

The Scientific Basis for Democracy, Peace, Enemies and War—Without ‘Intent’, We’re Fossils

Bob Johnson

MURDERERS cannot tell you why they killed. I spent 5 years getting to know 50 of them, and none could give me a coherent answer. Once they could, once they’d been taught that they too had been born Lovable, Sociable and Non-Violent, then, and only then, did their violence go. The conventional wisdom which crime fiction writers or movie directors regularly “sell”, bears no relation to murderous reality—the myths the media propagates, make things worse.

Being scientific means being fully prepared to abandon what you might have thought, or have long been taught, so as to find out not only what really happens, but how you can stop it happening again. There is a common thread to all killings, both at an individual level and in war, and this paper traces its origins back into our evolutionary past.

600 million years ago living organisms became, for the first time, multicellular. Up to that point, they had all been single cells—afterwards, cells learnt how to live together, trillions of them at a time—and the key chemical which made this possible goes by the acronym, DHA. This unprecedented molecule controls electrons much as semi-conductors do today—and, as in the modern world, it allowed *communication* between the different parts of the same organism, which could then become huge.

Where DHA came from, or how it came about is the central enigma in the entire biosphere—something we do not now understand, nor can we ever know. But just as communication allowed vast numbers of semi-autonomous cells to live together, so it forms the key to how we can too—healthy multi-people democracies mirror healthy multi-celled organisms. Fake-News poisons this, giving rise to fake hostilities, figmentary enemies, but real deaths.

The paper has eight sections: (1) *Our Evolutionary Downfall*; (2) *Our Living Miracle Molecule—& Goodbye Goldilocks*; (3) *Why all-cis-DHA Is So Deep & So Vital*; (4) *Cutting The One and Only Root of Fake-News*; (5) *Make Sure Your ENEMIES Are REAL—Else We All Lose*; (6) *Mrs Norris—And the Futility of Bullying & Revenge*; (7) *Only Healthy Democracies Can Avert War*; (8) *Conclusions*. So far, homo sapiens has responded to its own belligerence by building ever more lethal weaponry. Indeed the only time it has deployed Einstein’s universally known equation— $E=mc^2$ —is to build an incendiary thermonuclear device to incinerate our entire blue planet, thereby promptly terminating not only all of us, but all of life too. Is this really the best we can expect from homo sapiens? This paper explores a remedy.

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Keywords: MURDERERS, fictional murders, evolutionary roots of war, *all-cis*-DocosaHexaenoic Acid, Fake-News, Mrs Norris & Revenge, video violence, thermonuclear extinction

Our Evolutionary Downfall

“I have two boys at home. I have my young son and I have my husband”. So said Melania Trump in October 2016, on TV, at a turning point in her husband’s election campaign (Jordan, 2020). She then gave a hollow laugh. If you’ve talked to 50 murderers as I have—this is no laughing matter, it’s chilling. Here is an adult woman excusing a 70 year old man’s aberrant behaviour, on the grounds that he couldn’t help it—he is only a child, and allowances need to be made for this. She even refers to him in this interview as a *teenager*, and justifies her position on the grounds that he has the same emotional age as her 10 year old son, and so also needs looking after. What could she be thinking? Which is he? 70 or 10? Doesn’t reality come into this somewhere? Would you put a teenager in charge of the most heavily weaponised army in history? It’s like letting a toddler play with matches on an oilrig. It doesn’t make sense. Is there no explanation? Reality has a way of biting the unwary. What on earth was she thinking—or not-thinking? Where does all this come from? And what, if anything, can we do about it? This paper looks into our deepest evolutionary roots, to find a cool reasoned pathway through this endemic human problem.

Emotional immaturity—is this really at the core? There can be no dispute that children need looking after. From the very beginning, if they are not fed, comforted and succoured, they neither thrive nor, in extremis, survive. But surely there should be a limit to this? Traditionally the age of maturity is late teens or early twenties—70 is way beyond anything reasonable. Something has gone seriously wrong—there is an urgent need to find out what, and then to take active steps to prevent the worst.

Put this firmly into a scientific, medical context, and it cannot be denied that the human newborn is more dependent than any other, even among primates. Hairier parents among our nearest evolutionary cousins supply at least a hand-hold for their offspring—pictures of baby monkeys, for example, clinging to their mother’s fur, as she leaps from branch to branch, are eye-opening. Humans lost their body hair aeons ago, so there is nothing for their offspring to hang on to. And it cannot be denied that this places an extra burden, an onerous responsibility, primarily on human parents—they alone can prevent their babies dropping or falling. But it also impacts directly on the *autonomy* of every human newborn, none of whom has any control whatever, over their ongoing physical safety—a point obvious enough in itself, but whose implications run deeper than might be expected, indeed they penetrate to the very foundation of all and every inhumanity, as this paper explores.

Curiously, as many a baby-kissing politician has found, newborns are quite capable of gripping a passing lock of hair with unexpected tenacity. They seem to have no conscious control, but given the opportunity, their vice-like grip is surprisingly fierce. Medically, this is called the grasp reflex, and it is routinely tested for at birth. This ability is no quirk—it points to a whole new way of looking at human problems. It is one small plank in favour of the “Aquatic Ape” theory (Morgan, 1997), whereby for millions of years, we spent much of our time in the water. Moving through water is smoother if you’re not covered in hair, so we lost ours. Human babies are more buoyant than other primate offspring (at a considerable drain on maternal resources)—so they float better. They even possess a most unusual ability in that they can survive underwater for surprisingly long periods—the “diving reflex” (Godek, 2019). Explaining these evolutionary oddities in this way may seem fanciful—but emotional insecurity is anything but.

There's more to this unfashionable theory. Much more. Substantial scientific evidence from our biology offers us a far more convincing evolutionary origin—we have not descended from the trees, but have evolved by emerging from the water. Babies clench passing locks of hair as if their very life depended on it. Perhaps it did. What if they had been born in water in which they could float unaided, and, fearful of floating away, grabbed a convenient life line—human hair? This would need additional corroborating evidence. And here it comes—our tresses (both male and female) grow incessantly, becoming unconscionably longer than those of any other terrestrial primate. Why? Gorillas need no flowing locks to accommodate their newborns—nor do we *now*, but we assuredly did, else why do we have them and gorillas not? And why, during pregnancy, does the mother's hair thicken and strengthen—why on earth does it do this? And why at this precise and significantly costly time in female biology? In our current terrestrial habitat, it makes no *biological* sense—but in a watery context, it adds substantial weight to our aquatic origins.

Next, how come we are such confident bipeds? No other primate is. Watch, for example, gorillas clumsily fording a stream—they naturally assume a bipedal gait—so did we. You can wade much deeper on two legs than on four. Balance, gymnastics, ballet, trapeze—far beyond any of our evolutionary neighbours, but close enough to dolphins. This theory provides far too neat an explanation to be easily discarded, especially as it highlights our central evolutionary flaw.

Did dolphins start out as some sort of terrestrial quadruped? Seals may have been somewhat like dogs, who went to sea to eat fish. Were whales once a type of land-based pre-elephant or hippopotamus? Genomes provide something of an answer—but what cannot be denied is that no mammal started out in the water—they all began on dry land. Following this, the largest of them found a more fruitful future, in water. Why this matters to humans is that though we may have been moving in the same direction at one time, like dolphins, from dry to wet—we then reversed the process and moved back. Having done so, we acquired our evolutionary Achilles Heel—some of our aquatic adaptations have tragically persisted, and being now terrestrial, have proved calamitously maladaptive.

