April 2018

Quantum Thermodynamics #1: INFORMATION QUANTA

What did I teach you about long ago about how polar bears and penguins repel cold temperatures so they can live in polar water? How did they do it? Why do we struggle with it?? What do they both eat, and where do they both live? What is special about that environment? Is there something special about these animals compared to us? Do you sense an entanglement yet with these concepts? A food guru will struggle to see the gorgeous threads nature provides living quantum systems. A mitochondriac will begin to see something different.

DO NOT COMPLY WITH CONVENTIONAL WISDOM OR LOGIC BECAUSE AT THE QUANTUM LEVEL, THE TRUTH WILL EVADE YOU.

The invisible threads nature weaves into electron and proton spin are the strongest ties in the quilt of our lives. Today, this installation from the QUILT is about the foundations of thermodynamics in living systems. How these new concepts link to the quantum spin states of electrons and protons in mitochondria is critical to get correct before we can see nature's wisdom manifest in tissues.

The aftermarket data of the COVID-19 vaccines show this to us all now, but few people see this lesson. You must do so at the dawn of 2024.

People normally understand the law of increasing entropy as the tendency for things to get messier as time evolves. Still, the truth is stranger than fiction because it often makes no sense when you do not have all the data about the system in question. Still, science and mathematics now report that entropy actually leads to order in nature. Dr. Mike Levin is looking under this specific rock constantly in his lab. When he gets to this level, he'll begin to understand how regeneration and morphogenesis operate using subatomic particles and light.

The philosopher steeped in epistemology will say, "Uncle Jack, why is this idea you are presenting to us at the beginning of 2024 not a thermodynamic paradox?"

Nature organizes living quantum systems using nothing but entropy.

Order in biology always emerges from DISORDER.

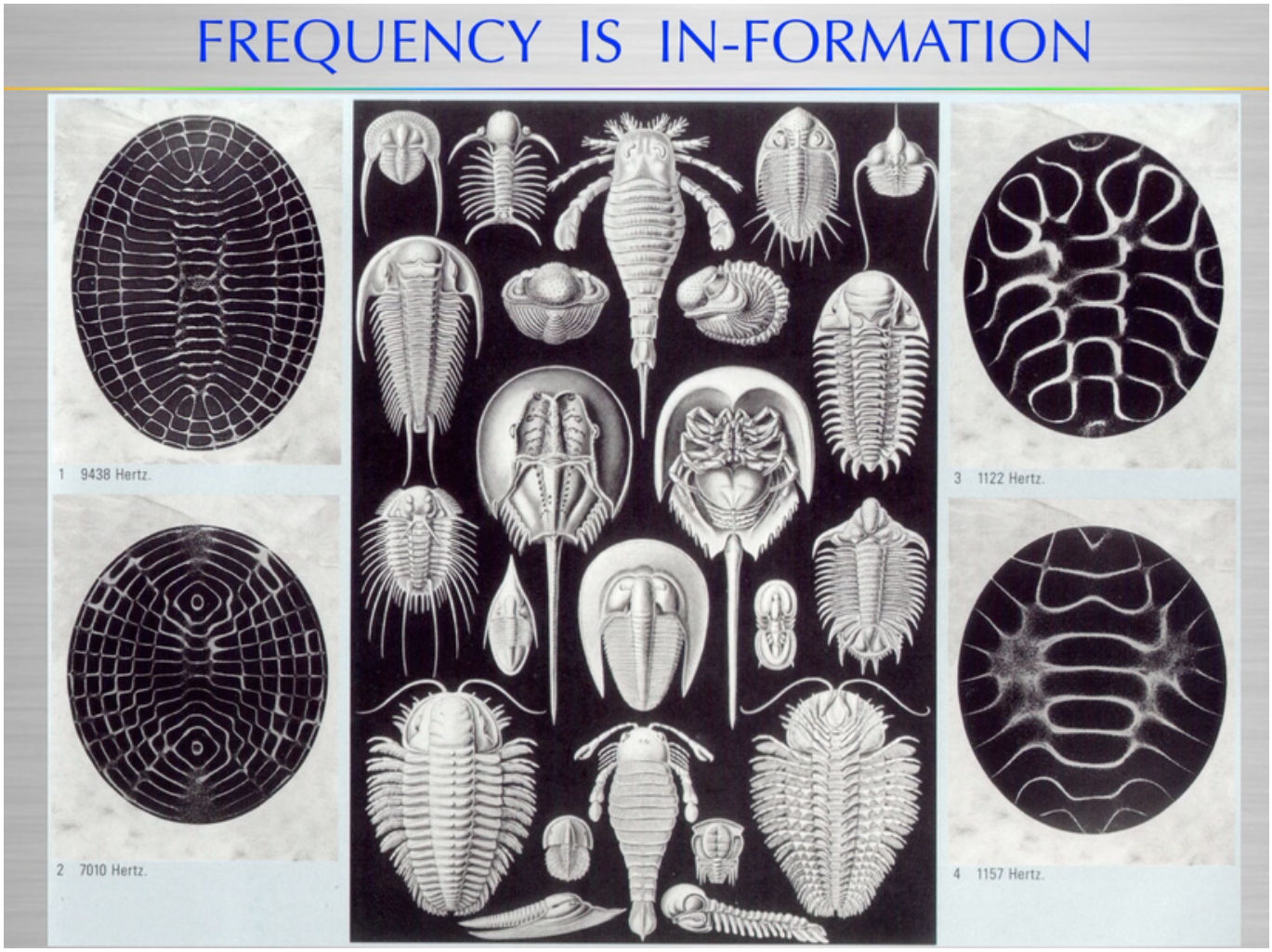
At its core, nature is asymmetric because of its atomic design.

