Chapter 1

Why you don't own yourself

In the time it takes to read these first few words, twelve people have been born. In the next hour, more than ten thousand people have begun life. There is more than three hundred thousand people born every single day. All of these people are born into slavery. Three hundred thousand slaves are added to the human race every single day. All legal rights to every new born baby's development is owned by commercial entities.

Every person in the world is a slave, but almost no one knows it. Every child is born into slavery, and dies in slavery. Every single human being is a slave to multinational corporations and government agencies. This is because not one person owns the legal rights to their own body. Not one person has the legal right to their own individuality.

This is not a theory, a conspiracy, or some fanciful dramatic fiction. It is a plain legal fact, easily proved, but also outrageous, offensive, and completely hidden from common knowledge.

The reason for this happening is quite simple. This situation arose because from your first instant of life, you were given a complete set of plans from your parents that would determine how your body would grow - half of that plan from came from each parent. It is the essence of your physical body. That essence is called your genome, it is made from DNA string, and it is arranged in sections called genes.

It is the living string that weaves all of life together. Although you inherited yours from your parents, it is now the exclusive legal property of multinational corporations, government agencies and research facilities.

All human DNA is patented, thousands of times over, all around the world. This is a plain legal fact.

That plan, your DNA, decided how every part of your whole body would develop, how you would look, how you would respond to food, injury, disease, and the world around you, and how your body would age. Even though you inherited your DNA from your parents, half from your mother and half from your father, your DNA is now *not the same as theirs*. In fact, it is not the same as anyone else's DNA.

Your plan, your DNA genome, is unique. There has never been another person with a genome exactly the same as yours, and there never will be. In all of history, and for all of time to come, you are unique, one of a kind, never to be repeated. There has never been someone exactly the same as you, and there never will be. The unique DNA you inherited from your parents has been altered by the challenges of your own individual environment, and the life that you have lived. You have woven your own genome.

You are utterly unique in our universe.

DNA, or DeoxyriboNucleic Acid, is made from just four chemicals, and is the most complex substance in the world. A single DNA molecule contains all the information needed to build an entire human body. It is 2 meters long and 0.000,000,002 meters wide, or put another way, if our DNA strand was as wide as the stroke of a pen, we would be 4000km tall giants.

It is held in cells in nearly every part of your body. You have about 37 trillion copies of it, which adds up to about 740 million kilometers long. That is long enough to reach to the sun and back 26 times. Staggering, but true.

It is very difficult to believe, let alone understand, how something could be so small, yet so powerful. It looks like this, and is so small that a sample of every species that has ever lived, over billions of years, would fit in a teaspoon.



Your DNA made you the way you are, but you have no rights to it. Every stand of it is patented.

A patent is an exclusive right to use an original design of something that has been invented, and governments all around the world uphold those patent rights.

The ownership of that patent gives exclusive legal rights to develop and profit from that invention. The unique traits that make each of us individuals, our DNA, have been patented thousands of times in overlapping claims, by many different pharmaceutical, veterinary, research, education and *government bodies*, all around the world. That is the legal state of all humanity, upheld in courts around the world.

Slavery, by definition, is the claim of ownership of a person, and the exclusive usage of a human being. It is obscene.

The precise reason that you are resistant to some illnesses and disease, is because your DNA made you that way. In the same manner, you may be more likely to suffer from some types of disease, and the reason is because your DNA made you that way. Your DNA responds to the challenges of injury, disease, infection and environment throughout your whole life, in ways that are only just beginning to be understood. It is the most complex information storage system in the world, and the sole reason that you are alive today. Your DNA is the result of millions of years of the most complex, ruthless, life and death development, yet all rights to *all of it, and its use,* is owned by multinational corporations and government agencies.

How can the DNA inheritance that you received from your parents, and changed by your own existence, a once in a universe event, be the legal property of a business, or government agency?