Walking on two limbs, not four, has another unique advantage, something quadrupeds cannot begin to rival. Once your forelimbs cease to be needed for locomotion (not in itself particularly interesting), they can be adapted to other much more fascinating uses. Even swinging through trees imposes at least some limitation on arms, since they have still, to some degree, to remain weight bearing. The technical term is brachiating—use of your upper limbs to move about with—something which humans dispensed with several million years ago. Our hands would be much less dextrous, if they had to support our weight, even if only from time to time. As it is, and living by the sea shore, we fed on molluscs, fish and other sea animals, which we picked up with our increasingly deft fingers. And check out our jaw line—semi-circular like a shark's, because we were piscivores for so long—not square-cut like fructivorous chimpanzees.

And here we hit another remarkable biological fact—chemistry prodded our astonishing, and unprecedented, evolutionary progress. Sea creatures in turn, feed on phytoplankton which, around 600 million years ago, and out of the blue, began to grow an astonishing chemical, one that had never appeared anywhere else in the entire cosmos, and one which could never ever occur at random, or by chance. Known as DHA, its full name is *all-cis*-DocosaHexaenoic Acid. And as Professor Michael Crawford spent decades demonstrating, it has a spiral molecular structure, with atomic gaps conducive to electron transfer. It's not unreasonable to refer to it as nature's semiconductor (Johnson, 2011) since it facilitated nerve conduction and thereby the

epochal move from single to multi-cellular organisms, known as the Cambrian Explosion, without which we simply wouldn't be.

So does DHA matter? Dolphins coordinate, they socialise, they move, they frolic. (Perhaps we should frolic more.) Weight for weight, they match zebras, for instance—but whereas the latter eat only grass, which has limited DHA, they feed exclusively on fish, where this remarkable compound is abundant, so far. The result? Their brain size is not twice as big, but six times heavier (350 g to 1800 g; Crawford, 2008). Our brain capacity is also large, compared with our fellow, non-fish-eating, primates. It's around 1800 grams, though we generally weigh rather less than dolphins. Can the Aquatic Theory really be kept at bay much longer?

But look at what has happened. Whereas babies could then float, they now no longer get the chance. Unlike in water, they simply have no means of supporting themselves—if they are not held, and handled with great care and attention, they drop. They fall. Hairless parents have become a developmental liability. *Autonomy*, even in the least degree, is unavailable. A few futile remnants persist, as witness the hair clenching facility—but any value in securing physical safety for oneself, has, in reality, been forever lost. Dependency for very survival takes on a strictly anti-gravity perspective. If your parents aren't careful, they could easily drop you—and you can do nothing about it—not until you are several years older. Maturity matters—especially since emotional insecurity tightly follows emotional immaturity .

Our Living Miracle Molecule—& Goodbye Goldilocks

The problem posed in the opening of this paper remains. How can apparently sensible people make statements that just don't add up, that do not tie in with reality, which are, frankly, unrealistic? This is non-thinking, and it needs sorting, since it could be the end of us. It is far too akin to Fake-News for comfort. But before progressing on that front, consider a challenge that even Einstein had no hope of answering, had he ever known of it. Neither can any of us. If you support a Clock Work Universe, with Fully Deterministic accoutrements, then ponder the chemical just cited—DHA, or *all-cis*-DocosaHexaenoic Acid. This is the central unknown of all biology. And it's unknowable. Darwin gave us evolution, but DHA is a scientific fact no-one will ever be able to explain. Nobody is ever going to be any the wiser about how it happened—though we all need to be aware that if it hadn't, then again, none of us would be here today.

This enigma is simply stated, hard to face up to, impossible to resolve, but vital to our survival. DHA is a long chain fatty acid, with 22 carbon atoms linked together. Nothing particularly unusual about that, there are lots of such molecules. Six of the bonds in this particular chain are double, or unsaturated. Again, hardly exceptional. Now the thing about any double bond is that it can be in one of two states, the one called *cis*, the other *trans*. Synthesise DHA in a scientific laboratory, and you find these double bonds come out at random—only a miserable fraction of the total product will be *all-cis*. So far, so scientific. Here's the issue. None of the other 720 varieties of DHA (factorial 6!) ever occurs in living organisms, not even once—they are all, invariably, *cis*—that's what the prefix "*all-cis*" means. So that's the first imponderable mystery. Einstein's God may or may not play dice—but living processes, courtesy of DHA, never have, so far. And it matters.

Next, this molecule, fairly simple as biochemical molecules go, compared for example with any number of proteins—this molecule turned up out of the blue, 600 million years ago. And, note this, it has remained unchanged ever since—not the slightest alteration, not the teeniest change. Nothing else, or certainly no genetic material or DNA has been so consistent. Mutations happen all the time, we have evolved a different genome from our nearest evolutionary relatives, even from each other—but, hardly believably, the DHA we use is

identical throughout biology. Variability, change, adaptation—these are solid and dramatically consistent features throughout the biosphere—yet here, in an ocean of change, we have a single constancy. Why?

More, consider this. For some 3,000,000,000 years, life on this remarkable planet had trundled along as single cells—eating each other or being eaten—but never more than one cell at a time. Then Shazzam!, along comes nature's "semi-conductor" and we get cells joining up for the first time—multicellular organisms came into existence 600 million years ago, never before, and so far, always since. That's how the Cambrian Explosion came about. And it's only because DHA allowed these cells to *communicate*. Without this, the Explosion would never have happened, indeed could never have happened. It is this communication between different components of a single organism, that allow its many, distinct cells to cooperate, and the whole therefore to survive, indeed to flourish, as we have, mostly. If semi-autonomous cells in a single multicellular organism can coordinate, to the mutual benefit of all—when it comes to social behaviours, why can't we?

Now the central point of this paper, and of its predecessors (Johnson, 2016, 2017, 2018, 2020a, 2020b, 2020c) is to deploy the notion of 'intent'. This concept has had a difficult time in Science. It flows freely in law, somewhat less so in general medicine, and hardly at all in today's psychiatry. One of the objections is that 'intent' is not scientific, it cannot be rigidly, even mathematically defined. But then neither can the origins of DHA. The central law of the biosphere is adapt or perish—and the variety and colour with which animals and plants have implemented this law, is breath-taking. Everything else changes, but not DHA—why is this? Where did DHA come from? And why, unlike pretty much everything else, has it persisted in precisely the same form as when it first arrived, deviating not one unruly electron from another, during all that time?

Let's take the simplest explanation—it hasn't changed, because it works. Manifestly so much depends on it working the way it does. But who or what decided that it does work? Because whatever the agency, it has been remarkably consistent over 600 million years. How farfetched would it be to say that multicellular organisms "decided" to keep DHA just as it was, at first? Something in them "decided" it worked. What that was I have no idea—nor do you. But I acknowledge it has happened, and invite you and all Scientists to do so too. Whether you go the next step, and take over from DHA, and say it works because of 'intent'—that is more challenging. However, I am happy to link 'intent' to DHA—indeed I would go so far as to say that this is nature's scientific basis for 'intent'—it provides solid chemical evidence, and indeed points to the mechanism for enabling 'intent'—these are deep, fuzzy and highly contentious areas—but vital. If you don't accept these incredible facts about DHA, what are you going to put in their place? And if we are talking life and death, which we are, do you have enough 'intent' to choose?

Some scientists express surprise at certain cosmological constants. The earth is just the right distance from the sun—were it closer, we'd fry like Mercury, further away and we'd freeze like Jupiter. No, like Goldilocks, we're just right—not too hot, not too cold. There is a bevy of such "coincidences". None comes even close to DHA. And none have such a direct bearing on health, and indeed on life itself. Look this biochemical anomaly square in the face—and all the other apparent coincidences among the so-called physical "constants" in our inanimate surroundings, fade into insignificance—which we may well do ourselves, unless we grasp its meaning sooner.