The experiment I did above shows you this effect in real time. What allows them to assume this pattern? Is it a chemical bond? Is it a hydrogen bond? Is it electrostatics? Is it some quantum effect? No, it is none of those things. The pattern emergence comes from the entropy I introduced into the system through the crafty knife cuts I put on all the pieces as I put them in the pan.

What is in the pan? The organization of matter in the geometry of time and space gives matter a morphogenesis, an appearance. What if I told you that altering the spin state of atoms creates order? Would you believe it?

Many phenomena in self-organizing systems are interpreted in the centralized literature as navigation in a morphological space.

The concept of morphological space can describe the range of physical forms a species can exhibit in Nature. The chaos in light can self-organize the things in matter to create a form. In this way, light frequency is information. Once light hits matter, it can be transformed into sound, which can be used to transform matter.



By navigating this space, the organism changes shape over time. Both morphogenesis and damage repair processes can be thought of as navigating this morphological space toward the stable adult form of the organism. Magnetism is a key way life gains its size and shape. Free radicals are magnetic. Most proteins in us act like semiconductors and are paramagnetic. This means they are drawn to magnetic fields. These small pieces of matter are like algorithms with instructions to rebuild the form. The damage becomes impossible to heal for the organism if it is at a point in the morphological space outside the basin of attraction of the stable configuration.

Sonic Hedgehog and Vitamin A begin the regeneration process in almost all phyla. They are

also critical in morphogenesis.

