

# Atomic Intelligence

## A Closer Look at the Atom Points to Instructions from a Cosmic Mind

by Graham Silcock

**T**he Antikythera mechanism, a complex piece of equipment discovered in a 2,100-year-old Mediterranean shipwreck, has been the subject of a great deal of scientific inquiry. What is of relevance to us here is that it is evidently designed.

**It's like that with atoms. These days, the internet provides us with excellent and detailed scientific information. Any non-scientist who is well-read and who looks into the subject can see evidence of design in atoms.**

**So let's look into it. Imagine that, after proper instruction, we are invited to participate in the creation of atoms. We will end up creating a universe.**

 **PARTICLE PAIRS.** First, we'll create a superabundant expansion of energy. Then we'll transmute some energy into productive entities which we'll call quantum fields, and we'll instruct the fields to emanate unending streams of particle pairs. We'll make the particle pairs self-destruct after a brief moment of existence so that we don't get overwhelmed with hordes of unschooled particles. During one of their brief appearances, we'll remove a particle from some of those particle pairs. The other particle in each pair escapes destruction.

 **PROTONS.** We'll take some of those escaped particles and designate them as "down quarks," others we'll call "up quarks," and still others we'll call "gluons." (These are just names; they don't necessarily mean

anything.) We'll combine each down quark with two up quarks and use the gluon confining force to hold the quarks together. The result is a composite particle. We'll call it a "proton."

 **ELECTRONS.** Our protons are as idle as elephants at a water hole on a hot day. We must get them moving, which we'll do by arranging for the quantum fields to provide us with particles we'll call "electrons." The idea is that the electrons will keep station on the protons and will move about in energetic clouds, taking the protons with them.

 **ELECTRIC CHARGE.** Gravity is too weak to keep the electrons in attendance on the protons, so we'll create a more powerful

force, an "electromagnetic" force, and we'll endow each particle with an electric charge. We'll give each of the two up quarks two-thirds of a positive charge. That adds up to one and one-third (+1 +1/3) per proton. Down quarks will each have one-third of a negative charge (-1/3). The combined result is that protons will have a net positive charge of +1. We will give electrons an exactly equal negative charge of -1, which will keep them on standby with the protons—well, much of the time. Why all these one-third and two-thirds fractions? Because later on we are going to arrange things the other way around.

 **MASS.** Our newly created protons and electrons are lighter than pollen floating in the breeze. We need our universe to have substance, so we'll endow the particles with mass. We'll commission a tailor-made quantum field. Scientists call it the "Higgs field." It will give protons and electrons a basic amount of mass. After that, we'll supercharge the elements inside the protons with energy, making them engage in a tumultuous dance which adds even more mass to the protons. We'll make the protons 1,836 times more massive than the electrons. That number has a purpose. It helps stabilize our universe.

 **PHOTONS.** The electrons need an energy boost to keep them on the move, so we'll arrange for a quantum field to emanate some energy particles. We'll call them "photons." Photons are "inclusive." They don't bump into each other. They happily pass through each other and are quite unselfish about occupying the same space.

 **EXCLUSION.** Electrons and quarks are also inclined at the outset to be inclusive, like photons. Nothing would stop them from passing through each other or from occupying the same space. If we leave things that way, the universe would be nothing more than an interesting light show. So what we will do is reconfigure electrons and quarks to endow them with the attribute of "exclusion." You and I are made of electrons and quarky

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protons, and that's why we can touch each other and bump into each other. On the other hand, we can't walk through each other or occupy the same space. We are "exclusive" that way.

 **ORBITALS.** But there's another situation. If electrons in an atom are permitted to behave naturally, their attractive electric charge would make them cluster right up against the protons. Atoms would have no bulk and would just mill around and bump into each other at random, like sand grains in a desert sandstorm. So what we'll do is arrange for paths called "orbitals" on which electrons are strictly required to travel. We'll stack the orbitals up at ascending and ever greater distances from the protons in each atom, in groups which scientists call "shells." Then we'll require that no more than two electrons can occupy each orbital. No clustering. Electron outriders will provide atoms with bulk, and they can be organized. We will organize them.

 **NUMBERS.** We should have mentioned that we propagated these particles to be greater in number than all the grains of sand on all our seashores and that we arranged for protons and electrons to be equal to each other in number, which means that, taken as a whole, matter is electrically neutral and gravity predominates, which is a good thing. Gravity behaves, while electricity does alarming things, like showing up as ball lightning.

The downside to all of this, so far, is that we have a universe of gas. Our atoms, which have only one proton each, comprise mostly an insubstantial vapor called hydrogen. We need to turn hydrogen into heavy construction material so that we can make planets and people.



### MAKING HEAVY ATOMS.

To make construction material we'll turn lightweight hydrogen atoms (1 proton) into heavy atoms like oxygen (8 protons), or copper (29 protons), and so on. We'll get there by making use of the furnaces of stars and their cataclysmic disintegration. The energy and pressure they provide can be used to introduce more protons into the structure of atoms. However, on its own, that mechanism won't work because protons refuse to stay close to each other. The positive electric charge we gave them pushes them away from each other, and the protons gleefully escape from their atomic bondage, leaving us back where we started, with a universe of gas.

To prevent protons from escaping we could increase the strength of the gluon confining force that helps keep protons together. But if we did that, all the hydrogen atoms in the universe would promptly fuse into heavier atoms and we wouldn't have the benefit of the sun shining on us, which it does by slowly changing hydrogen into helium. Better not go that way.

Alternatively, we could reduce the strength of the positive electric force that pushes protons away from each other. But then we would interfere with the same electric force that keeps protons and electrons attracted to each other. If that goes wrong, we are in trouble.



