

MODELS AND LOGIC OF SUBJECTIVE REALITY. SUBJECTIVE WORLDS

One of the main conclusions of the general systems theory is the idea that a system can form new, emergent properties that are not found in its constituent parts.

Creation of any system with subjective information can be compared to creation of a local subjective world, where the original design can set its own internal laws. Even with only three nodes performing the neuron function we can say that we have a simple subjective world. A really existing one, unlike a virtual one, for itself. The tendency to energy balance allows avoiding the need for information processing, to communicate to the parts of the world how to behave in a given situation. Everything will be happening naturally. This will allow creation within the model internal regulatory laws and instruments. Thus, part of our world do not continuously enquire for the scale and position of points in space, the single time format, components energy and the expected result of the interaction. The world does not require logic computations of the external device, otherwise there would have been an infinite recursion. Where the computer calculating our universe, would require an external power source and another computer, and so on.

An artificial subjective world may be not as large and complex as our universe, not having the space, but having other degrees of freedom for internal processes. Thus, for example, our senses of taste, smell, emotions have no spatial mapping. But their tints represent their own inner existence. Such mind could be found in evolved plants with no sight and the concept of space, but having higher nervous activity. Besides, generally, such a world can exist in the form of a solipsistic representation or a "brain in a vat". Nevertheless, it will "live" its own life. Such

systems can also have nested subjective formations as multiple minds of the creatures in our universe, or be single in themselves.

However, an artificial mind, as opposed to an artificial world, should have a memory on which to build the identity, associative mechanisms, language, and images to the process of thinking, and some other features. A subjective world can do without them.

Creation of such a simple world does not necessarily require understanding the structure of ours by solving the cosmology problem – singularity, string theory, or quantum chromodynamics. It's enough to create subjectiveness the basic criteria of which we have described in [this article](#). Let's give it a closer look.

THE OBJECTIVE AND THE SUBJECTIVE

One of the main conclusions of the general systems theory is the idea that a system can form new, emergent properties that are not found in its constituent parts.

Our world is more complicated than a typical description of the objective (materialistic) and the subjective (idealistic) approaches. In it multiple equivalent or nested systems may exist, for each of which will be its own reality. In the nature, there is no single ontological notion why or what for this or that exists. Parts of our world constitute a system. Each system may have objective and subjective features. For us, the senses of blue colour or sour taste are real, but they do not exist for the physical world. And they are separately real for each individual, but for others they remain the subjective reality of that person. We cannot directly perceive the feelings of another being. Electromagnetic radiation is real to the universe, but it does not directly exist in our perception. Each property exists only for its system. By technically solving the problem of "artificial life", we can get truly ambitious technology.

SCHEME AND LOGICS

Nesting of properties can be displayed on the following scheme:

Nesting and crossings of systems and elements



B and **C** are **A** system's elements;
B and **C** are subjective to each other;
A is objective for **B** and **C**;
A may be an element of a **D** system;

Large system elements can be systems in themselves.

A simple element or a complex system can be equal elements for a third system;

One and the same element may belong to different systems and have different properties in each of them

Belonging to a system does not necessarily depend on the spatial location. This may be exemplified by our brain which is a part of the physical world system and having its own subjectiveness.

LOGICAL DEFINITION OF "EXISTENCE"

Imagine an abstract **A** and suppose that **A** exists in the physical sense. Additionally, **A** does not interact with our world – space, time, energy, mass, charges. The question arises: for whom and how does **A** exist?

1. If this **A** can interact with something else, there is some infrastructure and laws that support this interaction, which does not only define the property of the other with which **A** interacts, but also the scale, intensity, other conditions and laws of this interaction.

Then **A** is not self-sufficient, but is a part of some larger system, being its property.

2. If **A** does not interact with anything outside, but has internal differences, **A** is the system itself, which includes internal parts with certain properties. And the existence is determined by the difference for **A** of one part from another, otherwise everything would be unmanifestable. The unmanifestable (even in potency) cannot be attributed the existence. The

properties of parts do not belong to them, but only describe them. That is, the weight and size of a stone are not merit of this stone. These are properties of the Universe, and the stone is only the carrier of them. Properties belong to the system, as well as their interaction algorithms. **A** is its own world with its own laws. If there are no such parts and internal difference, **A** cannot be called a system.

3. Also, **A** can be a mixed type, being part of a larger system and having internal subjective properties and laws at the same time. Our mind is a part of the world, but has its own subjective properties.

4. If **A** has no external or internal interactions either current or potential, **A** does not exist. For it does not manifest itself in any way either to the outside or to the internal. Neither potentially nor in reality.

By creating an analogue of subjective relations in the system, we can say that we have created a separate world.