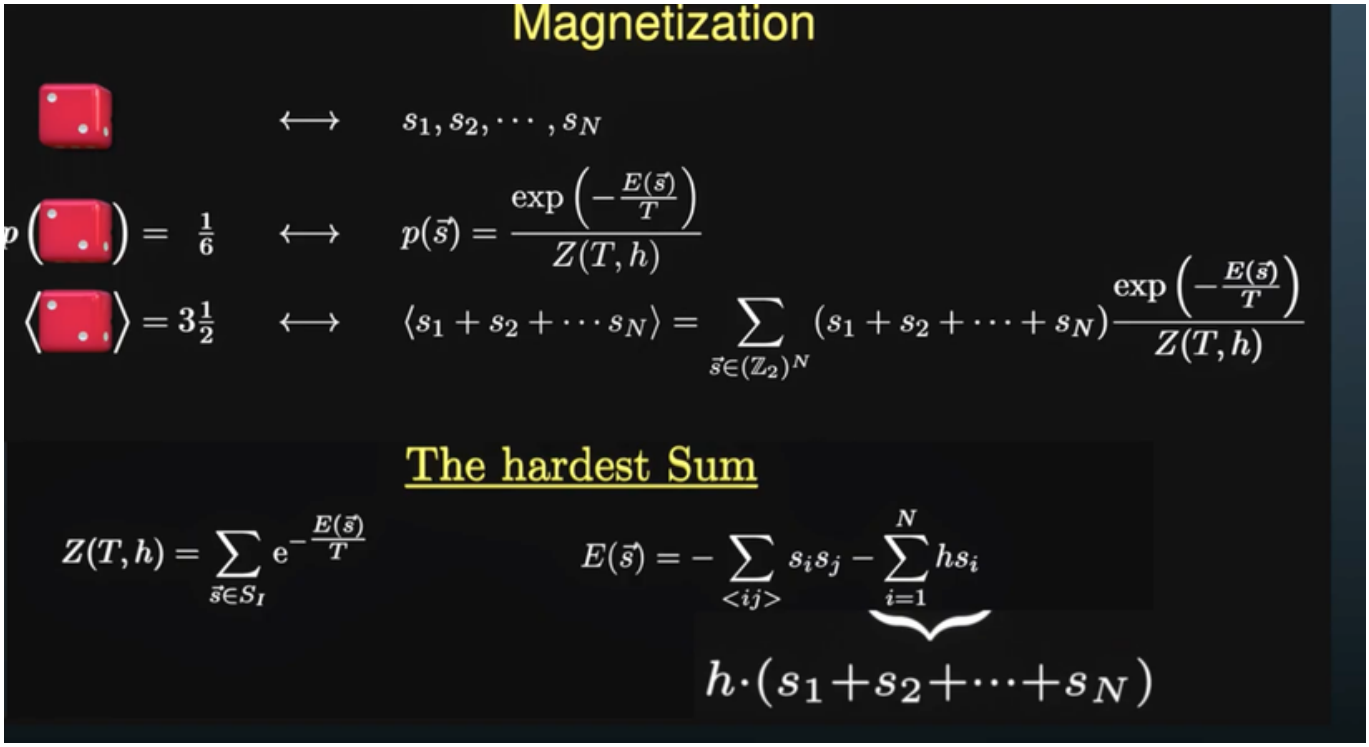
The simplest example of self-organization is called the Ising Model in physics.

This model confounds food gurus. The model acts as follows: Mother Nature is informing the food gurus and biochemists that every day, she eats a bowl of the alphabet soup of atomic spins from the environment, and this causes her to shit out better questions than any modern centralized guru could propose. What she is doing below the cell level is beyond their ability to fathom because of how they see the world.

But what exactly is the Ising model?

Originally it was conceived as a simple explanation for magnetization effects in matter, the Ising model explores the interplay between interacting spins. When in proximity, these spins tend to align with each other, leading to an interaction energy denoted by H=−Js1·s2$H=-Js1 \cdot s2$.

When something becomes magnetized, spins are aligned, and the atomic lattice consumes energy; this gives it its form. The addition of energy can change this form. Light energy and temperature energy do this to cells in a circadian fashion.



What happens when lots of spins interact all at once in matter? Well, it depends on how they interact: The Ising Model comes in many different flavors that begin to help us understand how order comes from chaos. Watch this video to understand how this operates in nature below your ability to sense it. This is why Nature is hard to understand for food gurus and biochemists. Mother Nature acts to levitate and fall asleep inside our atomic structure to drive what tissues are capable of.

VIDEO OF HOW THIS IDEA CHANGES HOW THINGS APPEAR

VIDEO 2 is for the deep physics geeks.

In my opinion, why do all cells release ELF-UV?

UV light magnetizes matter easily to alter its spin state. Many organic syntheses are substantially accelerated and decelerated or made possible in the first place by exposure to UV radiation. Mother Nature knew this 3.6 billion years ago. She used IR/heat in

mitochondria to favor the spin choice of H+ over deuterium in certain locations in cells, and she allowed cells to release ELF-UV collected from sunlight to control both redox and detox action within cells because purple light harnessed from the sun knows how to clean up after itself with a small mess.