Science has a fall back, a "workaround", when it comes to assorted fuzzy occurrences. When something is not immediately obvious, it is conventional to bring into play an estimation of "chance"—traditionally 1 in 20. Thus if an event occurs less often than on 5% of occasions, then it is customary to dismiss it as a "random effect" or "merely due to chance", and therefore discardable as being of no practical or scientific significance ($p > 0.05$). Here we have very much the opposite—*all-cis*-DHA occurs over 30 times more than chance would

allow, by a ratio of 720 to 20 ($p < 0.0014$), and has done for 600 million years—way above random, and quite beyond anything else we have come across so far. Something else is afoot—and we haven't got long to find out what. If DHA can be consistent, why can't we? If DHA represents, in some weird but wonderful way, some sort of biosphere evidence for 'decision-taking', for 'intent-making', then it behoves us to pay extra close attention. Is it telling us to take heed, and to become more 'intent' on avoiding self-extinction?

Some sceptical readers might dismiss these points, saying, in effect that DHA doesn't matter, choice is illusory, 'intent' doesn't happen, nor democracy either—why worry about Fake-News? But, since we are approaching this from a strictly medical and scientific perspective, we need to apply identical reasoning to, for example, "oxygen". Any who risk saying that an adequate supply of the air we breathe doesn't matter either, has got four minutes to change their mind, else after that, they'll have no mind left to change. Fossilisation happens all the time to any and all living organisms who insist on remaining unaware of the true nature of reality, of the significance, the "meaning" of what is really happening out there.

Why *all-cis*-DHA Is So Deep & So Vital

These crucial *biological* facts warrant unprecedented emphasis—the point is of such enormity, it cannot be overemphasised. Nothing else in biology, science, even philosophy comes close to this universality, consistency, reliability and objective repeatability—if there is one fact from this paper which stands out, then it must surely be this. DHA is unique in all other human findings, musings, or actions—it is unchanging, it will be the same in the future as it has been in the past, it's here to stay—even if we're not.

This paper concerns itself with why we humans eschew peace, weaponise to excess, kill each other, do each other down, or inflict needless pain upon one another, almost as a matter of routine. We need to get a grasp on this, else our golden opportunity of delighting in this quasi-miraculous planet looks increasingly likely to be shortlived. DHA, and 'intent' play a vital part in coping with all that the inanimate world can throw at us—time to implement these conclusions, with greater transparency all round, and rather less Fake-News. Communications in the modern world have by now reached unprecedented levels—unless we exercise these new opportunities very much more responsibly, we're in trouble.

DHA enhances *communication* at the cellular level—large, indeed enormous multicellular organisms could only have come about because of its astonishing electronic properties. Can we learn from this relatively simple chemical? This molecule, which only evolved, or came into existence after 3,000,000,000 years, is not fickle—it remains the same as it always has been, it does what it did then, and will continue to do—provided we don't obliterate it. Harmony between living cells—each of which retains an essential particle of autonomy—is only possible because DHA enables adequate inter-cellular *communication*. Precisely the same reasoning applies to unharmonious human beings—can we learn how to reproduce its unique success in our wider global society, of partially autonomous human individuals, soon enough? Or not?

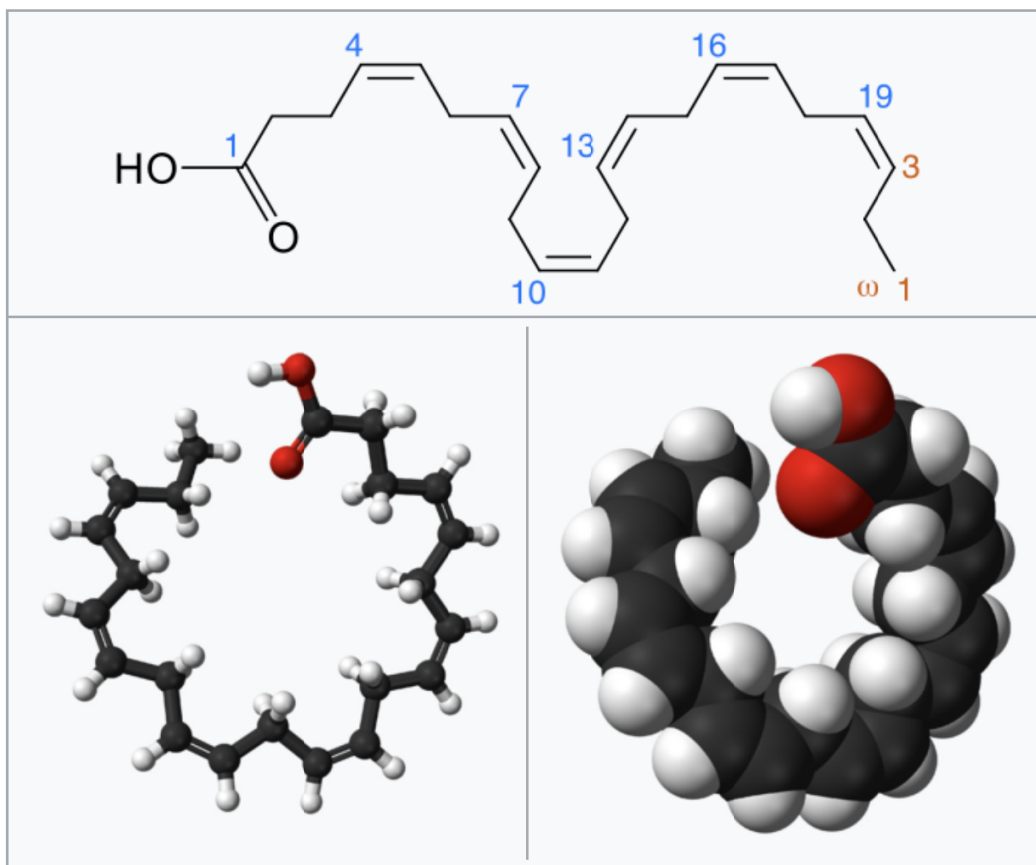
Since I cannot think of any other item, opinion, belief or fact which has survived unscathed for a fraction of the time this molecule has, we need to take a more detailed look at it. Now for some readers, even the very mention of "chemistry" is off-putting—the mind blurs, the fog of ignorance closes in, and the focus drifts. It's a bit like the advice so often given to general science writers—don't include a single mathematical equation, you'll lose half your audience—well, let's try anyway.

Here then, to help things along, is a visual aid, an "artist's impression" of what a DHA molecule might look like, if it was suitably edited for human consumption. I would urge those readers who are unfamiliar with

chemical symbols, whose knowledge of chemistry is vestigial, to read along as if we are discussing a piece of Lego, or wooden toy building blocks—not that far from reality.

So here's the graphic, courtesy of Wikipedia.

Docosaehaenoic acid



Start with the bottom right—here is a partial doughnut of a molecule, with two larger red blobs at the top end, which stand in for oxygen atoms. Note especially its shape. It's twisted around—it's almost circular—certainly the beginning of a spiral—so vital. This is a direct consequence of the double bonds, which fix the angle at which the next carbon atom, here denoted in black, joins its fellows in the chain of 22. The white “balls” depict hydrogen atoms. Only three types of atom are involved—carbon, hydrogen and oxygen—22, 32 and 2 of each, respectively. If there were any more or any less of these 56 atoms, as there very well could be, in our Uncertain cosmos—or, more crucially still, if even one of the six double bonds in this miraculous molecule were *trans* not *cis*, it would instantly lose its shape, and with that, any and all electronic capabilities, taking a crucial aspect of our biosphere with it.

