

IN PRAISE OF CARBON

by John Brignell

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– H. L. Mencken



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Children are having nightmares about their carbon footprint. What a pretty pass modern man has brought himself to! Frightening children with scary stories about hell fire is the way our ancestors drilled society into conformity. It might have been hoped that the age of science would bring all that to an end, but now we have entered the post-scientific age, in which a new class of high priest returns to the traditional methods of enforcement. In order to establish the essential fear-provoking scenario they have nominated in the role of original sin one particular element, one atom out of the whole gamut. It is a choice that is bizarre to the rational mind, yet one that conforms to the long established principles of the founding of authoritarian religions. Why is it bizarre? If you are of a mind to seek out magic and miracles look no further than the sixth member of the periodic table of elements.

THE PRIMAL SEED

Shortly after the discontinuity that launched the universe (if, indeed, that is the way it happened) the elementary particles came together to form the first atoms – hydrogen, helium, lithium; later beryllium, boron – and then something quite unique, an element of such startling properties that the ultimate outcome was the profound and mysterious development to which we designate the abstraction of “life”. Furthermore that development reached such a state of advancement that it could understand the nature of that which gave it being and then the perversity to vilify it as the root of all evil.

SHAPE SHIFTER

Even as a pure chemical, carbon exhibits a multiple personality that is quite exceptional in its variety. The soft powder that is lamp black, the amorphous stick of charcoal with which Leonardo first sketched the outline of a mysterious woman, the hardest of sparkling crystals nestling between the soft breasts of other women who changed history, yet which has been crucial to high technology, the smooth flaky centre of the draughtsman’s pencil that also lubricated the workings of his mechanical designs and the new nanostructures of unimaginable possibilities (fullerines, buckyballs, nanotubes etc.) are all chemically identical.

THE PROMISCUOUS BONDER

But the diversity of the pure element is as nothing compared with the infinite variety of its combination with others: for the structure of the carbon atom lends itself to a mechanism of

unconstrained potential known as the covalent bond. The atom has four electrons in its incomplete outer shell and exhibits a remarkable tendency to share these with other atoms. It forms chains, both straight and branched, and rings that yield combinations of unlimited length and complexity. Compounds of the same chemical formula can have quite different structures and properties (isomers). Onto the basic carbon skeletons many other atoms can be attached by covalent bonding to create an infinite variety of compounds with an awesome range of properties.

JEKYLL AND HYDE

Apart from some curiosities there are two prominent oxides of carbon. One is the silent killer, while the other is the giver of life. Carbon monoxide is preferentially taken up by haemoglobin, so poisons the body and brain by depriving them of oxygen, and is the most common cause of human death by poisoning.

Carbon dioxide, in contrast is the sole source of the food chain. Every item of nutrition you consume started out as atmospheric carbon dioxide. Through the intermediary of the photoreceptor chlorophyll (a carbon compound rather like haemoglobin, but centred on magnesium rather than iron) plants trap light energy from the sun and use it to manufacture sugars from carbon dioxide and water. These sugars are then used to create the higher compounds that plants and animals need for structure and function, while also making energy available where and when it is needed.

The only experimentally proven effect of increased carbon dioxide in the air is an increase in the growth rate of plants and, in particular, crops. The gas also makes a modest contribution to making the planet habitable by the so-called greenhouse effect, though water vapour is by far the dominant factor in this life maintaining mechanism.

THE FOUNDING FIRE OF CIVILISATION

The discovery of fire was the spark that ignited the explosive growth of civilisation. Man was surrounded by carbon, initially in the form of wood, and oxidation of carbon is highly exothermic; so the consequent liberation of energy and its subsequent control gradually made man the master of his environment rather than its slave. Up to that point technology had been based on flint knapping (to which some modern religionists seek to return). First fire gave us warmth, then the cooking of flesh, but it was the discoveries from the accidental exposure of various materials to fire that began the great technological ascent of man. Hence we were granted the boons of pottery, bricks, smelting of metals, manufacture of glass etc. Adding carbon to iron produced steel, a workable material of extraordinary strength that produced structures and machines of previously unimaginable capability. Unfortunately, it also enabled us to kill each other more efficiently.

ENERGY

The gift of unlimited energy freed man from the constraints of the musculature of himself and his domesticated animals. It freed him from the confines of the cave to travel the globe and master the air.

One of the more fanciful offshoots of anticarbonism is the dream of the hydrogen economy. It is nonsense, of course. The hydrogen has to be manufactured and you have to put in more energy than you take out (there are always losses) so you have gained nothing. It is dangerous nonsense too; hydrogen being the most explosive and mobile of all the elements, able to stream through the tiniest pinhole. If you are tempted to drive around on top of a tank of hydrogen, take a look at pictures of the Hindenburg disaster. The best way to transport and store hydrogen as a fuel is to link it to carbon in the form of hydrocarbons. The paraffins, for example, are straight chains of carbon with every available link taken up by hydrogen. They are chemically unreactive (which is what their name means) yet on complete combustion they yield up all their energy and just two benign gases, carbon dioxide and water vapour.