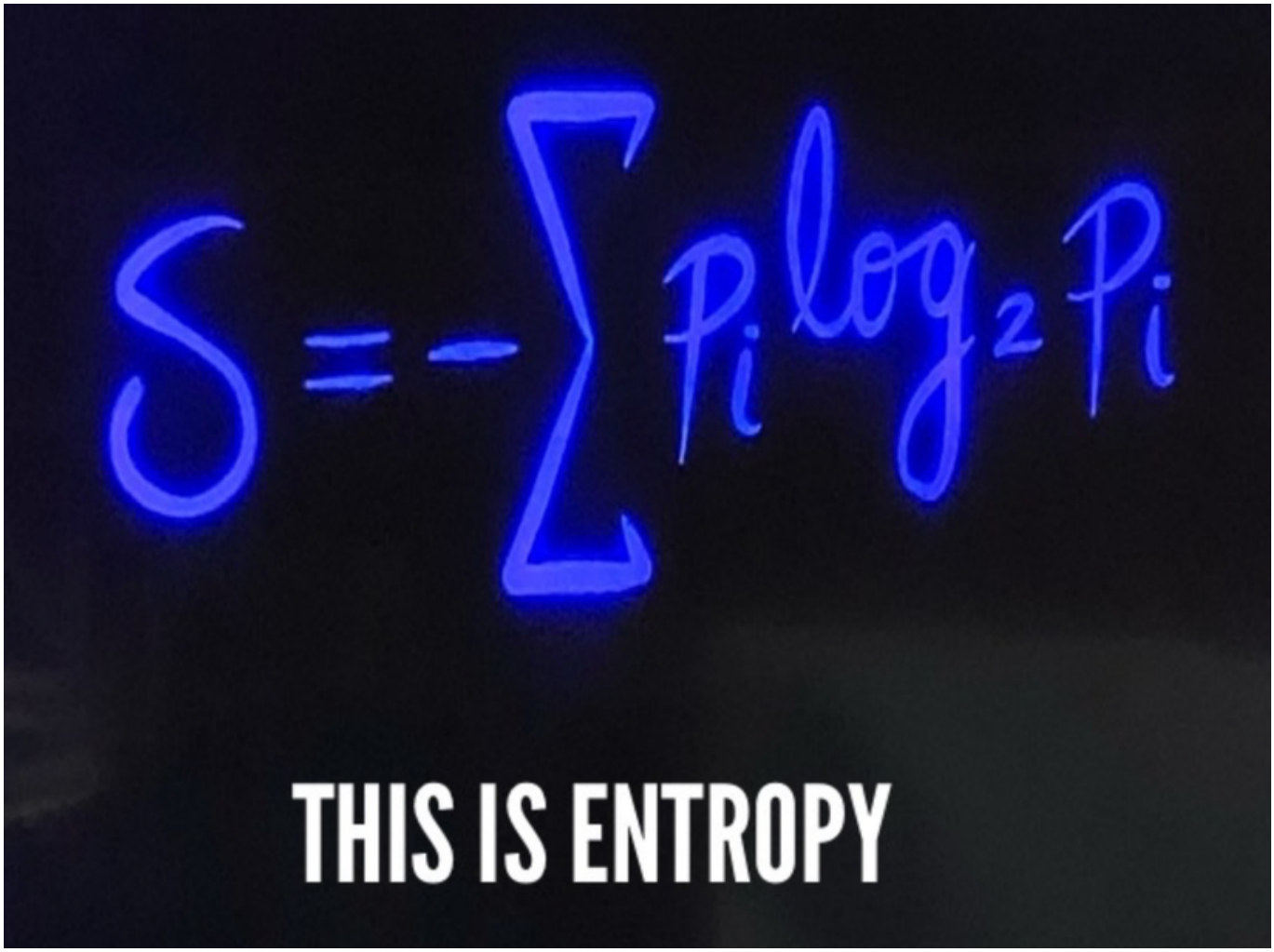
The Functional medicine food guru doctors have no idea this is how the process works because if they did, they would never offer sham detox/chelation programs to patients. The smart move is to put patients in sunlight, allow them to absorb UVA and UVB in a coupled thermodynamic fashion, and bury those frequencies in the topologic insulators inside cells.

SUMMARY

You must learn the lesson of how we got to the idea that the spins of the subatomic world and how light can change them, and the charge of atoms can drive regeneration and morphogenesis programs in us.

Democritus is the key hero in the story. He is mostly remembered today for formulating an atomic theory of the cosmos. Much of his work has not survived. What remained are anecdotes attributed to his ideas. This idea is beautiful because quantum mechanics has not yet been broadly applied to biology.