Bottom left is a more skeletal depiction, which, if you look closely, shows the six double bonds, rather faintly. Their actual position is shown in the top figure, even more diagrammatically, where each angle represents one of the 22 carbon atoms, carefully numbered from the COOH end, the acidic bit. I haven't worked out what the red numbers “1” and “3”, and the (1), represent—I leave that to the enthusiastic reader, though I would add that it does strike me as odd, that the top diagram runs from left to right, and the bottom

two, the other way. Still this does emphasise just how synthetic, indeed how artificial this depiction is as a whole—if you were ever able to visualise this remarkable molecule in action, it would be abuzz with activity, the electron “clouds” surrounding each atom would be constantly on the go, and—its *piece de resistance*—moving in one, *and only one* direction. Here is a pattern at the heart of multicellular organisms, such as ourselves, which knows where it's going, which puts a direction into otherwise shapeless meaningless electrons, without which, all over again, we would not be here. Might this give more weight to my contention that this is the way the biosphere underwrites 'intent'?

Just to emphasise how significant this short, rather simple organic chemical is, compared with the myriad of other biosphere molecules, especially DNA, note that it makes up fully a quarter of your very own brain tissue. It stands to reason that you couldn't think without it—as for reading anything as long or as complicated as this paper, well, that would be well beyond you. Professor Crawford makes the point that paucity of DHA in our diets, especially in our mother's milk, could limit the amount of this crucial component in our cerebral tissue, and so might mar our cognition.

But I haven't finished with DHA yet. In earlier papers (Johnson, op cit), I emphasise the many flaws in our knowledge—how we understand things, or don't. Indeed I write from a Post-Einstein-Science perspective—the Uncertainty inherent in the universal application of the Uncertainty Principle means that there simply is no pattern out there in the physical world around us—nothing, *fundamentally*, makes sense. The only respite we have from an otherwise bottomless knowledge pit, is to be found in the biosphere. And here, at the very heart of that, is DHA, *all-cis*-DocosaHexaenoic Acid—and by now, you can see why *all-cis* is in italics.

Where did it come from? What brought it about? How did it, or anything else, *know*? Here is a pattern, a consistency over 600 million years—time to doff our hats, and admit our Awe, along with our Ignorance. No wonder such a range of religious, even theological “explanations” persist—you can well see why. The problem with all our theologies, however comforting they might be for their various believers, is that they almost invariably foment disharmony—which takes us back to the core of this paper. Which is why I emphasise the commonality for us all, of this central chemical, this miracle molecule. Whatever God you believe in, whether the same as Einstein, or not, or even in none at all—you, I and every other multicellular organism simply wouldn't be, without this unique chemical. You can see why some opt for the Supernatural—for myself, the Natural is quite awesome enough.

Natural, Supernatural, or anything in between—we all live in reality. We all need enough oxygen to breathe—we all need comfort and peace-of-mind—we are all members of a single species, wherever we find ourselves. Opinions vary, facts are disputed, Fake-News rampant—yet all the time, we share the same vital requirements, without which we are first unhealthy, and then extinct. Have we scope for unpacking where our many dissensions come from, in time? What if the root cause of them all was as simple as the *all-cis*-DHA molecule itself? The above digression into a graphical representation of this astonishing chemical, serves to highlight a glorious efficient working optimism—let's see if we can't grasp it, and then emulate it, globally.

Cutting the One and Only Root of Fake-News

Does anyone still believe in human harmony any more? If you can dream up even the smallest difference between one human and another, it seems almost as if we humans are ever prepared to go to war on it. Dean Swift in Gulliver's Travels depicted belligerence coming from which end of the boiled egg you start eating. An un-thought-through aspect of this, is that those in the one group think that all would be well, if only those in the

other were the same, did the same, believed the same, and so restored unity that way. Since reality has other ideas, this is a non-starter. However, this paper does offer a deeper, more realistic solution—something that does work among our curiously cantankerous species—if it works in a maximum security prison wing, for exceptionally unstable and dangerous prisoners, it can work anywhere—at least that's my view.

Fake-News is not simple, it's grotesque. Various remedies have been mentioned, but like any other disease (and this is a social disease) what you first need is a realistic diagnosis. Without that, the real root will never be cut. So let's review what Fake-News actually consists of by comparing it with Real News, which is vital for our survival—if we don't know that there is a virus pandemic on its way, we cannot take every reasonable precaution to survive it. Truth means finding out what our surroundings are throwing at us, and taking the necessary action—in our case, social, political and economic action. But if you get the diagnosis wrong, because the "facts" you're given are Fake—then you are treating the wrong disease while letting the real one rip. And it will. Reality does not owe us a living—if we toy with that, then we are suffocating ourselves—first mentally, then fatally.

So this is the scientific and medical background to Fake-News—illhealth. Let's therefore take a step back, and put this, as before, into the context of where we all came from, aeons ago. In terms of our evolutionary roots, the Iron Law of Evolution applies—adapt or perish. Any living organism that concludes that it can dispense with its unique adaptation, like the Dodo did with respect to its ability to fly, then "reality" in the form of this unusual planet, takes the decision out of your hands, and delivers its verdict regardless of your deliberations. With homo sapiens, the same applies—we are bipeds, this has its advantages as mentioned. But the reality is that no biped can run away as fast as a quadruped, so if you sacrifice fleet of foot, you'd better be sure you retain at least as good an adaptation, else you'll never escape ravenous four-footed predators or other speedy life-threats (think wolves). "Reality" out there does not offer us a free lunch—we don't decide what reality is, it decides that for us. It tells us things, but if we don't listen, we are none the wiser. And if we act irresponsibly, via Fake-News or otherwise—we're fossils.

Misinformation, deliberate or otherwise, is a certain recipe for maladaptation. It entails treating the wrong disease, and/or succumbing to any number of dire consequences. Never forget that we are all living organisms, at least we are at this time—and unless we are especially careful to *adapt*, we will assuredly *perish*. There is nothing distinctive about homo sapiens that removes us from this biosphere Law. We may think there is. We may act from time to time as if there were—but you do not have to be a fully qualified doctor to know that diseases don't discriminate—they pick off the unwary, willy nilly. It's the Iron Law of Evolution.

So why do people do it? Where does Fake-News come from? Because if we don't nail it, and soon, we're in deeper trouble than we thought. Here we have conscious individuals quite deliberately distorting what she or he knows to be the case. Reality is being actively twisted for some other (generally clandestine) purpose. Why? Trifling with reality in this way, we cannot escape an immediate downside, a hazard which is incurred automatically—whether we like it, or not. This penalty arrives without regard to my opinion, or my contentions, nor to your pet beliefs, religious, scientific or otherwise—it depends exclusively on whether, as a living organism, you can get sufficient oxygen and other vital resources, in sufficient purity, in sufficient quantity, and in time. That's medical "reality". It is also our joint political reality, which we ignore at our current very real peril.

We call ourselves homo *sapiens*—this is because we build a model of our surroundings in our minds, so as to work out, using our 'intent', courtesy of our abundant *all-cis*-DHA, just which of our next options is safest, is most secure. We "reason" that Plan B is better than Plan A, and we then set about implementing it. Or that's what

we should be doing. This has, so far, been unbelievably successful. But it relies on ensuring our mental model bears the best relationship to what is really going on, as we possibly can. It's hard mental work. Even so, it's never 100%—something the Uncertainty Principle finally put a stop to, forever. But that doesn't ease our biosphere burden. On the contrary, it increases the need for stringency, for trying extra hard to be as near "reality" as we possibly can. Which is precisely what Fake-News sets out deliberately to scupper, at the very outset.

