary for eliminating the needs.

Thus, the mental process will be as follows: "the normal state—the need—a technical device—the normal state." Technical devices will return the man into a normal, comfortable state. As many devices have similar way of using—clicking a button—all needs will be eliminated almost equally. An aggressive marketing environment "informs" us about so many needs that "the normal state" of an individual will be very short and a new need will appear shortly after eliminating the previous one. The logical chain will be even shorter: "a need—a click—a new need—a new click—etc."

5 A virtual interface between a man and the world

In order to satisfy the increasing needs, human beings use some sort of a virtual interface which helps them interact with the outer world. This interface is created by using all sorts of devices through fixed rules and means of interaction. For example, regular users of music players are not interested in understanding what is inside them or how they function; they can just use the buttons on the panel: "Play," "Pause," and "Stop".

The same logic applies to supermarket customers: for most of them, it does not matter how goods are produced, they just should be confident of the goods' high quality. Many children in urban environments already lack knowledge about the origin of milk or meat, they do not even think about it, because it is not important for them. The reality is substituted by a virtual reality, keeping children away from the nature, which they know and can see only on the screen. Jung described this tendency during the "pre-information era" and pointed out that those who know about animals only from book illustrations may be surprised that barns smell since nothing was written about it (Jung 1958).

Importantly, the logic of human progress has forced people to interact with the outer world through such virtual interfaces which conceal the complexity of global business processes and the structure of the employed technical devices. For example, opportunities of repairing a laptop, a monitor, or a car without special professional help are very limited due to their complexity, although just a few decades ago the process of repairing most of devices required only some practical thinking and simple tools.

Thus, due to the active exploitation of various interfaces, most of our daily activities require increasingly fewer mental efforts. For example, using a calculator, a GPS-navigator, or a computer with an Internet access makes life simpler and forces an individual to abandon independent thinking, even those accustomed to it. For example, a professional mathematician had no option but to use a calculator, otherwise his calculation is less accurate and fast compared to the one carried out by an ordinary man equipped with a calculator. Similarly, a well-educated person with a phenomenal memory is forced to exploit a network and search engines otherwise any person with good skills in networking "has" more memory. If an experienced taxi driver doesn't use a GPS-navigator, he will find houses and streets much slower than a less experienced driver who takes advantage of a high-tech GPS-navigator.

6 Life outsourcing as a modern trend

The above examples indicate a new trend, which becomes especially explicit and widespread nowadays. We refer to it as "life outsourcing." This trend concerns not only high technologies but, importantly, converging technologies expand onto our daily life.

Let us consider development of "life outsourcing." From the very beginning of human civilization, people always tried to devise various instruments to enhance their skills and physical capabilities. In some sense, we can consider a shovel, a tractor, a telescope, a microscope, a telephone, and other devices as stretched and amplified hands or extended eyes and ears (Kapp 1877; Florensky 1992). The main reason for intensive application of technical innovations is that they enhance efficiency and quality of work. Thus, people started to assign some parts of their work, mainly physical, to numerous devices. For a long time, however, the crucial intellectual work remained a human prerogative. After the advent of computer technologies, machines began to perform intellectual work, including thinking, memorizing, imagining, and creating. Moreover, with development of converging technologies, the amount of assigned works grew significantly leaving people the only function of pressing the button. Further, in the context of human–machine interaction, human beings become dumber and machines more intelligent (Lanir 2010).

"Life outsourcing" shows the tendency to redistribute the basic functions between a human beings and technical devices. Increasingly, development and integration of NBICS-technologies into our daily life result in assigning a variety of functions and operations to devices, in order for individuals to have more comfortable and carefree lives. In the past, transferring heavy physical labor functions and activities to devices was motivated by the natural limitations of human abilities. Now human beings go further assigning most of their intellectual functions and related works to devices. As a consequence, in the nearest future, we may witness the process of vanishing of individual self and a coexisting identity from the historic stage, accompanied by a substituted identity with smart devices.

At this point, we can ask some questions, which are hard to answer. For what reasons and why does an individual try to free oneself? What is this individual going to do without work and duties? Presumably, using the functions of smart devices, people increasingly free themselves from external concerns, the duties of daily living, and home chores for the sake of all sorts of entertainment.

7 Extension of the "Chinese room" conception as a possible effect of life outsourcing

Constant life outsourcing confines a human being to a virtual so-called Chinese room. This concept was introduced by Searle (1980) in the form of a thought experiment, where a person who does not speak Chinese is placed into a room with a small window. Through this window, the person receives questions written in Chinese; his (her) task consists in writing the answers, also in Chinese. For this purpose, the person is provided with the instructions (written in his native language) how to manipulate Chinese characters. Searle argues that the person would be able to compile relevant answers without understanding the semantics of neither the questions nor his own answers. He will manipulate at the level of syntax, carrying out some sort of montage or collage.

Consider some similar to the "Chinese room" examples of the situations, where people's actions can be considered as some sort of manipulations at the syntax level without understanding the semantics of their work, but it does not affect their efficiency.