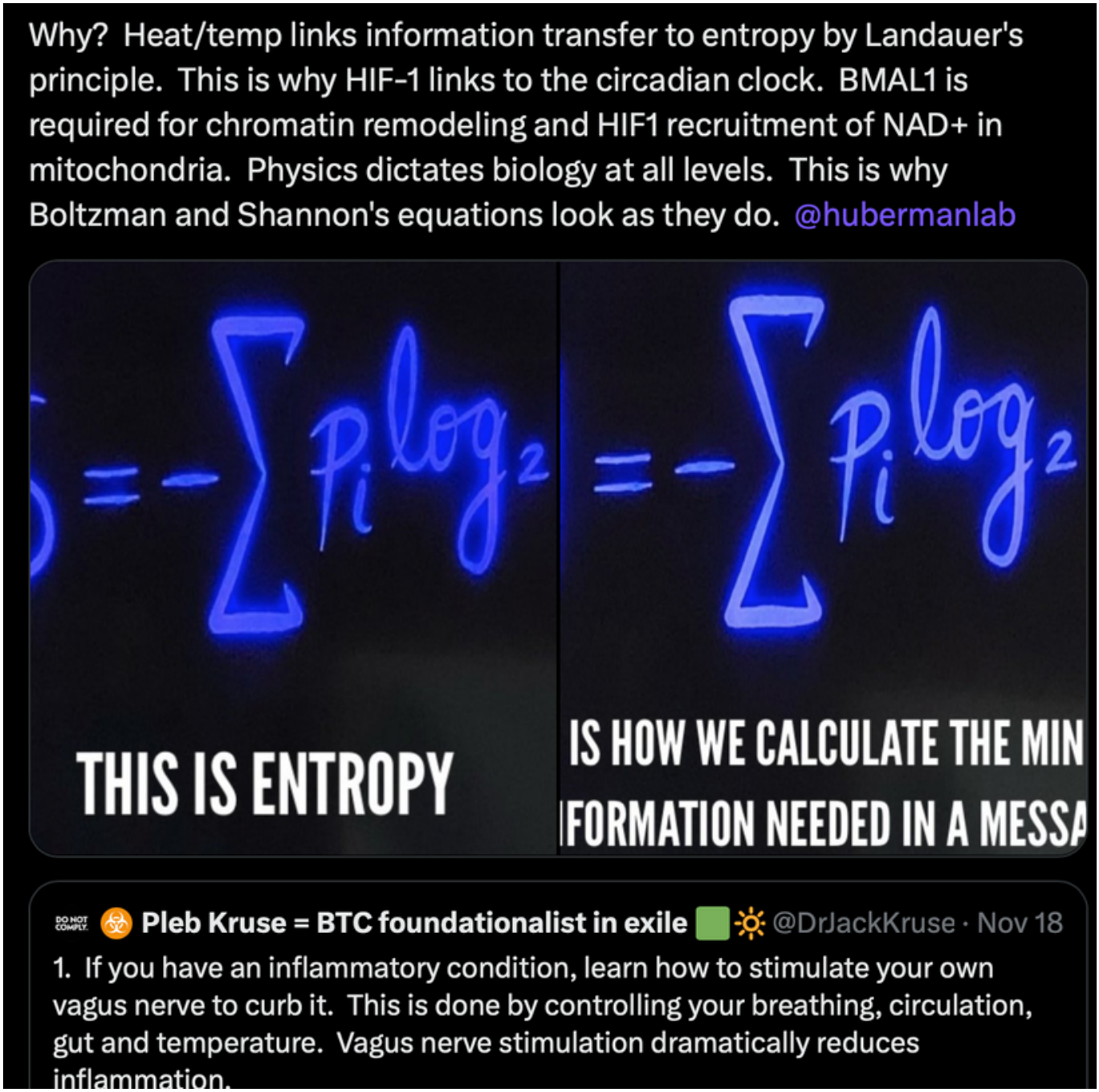
One of Democritus' arguments supporting atomism was that atoms naturally explain the sharp phase boundaries observed in materials, as we see when ice melts to water or water turns to steam. His idea was that small changes in atomic-scale properties would lead to big changes in the aggregate behavior. This defines the butterfly effect of Lorenz. Others believed that matter is inherently continuous, not atomic and that the large-scale properties of matter are not reducible to basic atomic properties.