It is carbon that grants Al Gore, for example, the means to bestride the world like a colossus in his private jet, earning more in an hour of mendacious diatribe against that which enables him to do so than most of us have to live on for a year.

CONDUCTOR OF THE ORCHESTRA OF EVOLUTION

As the earth cooled and the oceans formed, the covalent promiscuity of carbon created a primeval soup of molecules of ever-increasing complexity. It only needed the appearance of a self-reproducing molecule, perhaps a form of RNA, for the grand progress of evolution to begin. Assemblages of molecules enhanced their capability of mutual survival and at some ill-defined stage life came into existence. Other hypotheses as to its origin are held, of course, but this one will suffice for the present argument. One of these molecules was a photoreceptor, which launched the process of converting a carbon dioxide rich planet into an oxygen rich one that was a generous host to animals and man.

THE CYCLE OF LIFE

Before carbon was turned into a bugaboo for purposes of religious propaganda, school children learned about the carbon cycle. Carbon moves continuously between four reservoirs – the biosphere, geosphere, atmosphere and hydrosphere.

The carbon cycle provides the ideal means of recycling garbage. High temperature incineration returns carbon to the atmosphere whence it is converted back to food, the ashes being available to fertilise the soil, and as the combustion is exothermic there is a bonus of energy that can be utilised for power generation.

Almost every structure and process within the human body owes its existence to carbon. The protein collagen provides skeletal strength, chemical messengers control operations,

muscles enable motion etc., all bountifully endowed by the chemistry of carbon. Nature grants each of us the loan of a stock of carbon to house that mysterious entity we call consciousness and, when the time comes, calls for its return to the eternal cycle. Each of us enjoys our term at the top of the food chain, to which we are destined to return.

KING CLAUDIUS: Now, Hamlet, where's Polonius?

HAMLET: At supper.

KING CLAUDIUS: At supper! where?

HAMLET: Not where he eats, but where he is eaten: a certain convocation of politic worms are e'en at him. Your worm is your only emperor for diet: we fat all creatures else to fat us, and we fat ourselves for maggots: your fat king and your lean beggar is but variable service, two dishes, but to one table: that's the end.

KING CLAUDIUS: Alas, alas!

HAMLET: A man may fish with the worm that hath eat of a king, and cat of the fish that hath fed of that worm.

KING CLAUDIUS: What dost you mean by this?

HAMLET: Nothing but to show you how a king may go a progress through the guts of a beggar.

THE GREAT CODA

Of all the creation that has emerged from the extraordinary properties of the simple carbon atom, the most remarkable is the bearer of the code, deoxyribonucleic acid, DNA. It is an infinitely variable molecule of great length. The decoding of the double helix by Crick and Watson was perhaps the pinnacle of the scientific age before it went into decline. DNA carries a four-symbol code that can completely define a structure as complex as the human body.

THE PINNACLE OF EVOLUTION

The long trail started by those primordial giant molecules floating in the primeval soup led eventually to the human brain, a calculating machine of unfathomed potential, and with it that strange abstraction of self-awareness. For carbon chemistry led to the evolution of the neuron, not only the carrier of information around the body but also the fundamental electrical logic component that enables computation. There are a hundred billion of them in a human brain, which can thereby solve problems of great complexity, yet also mischievously think up imaginary terrors to haunt its owner.

IN THE STOCKS

In mediaeval times those who strayed from the path of correctness were put in the stocks to receive a hail of abuse, detritus and ordure. It is a curious reflection on the nature of modern man that he should choose to allocate analogous treatment to an atom; not just any atom either, but the one that is responsible for the bounty of nature. This, of course, is the whole point. When you are establishing a new religion, it is necessary to create the basic infrastructure of sacrifice, ritual and credence. Commitment comes from the combination of these three, but the greatest of these is belief. It is not sufficient to induce just any undemanding belief, such as that the sky is blue. That would require no leap of faith and therefore no devotion. If you can induce a belief that is logically insupportable, such as the reward for immolating yourself and others being eternal attendance by somewhat implausibly numerous virgins, then you have established mastery. It is then, of course, absolutely necessary to cut off other interfering sources of information, which is why the Greenies made such strenuous, if covert, efforts to occupy the commanding heights of the scientific and media establishments, from which to orchestrate a blanket censorship of alternative views.