Perhaps we'll need to relabel ourselves, not so much *homo sapiens*, but *homo fake-sapiens*—not a promising development. Instead of using our ineffable ability to find out ever more accurately what is real – we invent, we make things up, we pretend, we indulge in wishful thinking on a pathological scale. Why? Is there some sort of pattern? The invented reality is obviously fake, except to the perpetrator—but is there actually a hidden reason behind it all, a deeper diagnosis which if we could once grasp, we can understand? And then, hope against hope, remit.

And here our earlier evolutionary discussion helps illuminate where Fake-News really comes from. The "facts" it relies on, and propagates, do not relate to today—their speaker keeps desperately, strenuously asserting that they do—but cooler minds can see that they do not. So, let's suppose they come from a different reality. How would that work? Well, we've already considered how we evolved from an aquatic habitat to a terrestrial one—the other biological fact is that we also move from infant to adult. The chief difference for us, is that in the one if it isn't done for us, it doesn't happen—whereas in the other, it's the other way around—unless we do it for ourselves, nothing's done. And at the heart of this is survival. Are we responsible for that, or not? In infancy, not—in adulthood, oh dear me, yes.

Since we moved back from water to dry land, from aquatic to terrestrial, our new-borns can no longer support their own body weight unaided, by clinging to parental hair. Where their bulk was once supported by water, now fresh air can no longer keep them from falling—from being carried everywhere in our first environment, with all that that implies emotionally. As adults, we are required to learn to stand on our own two feet, especially with respect to our emotions—*something not all infants do*. Thus *homo sapiens* must now change—adapting from our first context, in which everything is done for us, else we don't survive—to our second, in which we need to reverse this, and do things for ourselves, to take responsibility for ourselves, or again, we don't survive. "Reality" doesn't take prisoners—you either adapt or you perish.

So the simplest explanation for Fake-News is that we are continuing on into the second environment, as if we were still struggling to survive in the first. Infancy was bad enough, but infant-adults don't stand a chance.

Make Sure Your ENEMIES Are REAL—Else We All Lose

Half close your eyes, and human disharmony clicks into place. Battles which were raging in the kindergarten, continue. Teenagers sulk, and toddlers have tantrums—does this remind you of real life politics today? Watch the nearest two-year-old you know—or even think back to your own nursery years. All humans are born quadriplegic—they can wave their limbs, and they can yowl—but saving their own lives, they cannot. Unaided they die, and they know this. The extent of a toddler's responsibilities is to ensure that your adult carers continue to care—they are in charge of you, your affairs, and indeed of your future, if you are going to have any. You have no say in that, that's up to others, 100%. Except, of course, you can always throw a wobbly and make a lot of noise should the need arise. You may already have noticed this among adults—could this be where it's coming from?

Toddlers can't even walk very well, by definition—but they can have the most horrendous rages, tantrums are second nature to them—and arise every time they feel their very lives are at stake, when they feel really badly threatened. What else can you do at that age? Things are not going well, they look dangerous, you could be about to die—you can't fight back—you're just too small, too impotent—so you yowl, you make noise, you stamp your foot—you desperately need to be noticed one way or another, else you're gone.

And that's not Fake, that's not unreal—if you happen to be two years old, and suddenly there's a gaping hole where adult life-support should be—you're terrified. You well know that, without being cared for—you cannot survive, you're dead. At that age, you can do nothing about it. If you're not fed, clothed, succoured—forget it, there simply is no future—life is for others, these curious giant-like figures hovering around you—but not for you. This should change by the time adulthood arrives—but does it?

To stop being a two-year-old emotionally, we need to have learnt, to have been taught, to fend for ourselves—if we are hungry, we need to learn how to provide for ourselves, if cold, for our own warmth. We need to be taught the confidence that this is natural, that we can do it. We are all multi-cellular, all fully equipped, all with that *all-cis*-DHA—and can therefore deploy 'intent'—something which is an invaluable human asset and with which we each of us was born. We use 'intent' to work out what is likely to happen next, where the next meal is most likely to come from, and act accordingly. None of this applies to two-year-olds—if it is not done for them, it doesn't happen. Other people's 'intent' is what matters—our own 'intent', along with any other capabilities we might have, takes second place, if any. Have you noticed any adults who behave like this?

So what makes you tick as a two-year-old is keeping a sharp look out for how others are reacting—are they smiling, are they frowning? Emotional immaturity means you cannot do your own life-saving—so, from this emotional foundation, you divide the world, and therefore any individuals you come across, into two distinct camps—those for, and those against. Those who might just help—and the ENEMY. There is no middle ground—you are either going to be rescued—or dropped, rejected and so become extinct. Only when you've learnt that you can amend this infant dichotomy, is it worth your while to try and improve things. Nothing helped when you were an infant, and since then, no one has got close enough to persuade you that growing up is different—it's not only possible, and available to all humans above a certain age, but it is actually a delight in its own right.

Many of the murderers in Parkhurst Prison were amenable to this reasoning—not all, and for some it took years—but that's the point of insight—truth in age—are you adult or infant? Are you 10 or are you 70? Worse, you have a choice—grow up, or die. Or, as the saying has it, die a thousand deaths as things are done to you rather than you doing for yourself. Indiscriminate killing might seem far fetched—it wasn't to those murderers, nor to all too many political victims. Being two inside, you're not the one who does, you're the one who is done to. Outside you may appear to be King of the World—inside, you're anyone's dog's body. And intrinsic to this, is the sinking feeling that the world out there is populated by far more ENEMIES, than friends, just as it was when you were a terrified two-year-old.

And of course, every murderer I talked to, fooled himself (it was a male-only prison) that he had killed his enemy—that's how he "solved" his most pressing, his most life-threatening, and his most obsolete, problem. Enemies – every one of them. Of course, the reality is that the target enemy was someone completely different, and from a long time ago—nothing directly, to do with the victim of today, who just happened to be in the wrong place, at the wrong time. It's the same with all killings. Homo sapiens survives by cooperating, stopping extraneous and very lethal forces getting too close—to kill, solves nothing. It doesn't even remove the terror

that's embedded from the emotional immaturity which gives rise to it—only insight can do that, and that doesn't come from life imprisonment, well hardly.

The other thing which struck me forcibly while working with those murderers, and which provides a twisted emotional background to their anti-social behaviours, was what I call the Prisoner Triad. I knew before I went that they would be emotional immature, and that they couldn't think about that clearly enough to rectify it, unaided. What did surprise me was just how deep this was. They suffered from three negatives—(1) negative social skills—they asked for what they didn't want, not for what they did; (2) they had negative futures, their pasts had been horrendous—they saw no reason their futures could improve; and (3), they had negative self-esteem—they'd always been taught they were rubbish, and saw no reason to doubt it, ever. Our perverse prison strategies intentionally confirm all three, as a matter of penal policy. It is my firm clinical opinion that had this Prisoner Triad not afflicted their entire life, since infancy, they would never have murdered, reinforcing a point Alice Miller made clearly enough, 40 years ago (Miller, 1981). The latter endorsed my work (Johnson, 2000). More, having once grown up emotionally, they disavow any further violence, which disavowal I believe. Verbatim dialogues confirm this, but only to those willing to see (Johnson, 2018).

A further surprise is to find that these three negative characteristics typify every other instance of emotional immaturity too. Negative wants, negative futures, negative self-esteem i.e. absent social confidence—all are far more rampant than you would expect. And they come with potent links to Fake-News, and to worse. If we're looking for the roots of war, and of murder on a grand political scale, then it surely helps to compare the clinical findings from a smaller study, to see if they extrapolate, globally.

