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**EURASIAN RESEARCH: THE CONTRIBUTION OF BIOTECHNOLOGY TO THE  
SPIRITUAL RENEWAL OF SOCIETY**

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**Introduction**

This theme was seemed inept to me. I didn't see any contribution at all that science and biotechnology had made to spiritual growth. There didn't appear to be a shred of a connection.

Have done some searching and thinking since that time, slowly I've come to the realization that the relationship between science, biotechnology, and spiritual growth is one of the most urgent and impactful ideas of our time.

What is "spirituality" I analyzed a lot of definitions of spirituality, and came to the conclusion that spirituality is understood as a combination of four qualities: faith, peace of mind, unconditional love and awareness. Spiritual growth is a change in perception, a change in the picture of the world. The spiritual man sees the world, and himself in it, as it is, undistorted. The spiritual man gained faith in himself, peace of mind, love and compassion for his neighbors. The spiritual person considers service to people as the most important priority [1].

What is "faith" There are a number of facts that can be verified. For example, that if ice is melted, you get water. To believe or not to believe in the facts does not make sense. These facts include purely random processes. They are accurately described by statistical laws, and the "faith" is also not applicable to them. Faith refers mainly to unobvious and nonrandom future events that a person can influence. Faith mobilizes the will, allows you to make decisions and stick to them, and leads to the achievement of results that otherwise would not be achieved. If you believe in victory, the chances of winning are much higher. If you believe that nothing will work, then most likely it will not work. People with weak faith adapt to people with stronger. Without strong faith it is impossible to lead people, you can only follow someone [1].

What is "peace of mind" Peace of mind is the absence of anxiety, bad feelings, panic, regardless of external circumstances. This is a calm, confident look into the future.

What is "unconditional love" "Conditional love" is when you love for something, for example, for gain. I suspect that this is not love at all. "Unconditional love" is when you love, without setting any conditions, you love not for something specific, but just love. In other words, you love not "for", but "against". In addition to love, the definition of spiritual growth mentions a good attitude towards people, sympathy.

What is "awareness" To live consciously means to perceive yourself, others, and the whole world as they are, and not as we would like. Stop deceiving yourself, stop hiding from reality, turn a blind eye to unpleasant facts, live in a fictional world. To admit to yourself in your desires, in your weaknesses, in your problems, in your dreams. Understand yourself.

Why does man need spirituality Spirituality enhances the quality of life. A person who loves, does not worry, believes in himself, and lives consciously, feels better than he who hates, is worn out, convinced of his failures, trying to hide from reality in a fictional world, and trying to convince himself that for him the best choice [1].

### **The scientific challenge to spiritual modernization**

There seem to be two primary ways that science and biotechnology make their contributions: first in the form of challenges that they pose to religious living, and second in the opportunities that they create. New ideas and spiritual revival in society cannot to exist without relationships between science and religious or society's consciousness. In addition, science and biotechnology have constructed clear, abundant, accessible opportunities for empowering spiritual living - opportunities that have never before existed on our world. Spirituality is a set of practical skills. It needs to be trained, worked out. The best training is the solution of complex problems that prevent people and the whole of Humanity from living and developing around you [2].

### **Rate of spiritual modernization**

It is clear that our lifestyle are being dramatically altered, and are being altered with exponential rate. Science is continually feeding change with new usefull and useless investigations and more 80% of all scientists who ever lived are live today. Technology's expansion is all-around process . One new invention may create 20 new applications, each of which may in turn open 20 more. The rate of assimilation of new products and new investigations in our ways of life is also increasing dramatically. We live like Rip Van Winkle in his world, every morning when we wake up, the world had been changed again. Who can keep up with this? The challenge of change has

provided a tremendous stimulus to spiritual growth - a stimulus to find ourselves and the stability of knowing world in an environment that's constantly changing. In addition to that challenge, there are also clear opportunities. Our ability to communicate with one another has blossomed since the industrial revolution. We have truly become a global village. Events in any part of the world can be immediately known and have an immediate impact on any other part of the world. The opportunities for the cross fertilization of ideas and cultures is overwhelming. If you were to plot the growth in velocity of human modes of travel for example, you would see it begin to skyrocket at about the turn of the century. We've gone from traveling by camel at 12 mph, to traveling at 100 mph by steam locomotive in the 19th century, to traveling at speeds exceeding the speed of sound by supersonic commercial jet, to traveling at speeds of 18,000 mph in space. You would see the same sort of graph if you plotted communication increases, starting with Gutenberg's press in the 1400's (though the Chinese had one earlier), to 1500 when Europe was producing 1000 book titles per year, to the 1970's when the world was producing 1000 book titles per day (and this in an age when telecommunications and the computer are dominating modes of communication) [2].