Cornell University research into this bizarre logic found that:-

A further issue of concern is that patents on DNA can readily cross species boundaries. A company can have a patent that they received for cow breeding and have that patent cover a large percentage of human genes. Indeed, the researchers found that one company owns the rights to 84 percent of all human genes for a patent they received for cow breeding. "It seems silly that a patent designed to study cow genetics also claims the majority of human genes," says Dr. Rosenfeld. Finally, they also examined the impact of longer claimed DNA sequences from existing gene patents, which ranged from a few dozen bases up to thousands of bases of DNA, and found that these long, claimed sequences matched 41 percent (9,361) of human genes. Their analysis concluded that almost all clinically relevant genes have already been patented, especially for short sequence patents, showing all human genes are patented many times over. http://news.weill.cornell.edu/news/2013/03/you-dont-own-your-own-genes

It is difficult to understand how a person's DNA can be made the property of an organization without their knowledge or approval, but that fact has been upheld in expensive legal battles all around the world. The United States Supreme Court finally decided in April 2013, after many years deliberation, that *new* patents on human DNA-in its *natural* form- would no longer be granted- but only in a *very limited* sense. It seemed like a victory for commonsense, but the decision also upheld the views of industry. As all human DNA is already patented in totality, thousands of times over in many countries all around the world, this ruling is cynical in the extreme.

The only reason that your DNA is patented is for the commercial gain of the patent holders.

The fact that pharmaceutical corporations think they need to have exclusive rights to your DNA, is because it is the key to knowing how medicines work in a person, and that knowledge is very precious. Pharmaceutical companies make the medicines that we need, or want, and it costs a huge amount of money to make them. The cost in 2016 to develop 1 new drug molecule is estimated to be US\$1.4 billion, (IMAP 2016), so those companies demand exclusive rights to sell those products. Humanity is the raw material, used for free, with the profits going to the patent holders.

These organizations all patent the very source of knowledge that allows them to make their products, claiming it is intellectual property, or something they have invented, to try to stop anyone else from exploiting that knowledge.

Humans are not the invention of a corporation.

As each new person is born, so the genetic diversity of humanity is increased. A persons' DNA may contain a new difference, or mutation, one that gives them complete resistance, or susceptibility to a disease, or environmental challenge. All these individual modifications to our DNA is the property of businesses that claim exclusive access and use of the natural evolutionary process that has been going on for millions of years.

This is not a new situation- to claim ownership of humans- it is called slavery.

Slavery is an idea that has appeared throughout history, an idea with exploitation at its heart. As long as slavery has been around, so has the idea that is wrong. Many people in many countries have fought for years against the idea that a person is just a thing that can be bought, used or sold. Most countries now have laws that prohibit slavery, laws that reflect decisions of the United Nations.

Just how the United Nations organization responds to this new manifestation of slavery will define its relevance, and therefore, its probable future.

Most countries have trading agreements that define how they will do business with each other.

These agreements are enforced by national governments, and include protection for intellectual property, such as patents. The World Trade Organization requires its members to have intellectual protection laws in place for most biological innovation, ensuring continuation of this obscene situation.

No country or government has the right to patent its population, or that of any other country.

Our DNA works inside us for our whole lives, yet we are almost totally unaware of what it does, or what it is worth. Your DNA is yours alone, it is your birthright, and it is the most valuable thing you own. It will never occur again, and you received it from both your parents for free, but, you can't value something which you don't know you have. We might not be aware of the value our DNA, but clearly, other people and organizations most certainly do. There are many charitable organisations that are being established to sample DNA from people that suffer from a particular disease, with the aim of improving our understanding of that disease. Even though the aims of these charity businesses may be laudable, the ownership of the DNA samples collected, and the knowledge it contains, remains the property of these charitable businesses. This is not made plain to the donor.

The uniqueness of your DNA is of extreme value, but historically there has been no way for the individual person to profit from that value. To give an example-

Henrietta Lacks was an African- American woman, who was born in Virginia USA in 1920, and died of cancer in 1951. While she was being treated for cancer, small samples of her womb cells were taken by her doctors, without her knowledge, or permission. Those samples were duplicated, stored, and regrown. Her duplicated samples-- "HeLa" cells - became the first mass produced human biological material to be bought and sold. The cost for a tiny amount of HeLa cells in 2016 is US\$450. There have been almost 11000 patents granted on HeLa cells in America alone. Twenty tons of duplicated HeLa cells have been produced, sold, traded and researched. Her cells are used in the development of medicines, gene mapping, in-vitro fertilization and cloning.