That is the perversity of some manifestations of religion. They operate on a principle of opposites in the nomination of that which is defined as evil. The contradictions are an essential part of the mystique. Religion creates commitment by belief and then adds reinforcement by demanding sacrifice and ritual. It is in the nature of man to deny that a sacrifice, once made, has been in vain, it offends his self regard, so that each further little discomfort and inconvenience affirms the dedication. They have been with us since the dawn of human language – doomsayers, puritans, flagellants, killjoys – the deniers of contentment and the promoters of pain. Every tiny pointless gesture reinforces the commitment: turn off the stand-by light, tolerate death-dealing maggots in the garbage bin, do without the holiday, abandon fresh milk and on and on. Each gesture must involve an element of pain or discomfort and be linkable by mangled logic to the realisation of the return to the supposed stone-age paradise.

The self-appointed chief inquisitor of the atom in question is Al Gore. Armed with a towering disregard of reason, truth or evidence, he preaches the coming Armageddon with all the fervour of an Old Testament prophet. He is a reincarnation of that favourite grotesque of the mediaeval satirists, the opulent prince of the church on a magnificent progress through the land; gathering further wealth on his way and forever declaiming the eternal message of the ostentatiously and hypocritically devout to the common herd “Do as I say and not as I do!” His familiar, James Hansen, shares his shameless addiction to self-promotion, gross exaggeration and contempt for reasoned debate. He manufactures the ammunition from behind a screen of secrecy and obfuscation. Behind them is a vast army of true believers, who propagate the scriptures and, just as importantly, suppress dissent. They actively penetrate and take control of the media, scientific institutions and educational establishments, turning our schools into eco-theological madrassas, in which the traditional religious service is replaced by five minutes hate against the innocent butt, carbon.

THE EVIDENCE

There is no scientific theory linking carbon dioxide to the “runaway” global warming that is the basis of the calamitous predictions. The contribution of the gas to the making of a comfortable planet by the greenhouse effect is well understood, modest and self-limiting. It is only turned into a terror by computer models. These are worthless; depending as they do on extensive guesswork about the ill-understood mechanisms and interactions involved in climate, and involving so many tunable parameters and feedback factors that they could produce any desired result by appropriate tweaking. A quarter of a century ago, before science came under firm bureaucratic control, such models would have been laughed out of court.

The putative experimental evidence is equally dubious. It all sounds very impressive and scary, but on close examination tends to dissolve like the morning mist in the light of the sun. It is only recently that a small troupe of volunteers with few resources has begun a serious audit of the claims. The much vaunted “high-quality” sensor network turns out to be ramshackle almost beyond belief; the processing of the data involves inapplicable methods, glaring errors and unexplained adjustments, which all mysteriously turn out to exaggerate the desired effect. There is a morbid and obsessive secrecy among the practitioners that is quite contrary to the open nature of the scientific method, which prompts the question “What have they got to hide?” Details of publicly funded “research” are kept, quite illegally, from the public who fund it; and only the claimed results, inevitably apocalyptic, are exposed. Such data that have been wrested with great difficulty from their creators almost invariably turn out to be subject to serious dubiety.

Carbon has been framed for purely political purposes.

CONSEQUENCES

There are many ironies in the appointment of carbon as the epitome of original sin. Modern religious man, having made the foolish, empty gesture of turning his back on the atom that is his primal progenitor and the essence of his being, has admitted a Trojan horse that is being used to attack basic human liberties gained by centuries of struggle. Carbon-based, carbon-dioxide-exhaling politicians invent carbon taxes, carbon trading and carbon rationing; quite meaningless paper transactions that only serve to manacle the masses and (naturally) enrich those individuals with an eye to the main chance. People submit to repression and restraints of liberty that would have seemed inconceivable twenty years ago, purely because they come wrapped up in a cloak of religious conviction. They are subjected to absurd rituals without the right to dissent. They are denied access to the knowledge that could unshackle them.

Of course, carbon is not alone as an element in the periodic table that has come under politico-religious attack. Both mercury and lead, for example, have been excommunicated by the totalitarian regime in Brussels, on the basis of empty scares and monumental ignorance. That is what happens in a bureaucracy unconstrained by monitoring and criticism.

In the case of lead, the consequences are dire: not only is there a threat to the entire electronics industry by the banning of solder; people are going to die because of predictable equipment failures.

The contagion also spreads to other compounds of carbon. The maggots of *musca domestica*, that underestimated yet deadly carrier of dangerous infections, are there in our garbage bins because of an empty scare about methane, the simplest of the paraffin series, said to be a powerful greenhouse gas, but so rare in the atmosphere that to all intents and purposes there isn't any (0.0002% and considerably rarer than argon, neon or helium).

ENVOI

So, if it is in your nature to give thanks for anything, spare a thought for the much maligned atom that is your primal ancestor and the provider of everything that you are, that you have and that keeps you alive.



Source: <http://www.numberwatch.co.uk/Carbon.htm>.

Cover art courtesy of [Amanda Wenger](#).