This is how Fake-News comes about—it's what you conjure up to fill the void, to provide the workaround, to by-pass the (disguised) lump of infantile garbage stuck in the middle of your mental highway, obstructing your 'intent'. Your 'intent' is entirely unfocussed, it goes all ways at once—you've never been taught any different. It doesn't matter to you what you say or think—so long as it gets you off the hook, so long as it delays confronting vague, unthought-through but impending immolation, at the hands of now long-passed figments from your troubled and insecure past. As long as I can blame someone else, I might deflect the feared (though heavily obscured) parental frowns. The one thing you must never talk or think about, is the deep, deep chasm where your life is not your own, but someone else's. This is deep enough to account for every one of our psychiatric turmoils—a stunted 'intent' underlies them all.

Personal autonomy simply hasn't even started. The whole area becomes dulled with pain, so becomes just too dangerous to think about—falling to your doom is still far too close, it's "about to happen next". So much so, that you prefer to look the other way. Even approaching it at an angle, risks repeating the original agony, so you avoid that like the plague. Even half-mention of it can be enough to spook you. Fake-News comes out any-old-how—consistency, that's for people who happen to be in charge of their own lives. It's not what matters to you, it's not what relates to your "real" reality—are you about to live or not, "next"? 70 or 10—which is more real? Social skills, futures and self-esteem undermine any possible access you might have to social delight, which is what real life is really all about—at least that's my story, and I'm sticking with it.

At this point, I venture to dip my toe in the fervid atmosphere of contemporary politics. I do so to ascertain if a seasoned political observer could see any evidence for the fundamental tenet of this paper, namely that emotional insecurity comes from emotional immaturity. "*His natural instinct is for destruction, both of himself and everything around him.*" Would you elect someone to be your political leader who merits even a milder

description than this? This is how John Crace, the Parliamentary correspondent for a major UK newspaper, sees his Prime Minister. He goes on—“*So while Starmer [the Leader of the Opposition] is The Daddy, [Boris] Johnson is visibly regressing in front of our eyes. When he first became PM, he would act the adolescent: Kevin the teenager. Then he slipped back to the grumpy 10-year-old. Now he is like a toddler barely out of nappies. At the current rate of progress, his baby son will soon be reading him bedtime stories*”. (Crace, 2020).

Political allies will see this as radical calumny. Others, that we have an infant-adult in charge. Nor is this the only issue regarding emotional immaturity. It highlights an even more serious impediment in the way our societies are now constructed—nothing less than an indictment of the “leisure” industry itself. In 1993, Michael Medved published a damning assessment of the impact Hollywood had had. He sees it as mounting a “*War on Traditional Values*” (Medved, 1993). Scientific evidence of the increase in the homicide rate following exposure to “Westerns” and other violence-addicted visual material has been as solid as it has been ignored (Huesmann, 2007). Advertising has been the bulwark of social media since radio—if ads sell goods, then violent-disposed videos sell violence. Indeed there is a strong case to be made that jeopardy, the keystone of “drama”, does in fact imperil trust. The point about peril in narratives is that people pay to see it—if the happily-ever-after comes too soon, the level of interest drops, taking revenue with it. But cash brings its own problems—there is a case to be made that we risk becoming addicted to it (Johnson, 2019). Time to bring on the real human cost of best-selling thrillers, and to count the price we pay by undermining that essential social ingredient—Trust—the panacea for strife, war, and all other killings.

Suppose we accept the notion that emotional insecurity comes from emotional immaturity—why does the sufferer not see it, acknowledge it, and then, to the benefit of all, especially her/himself, get rid? Well because of the peculiar impact fear, fear-of-dying, has on the human cerebrum. Since 1996, there has been irrefutable scientific evidence, that severe past trauma can have a devastating impact on cognition. Human beings, especially when small, are peculiarly vulnerable to trauma. It stops them thinking straight, all by itself. Here is hard, reproducible scientific evidence to confirm the point. Place a trauma-victim in a brainscan machine, and play them a trauma tape, something which reminds them of their quasi-lethal experience, and their frontal lobes and speech centre cease to work (van der Kolk, 1996). I call this the Kolk Trauma Test. If your thinking mechanism doesn't work anymore, if your *all-cis*-DHA is frozen, then what comes out of your mouth does not relate to what's happening today—it concerns itself in a deliberately obscured way to what happened, or rather what you judged to be inevitably about to happen, all those years ago. The point is discussed at some length, elsewhere (Johnson, 2018). Emotional insecurity from emotional immaturity—simple in concept, obscured in description, dire in outcome.

Mrs Norris—And the Futility of Bullying & Revenge

So we come to Mrs Norris—one of the most intriguing, and on the face of it, most difficult to understand of all characters in fiction. She is the aunt of our heroine in Jane Austen's *Mansfield Park*. Her unwarranted family connections, in which she took no part, leads her to a life of ease, and relative luxury—certainly never in want. Even so, she continually does things she doesn't need to do, unpleasant, unconstructive things. Whenever Fanny Price, our younger heroine, wants to do something exciting or warming or pleasant, Mrs Norris blocks it, or does her utmost to do so. Why? Jane Austen has an uncanny grasp of the oddities we humans get up to, some even rate her more perceptive in this regard than Freud ever was—but even she doesn't tell us what pushes Mrs Norris to be so *unharmonious*.

Fake-News can tell us. On the face of it, Mrs Norris has got it made. She exploits her relationship with the lord of the manor, has a comfortable well provisioned life, without having to exert herself—but all these happy circumstance do nothing to touch her destructiveness. You might have thought that being well provided for, she would relent, and reflect some of the confidence and security that have been lavished on her, to illuminate and gratify the life of those she comes into contact with. (A similar misplaced optimism is commonly applied to modern economic “development”.) Not a bit of it. Indeed, almost the reverse. The more comfortable her life becomes, the more discomfort she first generates, and then freely redistributes. Fake-News comes from insecurity, and leads to worse.

Jane Austen doesn't tell us why. But Fake-News gives us a clue. Mrs Norris was living partly in her adult world, and partly in her kindergarten one (at least, in her head)—just like every one of the 50 murderers I got to know well. She relished her assets, while damaging her niece. Watch carefully, and she smarms up to those in authority, those in charge—and bites those below her in the pecking order. Bullying by any other name. It goes to show that all bullies are cowards—remove the cowardice, and the bullying simply vanishes. Her world was indeed divided into two—those for her, and those against her—and for no thought-through reason, our heroine, though the least of her enemies, is placed firmly in the latter. Thus are enemies born, and enmity preserved. There are ways of reversing this process—humans have a prodigious ability to learn new things—but they have to be persuaded, so that they can 'intend' to, for themselves. Flawed pasts outweigh faulty genes.

Different explanations might be forthcoming for this—but the one that appeals to me, on the grounds that it is clearer and simpler than any other, is, as with Fake-News—emotional insecurity coming from emotional immaturity. Those in authority seem to resemble those who were, long ago, in *parental* authority—those without, are available to receive any expression of pent up negative emotion from that insecure period. This negativity can still power the worst. And there can be a lot of it, without end. Moving from toddler dependency to adult inter-dependence, cuts its root. But that's a big ask. The trouble with fossilisation is that it operates whether you like it or not—just remaining unaware will do it.

So bullying is inflicting needless pain. There's been a lot of pain in the past, which because of blocked frontals sticks there, and fails to be either updated or evicted (the Kolk Trauma Test)—so out it comes, but only when it's relatively safer to do so—not to your real masters, but to any minions who happen by. King of the World can give enormous scope for inflicting just such needless pain, while both missing the real target, and failing miserably to cut the pain off at source. That source is so well buried—indeed that's how you get through life, by keep not-reminding yourself you can do so little, little more than you could aged 2 or under.

