100 degrees Fahrenheit

In the morning hours, the temperature already exceeds 100. The body reacts, but the brain reacts even faster. At any given moment, you have to do the only right thing to avoid wasting energy.

Nevertheless, our time is simulated, the entire period of the next decade during which the demographic and climate transition occurs.

These extreme processes are really happening for the first time in history. We will face either a catastrophic collapse or a relatively controlled transition and stabilization.

The adaptive resources of homo sapiens are depleted on a population average, things are even worse at the level of behavioral patterns and attitudes.

Homo sapiens is destroying the biosphere by creating a synthetic environment above it, but in a biological sense it is all doomed.

In such a short time, it is impossible to reconstruct the cerebral cortex and the nervous system as a whole. We are massively facing climatic and biospheric stress.

Over the next five years, there is a 98% chance that one of these years will be the hottest on record, according to the World Meteorological Organization.

By 2050, more than 5 billion people will be exposed to extreme heat that poses health risks, according to an analysis of climate data by <u>The Washington Post and CarbonPlan</u>. This new extreme heat epidemic.

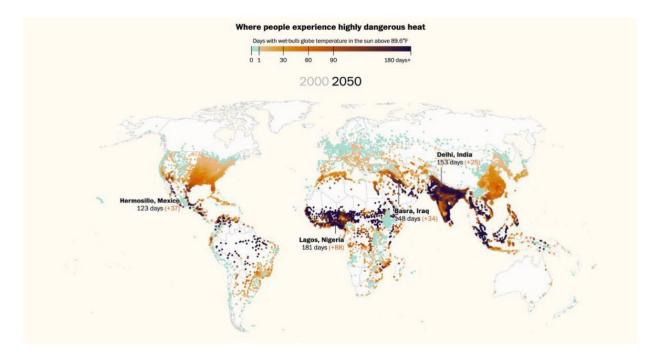


Fig. 1. Days with wet-bulb temperature in the sun above 89.6 °F

Our near future is connected with air conditioners; will those with better air conditioners survive?



Fig. 2. Air conditioning systems

The earth is heating up and entropy is increasing. What will allow us to bring order to chaos?

Stanislav Ulam and his colleagues once considered a method of mappings based on Hilbert's axiomatic principles. For example, consider the game "Life", which is based on these principles.

They play on a plane divided into square cells of the same size. Each cell can be in one of two states: either occupied (for example, with a chip) or empty. The initial state (initial arrangement of chips) can be chosen arbitrarily. Subsequent cell states depend on the occupancy of neighboring cells on the previous turn. Neighboring cells are considered to be eight cells directly adjacent to a given one (having either a common side with it - adjacent to the right, left, top and bottom, or a common vertex - adjacent diagonally). The game consists of a discrete sequence of moves. On each move, the following three rules (axioms) apply to all squares of the board.

Survival. The cell remains occupied on the next move if two or three cells adjacent to it were occupied on the previous move.

Death. The cell becomes free on the next move if on the previous move more than three or less than two neighboring cells were occupied (in the first case, the cell "dies" due to overcrowding, in the second - due to excessive isolation).

Birth. A free cell becomes occupied on the next move if three and only three adjacent cells were occupied on the previous move.

Let these be cybernetic games, they simulate very specific processes: a board with chips placed on it can go into very complex modes that simulate the processes of death (the complete destruction of all chips placed in the initial position), unlimited growth, a stable stationary state (a system with a certain periodicity in space).

As we see, there are two boundary conditions: death and unlimited growth. Will air conditioners save us, or rather, of course, all the infrastructure that our civilization is so proud of? I guess not.

A University of Oxford report on our Anthropocene epoch highlights new ontological challenges¹. Such a systems view and grand narrative of the Anthropocene may also encourage a sense of historical inevitability and grand destiny, that the surge in environmental degradation is an inevitable consequence of general human progress, rather than a particular consequence of specific economic structures and power dynamics.

Cybernetics emerged as a science for managing society. What management methods and political systems will prove ineffective?

It makes no sense for us to rely on any political institutions, especially states. Most likely, our population will simplify and return to a pre-state organization. Towards new social unions, but in a new environment where information management will be crucial.

Maksim Tuzhikov – researcher, science journalist. noos.europe@gmail.com

¹ The Anthropocene as a new ontology. The debate about a new geological epoch has emerged from and stimulated a wave of new thinking about whether new worldviews—new understandings of the nature of being—are required that address the nature of life on a human-dominated planet where human activity is bounded within planetary constraints and the risk of nonlinear feedbacks. A defining feature of the Anthropocene is the recognition and approach of planetary boundaries, the transgression of which may lead to fundamental and potential shifts in the nature of life on Earth. The realization of planetary boundaries and dangerous feedback is something new in human history, and many of our modes of thinking, being, and behaving are challenged by it. These new geopolitics may well have been emerging independent of the conceptualization of the Anthropocene, but the term provides a succinct label or framework for these considerations.