Let us take a student, who is writing an essay. Nowadays, in the era of ubiquitous technologies, the process of writing an essay, in principle, can be reduced to searching relevant information on the Internet and copying the found text and illustrations, since the Internet provides access to almost any sort of information. Importantly, it is not necessary for the student to understand the content of the copied pieces. In this case, the student, probably, will not be able to answer questions about it. Given some time, however, (s)he will probably find the right answer on the Internet. We can see that the described situation resembles the "Chinese room" because the student does not really understand the essay semantics, but is able to operate at the level of syntax and successfully fulfill the task (write the essay and answer questions about it).

Cribbing homework from a classmate's copybook is an older example of operating at the level of syntax without understanding the semantics. If a student submits a plagiarized homework to his teacher who does not investigate the origin of this work (does not compare the work with others, does not ask questions on the subject, does not use information about the past accomplishments of the student etc.), the teacher will not be able to distinguish this work from the one performed properly.

Piloting an aircraft can also be viewed as operating at the level of syntax. Modern aircrafts are equipped with various electronic devices to assist pilots in their job. Loosely speaking, a pilot is able to control an aircraft guided only with indications from the devices (like speed, altitude, angle, etc.) without looking in the window. It will not be a big exaggeration to say that in such a situation it is not necessary for a pilot to realize that (s)he is piloting. It suffices to only provide the correct indications. In such a way, modern pilots are able to land aircrafts in heavy fog.

In the above examples, human behavior is similar to that of a person in the "Chinese room" who copes with tasks without understanding the real meaning of the actions. Perhaps, in the future, when people delegate the majority of their functions to technical devices, natural human instincts may die off and people will be fenced off from the nature by technical devices. They will interact with the nature through some fixed interfaces provided by these devices, and natural human instincts will be substituted by some sort of instincts concerned with technological functions.

The above discussions lead us to an extended version of Searle's Chinese room. We can describe it as follows. A person is located in the room and is able to interact with the outer world via a special interface including two blocks: an operating block and a feedback block. The operating block consists of various instruments (like buttons, levers, microphones, speech recognition, and thought-reading means) enabling the person to impact the outer world; the feedback block contains different indicators (like lamps, sound-generators, monitors), which inform him (her) about the current state of the outer world.

The person is aware of what kind of indicators should be reached or preserved in order to complete his (her) task, and what operating block instruments (s)he can exploit in order to provide these indications. At the same time, the person does not aware of neither the current real-world state, nor how the feedback block indications related to the real world. Nevertheless, similarly to Searle's "Chinese room," we can assume that after the proper education and providing sufficient technical equipment, the person will be able to solve the real-world tasks, even though s(he) will not understand their real meaning (their semantic).

Let us give a very simple example and illustrate this conception. Consider a pilot, whose task is to reach a 10,000 km height with his (her) aircraft. The pilot has been trained that pulling a steering wheel would increase an altimeter indication and that the goal is to reach the number 10,000 at the altimeter. Thus, the pilot is able to raise the aircraft and provide the required altitude without realizing that (s)he is piloting the aircraft.

8 Conclusions

Strong dependence of people and the whole society upon the technologies increases the role of various technological devices greatly. Earlier, they usually only played the roles of instruments easing the completed tasks, but today some

of them gradually gain more crucial properties, for instance, of a passport or of an accessing window into the real world (which paradoxically, becomes more and more virtual). A very vivid example is a mobile phone or a smartphone. Quite often, it is required to indicate your phone number in order to get access to some services. In such a way, the mobile phone plays a role of a passport. Strictly speaking, nobody forces people to possess a passport. But the society is structured and is functioning in such a way, that absence of passport denies access to so important services and possibilities, that a person without it runs a risk of being out of the society. Thus, our society forces people to get passports, even those, who do not want to do it.

At least, the basic computer skills and an ability to operate various electronic devices become a very important condition of being sociable and of being in the society. Active and often aggressive embedding of information and converging technologies throws people, who have no such skills, on the circumference of life. For people, who want to preserve the traditional way of life, it becomes harder to withstand.

In this paper, we introduced some principles concerning the mental process of a modern individual. The main observed tendency is its gradual simplification under the influence of contemporary technologies. Human beings need increasingly less intellectual (as well as physical) efforts to complete their daily tasks. Amazing and scaring at the same time, technologies often play the leading role in human–machine interaction rather than a role of an assistant typical for the past. Furthermore, people often assign intellectual works—a human prerogative for centuries—to machines. Thus, an important question should be asked: "Why do people free themselves assigning almost all their work to technologies?"

The above-mentioned process of the action chain simplification and reduction to a "need—click—new need" scheme shows that a human being is impetuously transforming into a cyborg and people run the risk of being confined into an extended Searle's "Chinese room," which we also introduced in this paper. Is there an alternative?

We think that the answer is "Yes, there is.", and this alternative should be described with regard to the above excerpt from Heidegger. People must become thinking beings again and start thinking once again, which means, be open to the innermost in such a way that the innermost reveals itself to them and becomes present. In this context, an anthropological alternative is overcoming reduced actions: "a need—satisfying the need—a new need" which dominates behavior of "Homo clicking," and restoring an ontologically rooted human desire to think and be. The latter is possible if the fundamental ontological needs of humans are ultimately reduced and become extinct, so as rational beings they feel their own disappearance. The vital situation of disappearing from the historic stage will force them to return to thought and action through the innermost, through techne as production, thanks to which a person finds one's self, becomes existent and open to Being.

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