Reproducing such an existence requires two conditions. There must be a certain difference transmitting medium (in our case, this is an electromagnetic field), and complex interactions in the present. This is achieved using a constructive approach described above. The medium provides the relationship between the parts for which the difference is captured. Difference capture itself may occur only in the present. Not by discrete parts, but at one and the same time, and in all its possible fullness. Otherwise, we will have our system in each discreteness. It is the mutual determination of these parts that gives the complex emergent effect, causing a subjective existence.

LINES OF RESEARCH

Line 1. Creation of a single structured and consistent methodology for studying systems and subjective properties. Their combination, compensation, perception, influence on each other.

Line 2. Development of the technical part. Is it possible to bring the complex sensations created within the artificial neural networks or other subjective systems to the outside world? If subjective reality is the superposition of relationship between the portions of the system, the electrical interaction in neuron nodes can be replaced by electrostatic or electromagnetic interaction, preserving proportions, using capacitors or induction coils. If using conventional electricity we can create an effect in a neural network, can we bring it into a superpositional electromagnetic wave? Truth be told, the information of this wave will exist for the system itself, measurements relative to the earth between two conductors will have no sense that there is in the system. Consequently, conventional transmitters will register it with the distortions, as senseless signals, and will only be able to resonate with identical superpositional systems. So far, it remains unclear how such a wave can be transmitted and accepted. However, this trend may give new prospects even in information transmission and encryption.

Is it possible to create systems that do not consume external energy? By creating relationships with a combination of magnets or structuring of conductors which in the molten state can orient the molecular dipoles in accordance with the current energy balance of the system, the position of which will remain at the solidification of the conductor. Such a conductor may be impacted with magnetic point actions, causing imbalance in the system.

Line 3. Search for logical and experimental schemes to confirm or refute the hypothesis if there are subjective relations for a parent system, included in its minor systems.

Are subjective relationship of internal systems aggregated, adding these properties to the parent system? The answer to this question can confirm or refute the hypothesis whether the Universe feels the sensations of the living organisms existing in it? Because our brain uses the space, time, energy parameters that do not belong to the brain but to the universe as a whole. Is it possible to suppose a feedback that affects the components of the condition?

Is it possible, instead of the self-preservative instinct-based dream of transhumanism in the form of creating an immortal body with ordinary, but primitive perception formats, create a much broader format of mind? For example, an artificial world that will perceive everything that happens in it, including the lives of creatures that populate it, being the inner Nature (if the format to be created is impersonal), or God (if the format is equated to a person with the personality, memory and associative mechanisms)? Which will be its own life for the world. Moreover, the life unlimited in time, since the system will have internal subjective time.

Line 4. Search for logical and experimental schemes to confirm or refute the hypothesis if inner systems properties can affect the parent system properties? That is, can the devices based on known physical principles locally modify these physical principles? Modifying natural laws?

Is it possible to create constructional notes of the system, where the relations of our world will be executed or changed? The virtual computer approach has achieved significant success in modeling the world. Is it possible to create an analogue in subjective reality? When building such artificial systems, the question arises, how exactly should these relationships be created. With one area of artificial space defining its scale and location in relation to other areas. With the charge analogues created knowing how and what to interact with. With the subjective time applying to all areas of space and participating in all subjective energy processes.

Understanding these questions will help to answer how it works in our objective physical world. Which for itself is also a subjective system of its own. Where space, time, and energy are not conditions for the existence of the universe, but the result of its work. If the assumption of interaction of different systems is correct, then the billions of years and kilometers, enormous energies, that are intrinsic properties of our universe, can be included in the "eye of the needle" of other properties and systems. How does the "essence" of the system work, connecting all, which Lao Tzu called Tao, and Spinoza – the "substance"?

Line 3 and **Line 4** contradict each other. If we cannot with the parts of the system create a subjectivity that would go beyond the capabilities of our world, then we are limited by its laws. In subjective systems, we use space, matter, energy of the physical world. So, the assumption is correct that the laws of our Universe are not only involved in every process, but also reproduce it. The Universe does not simply peep into the mind of each organism existing in it, it creates such organism. If not, then it is possible to isolate the artificial system from the laws of our world, and create whatever we want. To do this, we need to confirm, properties of the third and other levels can be created within the systems, **subjectivity in subjectivities**, not depending on the initial conditions of the physical world. Are mixed variants possible?

This can be one of the most interesting problems of modern science. But the experimental confirmation of subjective properties is a major challenge. Because they make sense for the system itself, and an outside observer cannot possibly perceive them directly, only by indirect indicators. Here we have the unsolved paradoxes of Turing test, Chinese Room, Qualia, Mary's Room, etc. We will try to find and describe the research verification algorithms, and develop a general structured theory.