She is the first example of immortal exploitation. Although her personal DNA launched a multibillion dollar industry, yet she received no compensation whatsoever for the use of her unique cells, and was buried in an unmarked grave. Her identity was hidden from her surviving family, by the very industry that was profiting from her.

The Supreme Court of California upheld this position in July, 1990, ruling that a person's discarded tissue and cells are not their property, and can be commercialized. When you submit to have any samples taken, by anyone, be it doctors, government agencies, sporting bodies, or businesses, you have given away all rights to that sample. This type of exploitation is seen as normal, and so very common. https://dx.doi.org/10.2147%2FJBM.S36134

Those samples may be stored, used, modified, or sold, without your knowledge or approval, at any time in the future. Countless millions of tissue samples have been taken, used, and developed. This is standard practice. It is now possible to identify individuals, by cross referencing their samples with existing private commercial DNA databases. There is no universal or consistent laws to protect the use of a person's tissue samples or their DNA, in any country in the world, yet immense profits are made using this human raw material. https://www.gizmodo.com.au/2017/10/what-dna-testing-companies-terrifying-privacy-policies-actually-mean/. https://www.clinchem.org/content/56/11/1675.full

However, if scientists did not collect and grow such cells, we simply would not have the drugs we have now. Those drugs are responsible for the increasing health of humanity, and without such drugs, most of humanity would be diseased, dead, or never even born.

The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, or Budapest Treaty for short, is an international agreement that is backed by the United Nations, and came into force in 1980. It allows for microorganisms to be deposited in storage facilities as an example of something that is to be patented *sometime in the future*. Granting a patent over a design or invention usually requires a full description of the subject matter, but it is far beyond our science to understand, let alone describe, the complete workings of any living microorganism. This treaty allows for any human, plant and animal cells, bacteria, protozoa, spores, yeasts, stem cells, and their DNA in all its forms, to be claimed as patentable, by simply providing a sample of the microorganism. There are 80 countries subject to this treaty, with the latest of 46 collection facilities opened in Switzerland in January 2017.

The future of **all** life on earth is to be patented.

This is indeed a grim reality, but there is now hope for a better future- one that relies on you claiming your own birthright, with DNAMIQ.ME



Chapter 2

Origin of the problem

This new slavery has come about through one of our most basic instincts – that of self-interest. There has been no grand conspiracy to construct this state of affairs, it has simply evolved in the normal course of business. The only solution to this problem relies on that same instinct of self-interest: what is in it for me?

We "naturally" expect to buy things at the lowest possible price, and that expectation is wrapped up deep in our survival instincts. We are genetically and socially programmed to "conserve and protect" the things that help us exist, without always being able to explain why we need them. This "greedy" problem is simply part of human nature, inherent in all people and in all places, and so, for example, we have developed laws demanding that a business has to be run in a profitable way. We write laws that demand company directors act in ways that make the company profitable, such as obtaining their raw materials at the lowest price. In the case of pharmaceutical research- that's us. We are the raw material for the multinational, multibillion dollar pharmaceutical industry. The first US patent granted on a natural human substance was for a form of the adrenaline hormone in 1906. This was challenged in court, but the patent upheld, because the Judge found the patent was more commercially useful than the natural substance. This case is still referred to in deciding commercial interests in constitutional patenting law.

A profitable business system has proved to be the only long term basis for a stable society, but also prone to catastrophic boom and bust cycles when eventually greed goes unchecked, and technology gets ahead of lawful business practice. The capitalist system that we depend on has this flaw of inevitable boom then bust, simply because it is run by humans. History is littered with many repeated boom-bust economic disasters, such as the Dutch tulip craze of 1637, the great depression of the 1930, and the latest sub-prime crash of 2007. There are many more examples of this pattern, where businesses collapse, bringing ruin to millions of people. But all these events have one thing in common-the business model being used did not match the reality of the moment. The pharmaceutical industry is now in that same perilous position- it relies on slavery for its survival. Slavery has repeatedly been proved to be a failed business model. The pharmaceutical industry did not set out to establish this immoral reality, but will be forced to react to it.