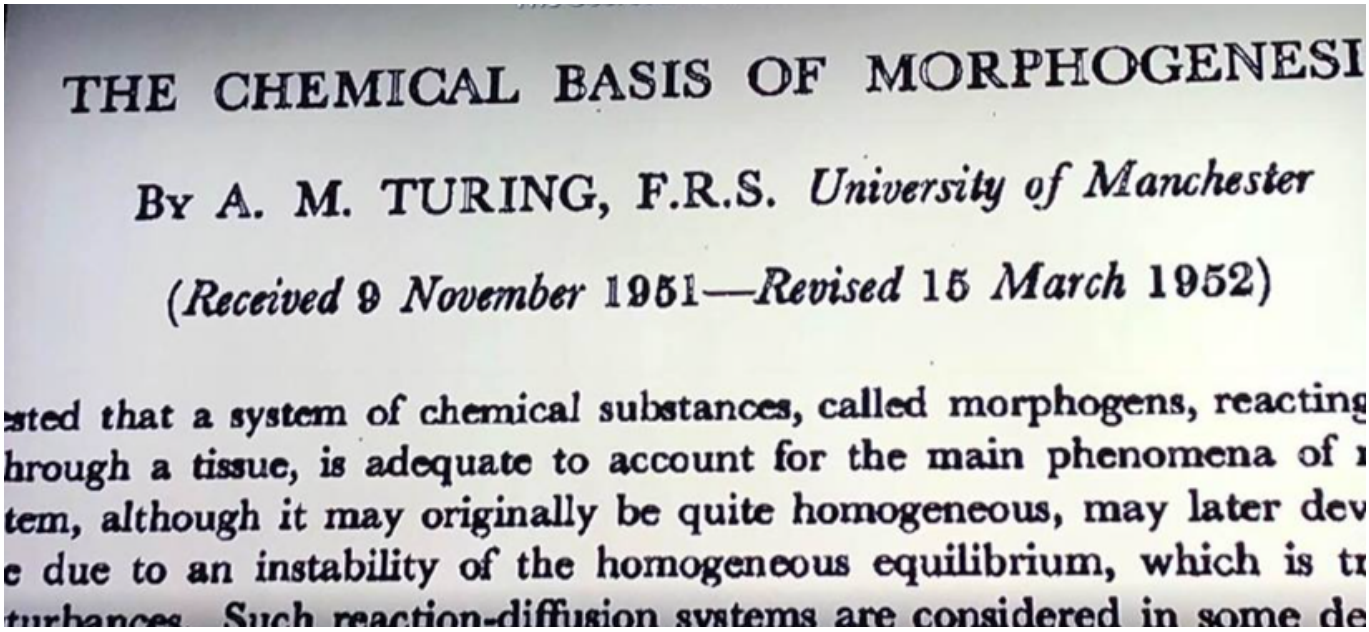
While the laws of chemical bonding made it clear to nineteenth-century chemists that atoms were real, the debate continued well into the early twentieth century among physicists. Atomists, notably James Clerk Maxwell and Ludwig Boltzmann, applied Hamilton's formulation of Newton's laws to large systems and found that the statistical behavior of the atoms correctly describes room-temperature gases. However, classical statistical mechanics did not account for all the properties of liquids, solids, or gases at low temperatures.

Once modern quantum mechanics was formulated in the early 20th century, atomism was no longer in conflict with real experiments in the lab, but this still did not lead to a universal acceptance of statistical mechanics, which went far beyond atomism.

Josiah Willard Gibbs had given science a complete formalism to reproduce the laws of thermodynamics from the laws of mechanics. However, many faulty arguments have survived from the 19th century, when statistical mechanics was considered dubious by the paradigm of thought in power. The lapses in intuition mostly stemmed from the fact that the limit of an infinite statistical system has many zero-one laws which are absent in finite systems: an infinitesimal change in a parameter can lead to big differences in the overall aggregate behavior, as Democritus expected.



This enigma remains today in the self-organization of cells that defines how chaos becomes order when small things in cells begin to exert their effect, on the whole, to define what the cell is capable of physiologically. This is the edge of modern developmental biology on January 1, 2024.



THE CHEMICAL BASIS OF MORPHOGENESI

By A. M. TURING, F.R.S. *University of Manchester*

(*Received* 9 *November* 1951—*Revised* 15 *March* 1952)

ested that a system of chemical substances, called morphogens, reacting
hrough a tissue, is adequate to account for the main phenomena of
tem, although it may originally be quite homogeneous, may later dev
e due to an instability of the homogeneous equilibrium, which is t
turbances. Such reaction-diffusion systems are considered in some de