The other striking thing about bullies is that they must never lose. If they appear to be losing, they explode. Why? Well, even though infancy was insecure, there was something of value there, or at least should have been. So losing even what little you've got, hurts. Again what happened, or didn't happen decades ago, should carry little weight today—when it does, there's something worse afoot—frontal paralysis, leading first to Fake-News and then to needless pain, or worse. Needless sibling rivalry gets its irrational venom from the same source.

The pain inflicted either by Mrs Norris or by any other unconfident bully, does nothing, absolutely nothing to assist the bully him or herself. It is entirely pointless. It makes matters worse all round. It helps no one. It increases disharmony, without in the least helping either the bullied or the bully. Why do it? Well because you can't *think* of anything else—your frontals don't let you realise that you are no longer dependent for life support on unreliable people who might drop you just by looking the other way. If you could grow up emotionally, then you would be self-sufficient, and the people you come in contact with—minions or

masters—could universally be a source of delight, the sovereign source of peace-of-mind. But to get there, you need to be taught how. And basic to all that, is that fuzzy but vital word—Trust. If your childhood carers didn't trust either, how can they teach you? But that doesn't mean it cannot be taught. I taught a number of those murderers, and they rewarded me by refusing to murder anymore, either me or their fellows. Can this be taught more widely, and soon enough?

What happened to our species all those millions of years ago might seem of little interest, or have little impact today. But its consequences rumble on. The impotence of infants didn't arise solely because we returned from an aquatic to a terrestrial habitat—but, as mentioned, it didn't help. More, though our reasoning ability is second to none, courtesy again of our plentiful *all-cis*-DHA—our vulnerability to traumas, to fears which *blind*, risks us losing our one and only vital evolutionary advantage. Whatever happened long ago, should, by definition have stopped happening long ago too. But look around you, and it doesn't. Emotional insecurity, which is the hallmark of every human infant, should cease when you've completed your adolescence and become an adult—but too often, it's still there, decades later. All that mental furniture needs reorganising, needs educating, needs encouraging—and who is going to do that, unless they've already themselves been taught how?

Inflicting needless pain doesn't help the inflictor—that much is obvious to everyone else. But what you find, even on the most superficial examination, is that past pains can drive whole nations to repeat the cycle endlessly. It's called revenge. What hurt me long ago needs to be “paid” for. I can't get back at those who did it, they are either dead or have moved on to other matters—but I'm still full of venom, since it's exactly that that stops me sorting it. So someone else has to suffer, as I did. Not clear thinking, but potent rage nonetheless. Toddler-thinking in spades.

Revenge—when enough people support it, it can do enormous damage, ongoing damage, which multiplies the needless pain, indefinitely. It can be euphemised into “retribution”, and thence built into the constitution, to be regularly reinforced with the full force of the law. Politics too, is just as easily distorted. If some people have hurt you, even killed some of yours—best thing is to hurt or even kill them right back, before they can do it all over again. Round and round the revenge cycle goes, with ever more damaging impacts, each of which perpetuates and amplifies it further.

Talk to 50 murderers and the motif of revenge is unmistakable. It often emerges early on—“s/he had it coming”, “no one talks about my mother like that”, “I've been in so much pain, that when s/he did that, I just let go”. There is always a cause, a reason for violence, for killing. This cause is invariably out-of-date, it comes from long, long ago, and should by rights be left there. But because our frontals are peculiarly susceptible to pain, to fear, to terror—we have the utmost difficulty in *thinking* this, in thinking things through. Fake-News is just the surface.

So what to do? Well first tackle Fake-News. If we can stop damage coming from a highly addictive drug such as nicotine, we can surely, collectively, re-educate truth-distorters. The simple Truth is that killing people is really not the best way to stop people killing you. Murderers operate as if it was—but just as with bullies and needless pain, such emotional myopia merely increases the damage, while neglecting reality ever further. So how about “anti-venge”? What if you could kick start those frontals, educate everyone that homo sapiens does blossom when provided with social delight? How about bringing us all up to date? Infants are impotent—no-one can deny that, not when they're thinking straight. All adults prefer smiles to frowns—too many underrate that—but that's because they've never learnt, never been taught. If we have all been given our

due share of *all-cis*-DHA, which we have, why don't we use that to help others delight in social contact? It's a win-win—we get to live longer, happier, and might even defer fossilisation too.

Retribution, revenge, retaliation, pay-back time—call it what you will, it means inflicting pain—to what end? Does it reduce violence, anti-social behaviour? No. Is it painfully reminiscent of—“you (or somebody who looks very like you) stole my toy, I'll take yours”? Yes. Is this standard unreconstructed nursery-thinking, unthought-through kindergarten thought? Yes. Can we change it to something that works? There's optimistic evidence all over the place that this is exactly what we can do, though heavily muted by infant-adults. Work with youths in Glasgow, Scotland (SVRU, 2005), decimated youth crime. Many other initiatives have too. So stopping murderers murder in Parkhurst Prison by educating them into adulthood is reinforced all over the place—at least it is, when enough people in charge can think it through, can take the time to double-check what actually does work in reality.

Revenge is self-evidently coming from a past “wrong”—trouble is, time moves on, and what hit you before is unlikely to hit you again. Suppose you are revenging a past atrocity—the next peril is likely to come from something completely different—drones say, suicide bombers, even cyber attacks. You tend to fight last year's battles, which are obsolete this time around—just like the Maginot Line was, or last year's flu jab. More, if you want to curb murder say, or other violence—see first where it comes from, and then tackle that. Killing doesn't stop killing—it perpetuates it. All killers are cowards, take away the inner and obsolete fearfulness and all killing disappears, it dissolves in a wave of social delight, as if it had never been. Hard to believe? I've seen it happen. (Check out verbatim dialogues. Johnson, 2018.)

Only Healthy Democracies Can Avert War

Time now for optimism. If you think *all-cis*-DHA is complicated, raise your eyes to the level of yourself. You and I consist of myriads of individual living cells, all beavering away, *cooperating*, at one thing or another—some transport oxygen from your lungs to the rest of you, others pull together so that you can defy gravity by lifting food and drink from the table. And if you are really chasing complexity, pause and think of the liver—here is our food store, our chief digestive organ, our detoxifier of unpleasant food stuffs—we shall never get to the bottom of all of what this noble organ does for us. It works away, unasked, generally uncomplaining, and fulfils more tasks than you or I could ever imagine.

And if all that still sounds straightforward enough, take a closer look at the individual cells, which, more than anything, are what we are really made of. No one will ever know what goes on in the heart of a single living cell. Of course, we can know this bit, and learn that detail—but put it all together, and it slips away from all possible human comprehension. The living cell is the second most complex entity in the entire cosmos. I still well recall a flash of insight from my school days. We are footling about in the biology lab, out of earshot of the science teacher, toying with a curiosity that someone had left lying about—an antique microscope which was actually constructed of two identical tubes, each with an eyepiece and an objective lens. It was a handsome brass construction, lovingly put together. The purpose of this doubling up was that the two parts focussed on the same spot, so what you had was a three-dimensional stereoscopic image. Quite a curiosity in those days.

Looking down this neglected anomaly, and twiddling the knob to focus on some pond water that happened to be on the microscope slide, what did I see walking towards me, as it were? Nothing less than an amoeba—the simplest living cell of them all. There it was, like some animated bulbous pancake, moving

determinedly if slowly, across my field of view. It knew where it was going. Something I didn't, indeed something I never could.