**NEUTRONS.** The solution is to make proton-like particles with no electric charge. We'll take two down quarks, each with one-third of a negative charge ( $-2/3$ ) and combine them with one up quark, which has two-thirds of a positive charge ( $+2/3$ ). The charges cancel out. We now have chargeless compound particles called "neutrons," which are very like protons except that they don't mind being close together. Being made of quarks, they are exclusive but being electrically neutral, they are sociable.

There is method in this madness. We can now add extra protons to atoms to increase their mass, and we will hold back the pesky protons from escaping by adding sociable neutrons. It's like adding busloads of well-behaved accountants to a soccer crowd which could otherwise begin to riot, as soccer crowds sometimes do. Things calm down. The good news is that this unnatural arrangement actually works. We can now make heavy atoms.

The materialistic approach is to overlook evidence of design while suggesting a landscape of innumerable, imaginary, and undetectable universes which perpetually and prolifically emerge from eternal laws of nature by way of quantum fluctuations



**TEMPERATURE CONTROL.** We mustn't forget to make sure that the energy we created at the beginning keeps on expanding the particle universe, because otherwise luminous stars will superheat everything, making life impossible. An expanding universe alleviates the heat problem.



**STRUCTURE.** There's another situation. Atoms which have received additional positive protons will naturally be inclined to take on board negative electrons until the protons and electrons are equal in number. After that, the atoms will be electrically neutral and will meander around with no particular purpose, like a herd of contentedly browsing elephants. If we leave things that way, the universe will have no structure. But we need structure, and, more than that, complex structure. We need solids, liquids, and gases.

To introduce structure, we'll teach atoms to do the eightfold reel. They will dance around, linking up with each other, sharing and exchanging electrons so as to make up combinations of atoms with eightfold outer electron shells. There can be other numbers but eight will be the favorite.

Here is an example: a calcium atom spins off the two electrons in its outer shell. The next lower shell (which has now become the outer shell) has eight electrons. Success! A carbon atom joins in the dance. It has four electrons in its outer shell (4). It links up with three oxygen atoms, which each have six electrons in their outer shells (18). Then the two electrons from the calcium atom join in (2) and that all adds up to 24 electrons. That's three times eight. Triple success! The end result is a combination of a calcium atom, a carbon atom and three oxygen atoms. Scientists call it calcium-carbonate; we call it chalk.



**MATTER.** Scientists refer to this combining process as bonding, or overlap. Bonded atoms provide us with matter. They give us the things that make our material world, like gas

(carbon dioxide) and water (dihydrogen monoxide) and salt (sodium chloride) and earth (silicon dioxide). We now have the building blocks for a universe.

## Examining the Atom

People on social media often use words like "astounding" and "sensational." Atoms deserve such adjectives. An atom is a proclamation of design, an artificial construct, an unnatural and complex combination of unrelated forces, emanations, and processes, assembled with predictive, purposeful foresight and problem-solving ingenuity.

According to Darwinian natural selection, a newly acquired physical attribute which affects a living creature may be passed on to successive generations, eventually being passed on to a whole population. It is different with atoms. Creation and change tend to happen by way of momentary cosmic convulsions which affect all particles. That leads to an interesting insight: the universe appears to have been designed *before* it came into being.

Unlike with Darwinian natural selection, there are no benefits at intermediate stages. Quarks without gluons, or without mass, have no use. It's only at the end of the chain of creation events, when matter emerges, that we begin to see what design is all about.

When electrons occupy the orbitals of atoms closest to the protons, what they are doing is dropping into the lowest available energy levels. Isn't that a natural mechanism? No, that's like billiard balls dropping into billiard table pockets. Billiard table pockets are purposefully designed; so are atomic orbitals.

## Examining Our Narrative

We cannot be accused of artificially imposing design on our narrative. Design is embedded in the makeup of atoms, just as it is in the car parked outside my front door.

Is our narrative accurate? Not all scientists agree that quantum fields are transmuted energy. Actually, no one knows what quantum fields are.

Is our narrative too brief? What about spin, wave-particle duality, quantum chromodynamics,

the weak nuclear force, and virtual particles? Those features have their place, but this isn't a physics textbook, and after 40 pages our conclusions would be the same: atoms are designed.

We could have presented things in other ways. We could have talked about electron orbitals in terms of wave function probabilities. But the big picture would be the same. The big picture opens us up to design.

## Science or Materialism?

Science is supposed to follow the evidence wherever it leads. Our design narrative is scientific. Materialism is a philosophical construct imposed on science that prohibits the design inference. Our design narrative is in breach of this prohibition, which suggests why there is no such scientific narrative.

The materialistic approach is to overlook evidence of design while suggesting a landscape of innumerable, imaginary, and undetectable universes which perpetually and prolifically emerge from eternal laws of nature by way of quantum fluctuations. A mathematical innovation called string theory permits the belief that each imaginary universe is different from all the others in endless variety. The idea is that anything *can*, and everything *does*, occur somewhere or other within this vast array, including the existence of our universe.

We are expected to have faith that science will at some future date replace these conceptual images with facts. But there is no prospect that this goal will be achieved.

Even then, myriad universes wouldn't produce atoms. How could they? In fact, it's the other way around. There were atoms before there were stars and galaxies. And there are other difficulties. For example, there is no natural process that would create electron orbitals. Orbitals are not created things; they are a set of instructions. In fact, all of the attributes that we observe in atoms have the appearance of a set of instructions from a cosmic mind.

Our scientific exploration of atoms leads to design and that leads to a Designer. And that, of course, leads to another story. ☉