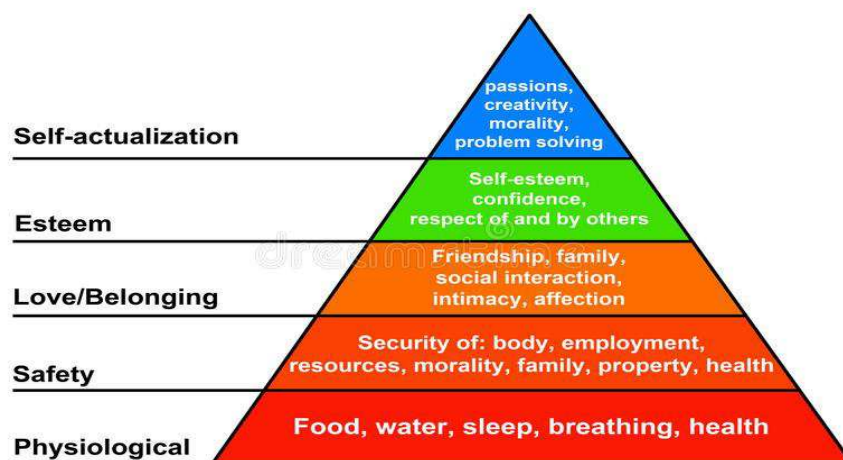
### **What are the barriers to spiritual growth**

What prevents spiritual growth. A person does not believe in himself, is nervous, separates himself from people and is at enmity with them, hides in an imaginary world - not from a good life. Everyone has psychological problems that largely determine what we think about ourselves and about others. These problems accumulate from childhood, and do not allow us to grow spiritually. Belief in yourself is hampered by conviction, nothing will come of you, you will be mistaken [3]. They interfere with peace of mind - insecurity in the future and dependence on many factors. None of the people will even think about development if it has bad living conditions. And to create good living conditions, such as a good home, education for getting a job, nutritious and wholesome food, entertainment, money is needed. And many people spend their whole life on this without even thinking about spiritual development. In this way, we can conclude that a high standard of living contributes to the development of a spiritual level. This statement is well illustrated in the Maslows Pyramid.

### **A little bit about Maslow's pyramid**

What is Maslow's Pyramid? Maslow's Pyramid is a schematic depiction of all human needs, from the simplest and most pressing to the highest. Back in 1943, psychologist Abraham Maslow described the pyramid of values with one goal: to understand what motivates people to perform certain actions. Maslow himself only formulated this concept, and his pupils invented a graphic diagram. Typically, the pyramid is depicted as a triangle: The lower and widest part is the physiological needs of the body. Our body is historically programmed to meet the need for food, quenching thirst, sleep, sex. If it wants to eat or go to the toilet, then the brain cannot think about anything else. The second step is the need for security. Like physiology, safety is sewn into our DNA back in the times of man-ape. The life tasks of our ancestors were simple: 1. Eat. 2. Multiply. 3. Avoid the danger of being eaten. They helped humanity survive, so the need for security is also called the "hit or run" physiological response. The third step - the need for love and belonging to the group is also laid down in the days of the cave dwellers, when it was impossible to survive alone. But just for living in a group a person needed a new skill. This is willpower. If you do not connect it in time, you can easily be punished and be expelled from the cave or in modern conditions, be blocked in the social network. Fourth and fifth - the need for respect and knowledge. They are so interconnected that they are bundled. Indeed, among scientists and inventors, for example, the need for knowledge is much stronger than in recognition. For example, Gregory Perelman all his life argued and proved the theory of Poincaré, and then refused the prescribed award and all titles. The sixth step - aesthetic needs. These are museums, exhibitions, music, dances, hobbies, everything that brings pleasure to the soul and forms the intellect. The seventh step is the need for self-actualization or the desire to reveal your spiritual potential. Here, too, is not all clear. According to the logic of the pyramid device, this need must be realized in the last place. But after all, the monks seek the realization of spiritual potential precisely by pacifying the rest of their needs [4].

Figure 1. Maslow's Pyramid



### How do Biotechnology contribute to Spiritual Growth

The development of science and biotechnology in particular facilitates the life of people and makes it possible to devote less time to meeting vital needs, thus people quickly climb the oil pyramid and, accordingly, think about spiritual development. Let's look at biotechnology. This is the science of the practical use of the achievements of other scientific environments for the benefit of society. Throughout the history of mankind there was no medicine that would save as many people from death as penicillin. It got its name from the progenitor - the mold fungus *Penicillium*, which soars in the air in the form of spores.