Bear in mind that living cells are too small to be seen by the naked eye. Without suitable equipment, we wouldn't even know they were there. Only with the invention of the microscope did they float into our consciousness—prior to that, their very existence was unknowable. Even so what you see, is not 100% what you get—WYSIWYG in the jargon, does not apply to the cells of which each and everyone of us is composed, and without which we would not be. And it never will.

That amoeba was on its way. Perhaps it was moving towards some particle of decaying vegetable matter, which it would then “eat” by forming an opening in itself so as to get it inside. It didn't have a “mouth” (or for that matter an “anus”)—it couldn't have one, because, by definition, it consisted of only one cell, so had to take care of all this “housekeeping” itself.

Or it could be that it was just scouting its neighbourhood for more comfortable living quarters. I didn't know. I couldn't know. But in an important sense, it did. It was animated. What does that mean? It was alive—yes, obviously, else it wouldn't be still in one piece, nor moving at all, especially not under its own steam. And in its own limited way, it was purposeful—it wasn't moving about at random, like a blob of inanimate matter might. No, it was up to something, it had a plan—could I venture to hint it even had the beginning of an ‘intent’?

Well for a Scientist to suggest such a thing would be unheard of. What? Will we be getting amoeba to think for themselves next? How ridiculous. But is it? Odd though it might sound, and unwise to voice if you are looking for research funds—but that amoeba *was* doing something that it couldn't have done if it wasn't alive. Looking closer at its innards, we can make out some sort of equivalent of a nervous system—bits of it are there to communicate to other bits. Go this way for more food, go the other because it's more comfortable—somehow or other this “data” is processed so that the whole organism, even though only one cell, can do what it needs to do. If it didn't, it'd die.

You don't get one part of an amoeba at odds with another, one part fighting at cross purposes with its other bits, no amoebic disharmony—perhaps you do, I don't know enough about amoeba diseases to know. But I do know enough about humans to see conflict and unharmony almost every minute. Why? And just as single cells fall to pieces if they don't cooperate, so do human beings—on an individual level, when some cells go anarchic, as in cancer—or on a global scale, when some nations go berserk and unleash a thermonuclear Armageddon. It's all there, waiting in the wings, for some mad-Hitler type to press the wrong button in a fit of pique. Childish, perhaps, but fossilising the rest of us, willy nilly.

An amoeba doesn't need any *all-cis*-DHA—its parts are close enough together to communicate without hindrance—not something multicellular organisms can. Nor, on a global scale can we—we need to communicate—looking for food, looking where to put our waste products, but above all not being at cross purposes, one part with another, one individual or nation against another—that way leads to social cancer, and premature extinction.

Can we learn from amoebas in time? Each bit of the single cell helps each other bit—it's a whole, it's holistic, and it works. Join single cells together, courtesy of *all-cis*-DHA, and the scope increases out of all recognition. But the same restrictions still apply—you need a source of food, a way of securing comforts, and a means of ensuring you'll still be here tomorrow. Assemble people in the same way, and the sky's the limit, but only if precisely the same conditions are fully and consistently respected. That's what defines a healthy democracy.

It is only because we are now myriads of cells that we can do more than any amoeba. More, since we humans are billions in number, we can achieve astonishing objectives, which a single human can scarcely dream of. There are more cells in each human, than there are humans on our miraculous planet—but the same “rules” apply, whether single-cell or multi-cell or multi-social. Living organisms of any complexity need to take extra care, and promptly, if they, or we, are to avert what hangs over every living organism—fossilisation.

So our body cells work together—how do they do that? Well there are elaborate methods of *communication*. The nervous system is only the most obvious. One part informs the other parts what's going on, what needs to be done next, and how the whole should best cope with the latest twist in the environment. Because, let's face it, the outside world is a hostile place—it blows hot, then cold, it rains, then it droughts, it feasts or famines at whim—never the same, always undoing what we do. But this is the same for every living organism that ever was or ever will be—adapt or perish. Multi-cellular organisms recruit multiple cells in this on going struggle—multi-people societies do precisely the same on an even grander scale—until they don't.

Fake-News clogs the democratic arteries. It blocks the democratic lungs. It self-perpetuates—the more there is, the more there is. None of it undoes the damage other bits of it inflict. They can't, because they don't come from the same spot, the same “reality”—no, they come from long ago, when things were worse. Real News is the life-blood of all politics, and of each and every healthy democracy—and that's not just a metaphor. Unless we, as a global society cope better with Fake-News, it could fossilise us all.

And this is where Human Rights apply. When your body cells are behaving, interacting in a healthy way—all is well. When even one part starts complaining, that's the beginning of illhealth. With multi-people organisms, such as societies, families, the globe—we each have a vital part to play. We each have a unique contribution to make to the overall wheal—we can see things no one else can, no one else looks at things from precisely the same viewpoint as we do. That's an asset, not a flaw. Listen to as many points of view as there are, and you thereby reduce disasters. War is a disaster—there is always likely to be enough emotional maturity around to avert it—just make sure the *communications* are intact, and have escaped the dread disease of Fake-News, which can be lethal all by itself.

Conclusions

PEACE has acquired a dismal reputation, which it richly deserves. Peace treaties may start out bravely enough, with idealism swirling all around, only to succumb to the next change of personnel, with a regularity as painful as it is predictable. The “War To End Wars”, didn't. Genocides and holocausts don't fade into the past, where they belong, but are re-hashed and re-fought, with sickening predictability. Retribution, retaliation and revenge—all poison the present, much as they tortured the past. Well-meaning souls may voice more benign perspectives from time to time, but they are easily silenced as being out of touch, too impotent, or coming from another world. “Turning the other cheek” is glibly depicted as hopeless, if not masochistic. The actual political remedies applied to date, seem about as efficacious, from a general medical viewpoint, as rubbing skin warts with a “witch's stone”—which makes no sense and no difference.

War is like many of our other human diseases—it kills a lot of people—and like cancer (which it resembles), it acquires a type of fatalistic taboo which removes it from everyday conversation. It has underlying causes, like all diseases, and, like all the others, it calls for the deepest, most accurate diagnosis, available. War murders more than the murderers I met—but for the same reason. The latter responded when enthusiastically

invited to reverse the Prisoner Triad—why not apply the same on a global scale, and so change *homo bellicose* back to *homo sapiens*?

The axiom I evolved to cope in Parkhurst Prison, was Truth, Trust and Consent—uphill at the best of times, especially in a totally coercive context, such as a maximum security prison, under the self-defeating ordinances of populist government policy. Truth is already legally vouched for in some aspects of human commerce, where *fraud* can be vigorously rooted out, and penalised. Any political official or indeed company director who deploys or profits from Fake-News—which is fraud in action—should be removed from office, and fined a percentage of their net worth. Professor John Naughton proposes juries to define fraud in this context, as they do “truth” in court cases (Naughton, 2020), and I agree with him as usual. Trust is vital—it needs to be earned—it can never be bought. Trust is the antidote to fear, so alone can unlock frontals. It is often fiendishly difficult to engender—but without it, peace-of-mind remains forever unavailable—whereas with it, both sides can benefit by providing mutual validation, something we all need, all our lives. Social delight *can* defeat social harm, for all. Consent is equally crucial—I wouldn't Consent to Trust anyone whose Truth I disbelieved, and wouldn't expect you to, either. But Consent, which encompasses 'intent', is the sovereign pathway to delight, which being “sapiens”, we surely merit.

None of this is easy, but any alternative bodes briefer. Alice Miller (op cit) cites Adolf Hitler—“*What good fortune for those in power that people do not think.*” The Kolk Trauma Test tells us, as scientifically as you could wish, why thinking is blocked so regularly. Can we mobilise our 'intents', our *all-cis*-DHA, soon enough to prevent another *Führer* needlessly fossilising us all?

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