The Pharmaceutical industry in 2011 had an income of US\$964 billion, giving it more economic power than the economies of 179 countries, (Statista). In 2016, that income has grown to well over \$ 1 trillion, but even with this huge income, its foundations still rest upon slavery to continue. History shows that reliance upon slavery eventually leads to the collapse of all those who relied upon it.

Stock market companies must profit, or fold, so marketing and advertising creates the need that is cheapest to supply profitably. The law makes company directors liable if they don't put profits first. Little wonder that there has been only one new drug for malaria recently, but 17 for erectile dysfunction.

Vastly more urgent though, is the need for new antibiotic development. A study published in 2012 reported that there was already types of microbes that were resistant to all but 3 of our current antibiotics (*Clinical Chemistry August 2012 vol. 58 no. 8 1182-1186*).

It is profoundly troubling to see that in July 2016, cases of infections that are resistant to our *drugs* of last resort are now being reported in China, Europe, USA, and Canada.

http://dx.doi.org/10.1128/AAC.01103-16

According to a recent study by the British government into these superbugs - the economist Lord O'Neill found that by 2050, 10 million people a year would die from these infections, that is one person dead every 3 seconds, and it would cost at least \$100 trillion per year.

http://amr-review.org/sites/default/files/160525 Final%20paper with%20cover.pdf

This study, published in May 2016, calculated only the economic cost of a sick workforce, and did not consider any increased cost of healthcare, any social issues, or any effects on food production. It is valid to fear this may be the trigger for economic collapse. Human suffering, in the face of this global famine and disease catastrophe, would make even war seem like a good idea, by way of horrific comparison. It is not cynical to expect companies to put profits before people, simply realistic, and historically accurate.

The huge cost and time delay in bringing a new antibiotic drug to the market is swamped by the ease and profitability of producing a new "Viagra." Companies are bound by law to be as profitable as they can be. That is the position maintained by the governments, the law, and profit is the *only* concern of the stock market. The situation is not hopeless however, because there is now a better way of utilizing the incredible riches of your DNA, with DNAMIQ.ME

It is humbling to realise that we know comparatively nothing about our DNA, compared to the amount of information stored there, despite many years of worldwide study and countless billions of dollars being spent in research facilities.

In 1990 the first project began to examine a "complete" human DNA sequence- the Human Genome Project, which took 13 Years to complete. It used the DNA of several European individuals, rather than that of just one person, and cost US\$3 Billion. That project only sampled about 90% of the total DNA strand. The success at being able to "read" a human genome for the first time was a world changing event, but the mountains of information it produced is still giving rise to wildly varying opinions.

There are large areas of our DNA that scientists call "junk" DNA, because it seems to have no function that we currently know about. These areas of "junk" make up over 90% of the total, according to the latest studies.

http://dx.doi.org/10.1371/journal.pgen.1004525

There are greater than 3 million differences in the structure of your DNA compared to anyone else's, and these differences are what make you unique. Most of these differences are found in this area of so called "junk".

It seems illogical that nature would spend millions of years developing a wonder of such staggering complexity as human DNA, when most of it is junk, but such is the hubris of developing knowledge.

A scientist's basic desire to arrive at a complete unified theory to explain all mysteries has given us astounding progress, but it is dangerous when new, therefore incomplete knowledge spawns laws that limit further research. Limits imposed by laws on an unknown quantity stifle research, for fear of legal action, resulting in market and product misdirection. It is easier, cheaper, and legally safer to develop a product that is not entirely new, rather than a new product based on contested patents. Normally patents only last for 20 years, but the practise of "ever greening" an existing drug patent, that is, renewing the patent by changing tiny aspects of the dose, or the way it is given, and calling it a new drug, is a massive problem- to the extent of this practise being outlawed in some countries. This attitude gives a clear picture of the business model used by the drug industry, they call it "lifecycle management." Human DNA patents are of course subject to this same evergreening practise.

http://www.smh.com.au/national/health/drug-patents-costing-us-billions-20130402-2h52i.html

We have a system of drug development where legal and economic forces direct the aim of research, rather than focussing on how that drug may affect its intended user- us. To give an example, the practise of conducting human drug trials in third world countries as a cost saving measure is well established. The lack of a robust regulatory system, and the prevalence of corruption in these impoverished countries has led to appalling instances of participants being exposed to drugs and practises that are outlawed in the originating country.