This discovery has allowed people to get rid of the fear of many diseases. Biotechnology makes an even greater contribution to the food industry. It is food that is one of the basic needs for which we are forced to spend time and money every day. Biotechnology makes food more accessible to us. In everyday life, we constantly use products produced through biotechnological processes. The most commonly used lactic acid and alcohol products are yoghurts, sourdough, kefir, cheese, beer, wine, as well as bakery, etc. These products are prepared using enzymes that form specially cultured microorganisms. Nowadays, the use of food biotechnology allows to produce new types of products, reducing production costs, which is a stimulating factor for the development of the food industry. At the same time, the quality of agricultural and animal products is significantly improved, and their usefulness and safety is increased significantly. It should be noted separately the use of amino acids produced by synthetic means. Of the twenty amino acids found in proteins, eight are indispensable. This means that the human body cannot independently synthesize these amino acids. Using microorganisms get the whole range of amino acids introduced into food in the form of dietary supplements. They are added to vegetable feeds of farm animals, which increases their growth and reduces maintenance costs, significantly increasing the productivity of farms [5].

### World trends in biotechnology

Nowadays, biotechnology has become one of the industries of macroeconomic importance. Developed countries attach great importance to its development, and therefore national and international biotechnology programs funded by state and private capital have been developed and are operating in all the leading countries of the world. Thus, an indicator of high growth in the global biotechnology market is its annual growth of 7%.

Annual sales of biotech products in the world were:

- food industry and agriculture - \$ 46 billion;

- Seed material of genetically modified plants - \$ 30 billion;
- pharmaceuticals - \$ 27 billion;
- enzymes for the production of detergents - \$ 21 billion;
- medical and cosmetic products derived from plant and animal raw materials - about \$ 40 billion [6].

Biotechnology in modern science is of great benefit. Due to the discovery of genetic engineering, it became possible to develop new varieties of plants and animal breeds that will benefit agriculture. The study of biotechnology is connected not only with the sciences of biological direction. Microelectronics developed ion-selective transistors based on the field effect (HpaI). Biotechnology is needed to enhance oil recovery of oil reservoirs. The most developed area is the use of biotechnology in ecology for the purification of industrial and domestic wastewater.

Many other disciplines have contributed to the development of biotechnology, which is why biotechnology should be attributed to integrated science.

Another reason for the active study and improvement of knowledge in biotechnology was the question of lack (or future shortage) of socio-economic needs.

In the world there are such problems as:

- lack of fresh or purified water (in some countries);
- environmental pollution by various chemicals;
- lack of energy resource;
- the need to improve and obtain completely new environmentally friendly materials and products;
- increasing the level of medicine. Scientists are confident that these and many other problems can be solved with the help of biotechnology [7].

### **Conclusion**

The conclusion of all the work can be the affirmation that spiritual growth is not possible without creating advantageous, friendly living conditions for people, this purpose must become paramount for the country.

### **Literature**

1. Балашов К. Что такое «духовный рост», и как его достичь цивилизации [Electronic resource]. - URL: <http://waytosoul.ru/node/3658> (date of the application: 16.03.2019)
2. How do Science and Technology Contribute to Spiritual Growth? [Electronic resource]. The Urantia Book Fellowship - URL: <http://www.urantiabook.org/archive/readers/science-technology-spiritual-growth.htm> (date of the application: 78.03.2019)
3. Spiritual Growth [Electronic resource]. - URL: <https://www.allaboutgod.com/spiritual-growth.htm> (date of the application: 17.03.2019)
4. Abraham H. Maslow. Hierarchy of Needs: A Theory of Human Motivation [Electronic resource].- URL: [https://Maslow%27s\\_hierarchy\\_of\\_needs](https://Maslow%27s_hierarchy_of_needs) (date of the application: 18.03.2019)
5. Biotechnology in the food industry [Electronic resource]. - URL: <http://phct-biotechnology.ru/stati/mikroorganizmy/pishhevaya-biotehnologiya/> (date of the application: 18.03.2019)
6. Мукашева Г. Развитие биотехнологий в Казахстане [Electronic resource]. - URL: <https://pandia.ru/text/81/395/46855.php> (date of the application: 20.03.2019)
- 7 The Uses of Life: A History of Biotechnology [Electronic resource]. - URL: [https://www.researchgate.net/publication/20246145\\_History\\_of\\_'biotechnology'](https://www.researchgate.net/publication/20246145_History_of_'biotechnology') (date of the application: 20.03.2019).