A report by the World Health Organisation stated – The Letrozole trials are a shocking example of a widespread global phenomenon. A recent survey of more than 200 health researchers concluded that a quarter of clinical trials conducted in developing countries do not undergo ethical review. The survey was commissioned by the former US National Bioethics Advisory Commission and published in February's edition of the Journal of Medical Ehics (Journal of Medical Ethics 2004;30:68)

These drug trials make little reference to a person's race, gender, local diet or environment, when in fact these issues are the place where the drug is supposed to work. It is like designing a new language, seeing that some people understand it, and then claiming the rest of the world will safely understand it oo.

The relevance of these drug trials relies upon the statistics that show how effective, or safe the drug is, or should be, for most people. If the statistics show that a profit can be made without the risk of too much harm, then that drug is brought to the marketplace. It is extremely sobering to review the number of highly dangerous drugs that have been *knowingly* sold, for years, causing death and disease to countless people, using this method of drug development. From the horrific thalidomide of 1960 onwards, this method of drug testing and marketing has caused incalculable death and disease, and cost countless billions of dollars spent in lawsuits and compensation.

Since 2004, Pharmaceutical companies have paid over \$7 billion in fines and penalties, but even these figures barely dent profits. The \$2.3 billion fine that Pfizer paid in September 2009 for the way one its subsidiaries marketed Bextra, was the biggest ever paid by a corporation in the United States. Yet the fine was just 14 per cent of \$16.8 billion revenue from the drugs from 2001 to 2008, little more than doing the price of business. - New Scientist Oct 2010

In 2010 alone, the cost of only the ten worst drugs recalled was more than \$3 Billion. In 2012-13, that cost was \$7.5 Billion. In just the US alone, from 2012 to 2015, more than 5300 drug products have been recalled. This cost represents only a fraction of the profits made by the drug industry, so it is, to the industry that runs this system, an acceptable cost. This assessment takes a cynical gamble to risk a persons' health for the sake of profit. It ignores the human cost to the actual patients who trusted these medications, and there pain, suffering and death, loss of loved ones, grief and future prospects.

The cost to the companies of these disasters is of course added to the sale price of drugs that are still for sale, thereby increasing their cost, because profits are demanded by the stock market. The success rate of a new chemical making it all the way from first design, to actual sale as a human drug, is as low as 5% for cancer drugs. This process of approval can take more than 7 years.

https://www.bio.org/sites/default/files/Clinical%20Development%20Success%20Rates%202006-2015%20-%20BIO,%20Biomedtracker,%20Amplion%202016.pdf

It is of little wonder that new treatments may be so amazingly expensive that a rampant drug counterfeiting industry is thriving. In many parts of the world, particularly in the third world, fake drugs are traded as genuine, with disastrous results.

http://www.who.int/entity/medicines/publications/drugalerts/Alert32016 Fev FalsifiedHepatitisCproducts en.pdf?ua=1

The people and organisations that advise governments about which drugs are safe, and which drugs are best value, are themselves influenced, if not corrupted by the billions of dollars in funding that are awarded by the drug companies to research the very same drugs in question.

The professional reputation and future career of a scientist or researcher is dependent on publishing the results of their enquiries, and having these results examined and confirmed by other qualified scientists or researchers. This is the standard for scientific advancement in all areas of study, and on the strength of these results, reputations are made, or lost. It is based on the idea of publishing unbiased results.

The need for an unbiased opinion on the effectiveness of a medicine is sorely needed by governments who fund public health systems. Many new medicines appear on the market, and those selected for funding by the public purse are extremely profitable for their makers, but the process of selection is clouded, to put it mildly. Competition among manufactures to join the public health list is fierce, yet there is no truly independent organisation that can provide data to governments, that is completely free of funding by the pharmaceutical industry. The cost of some new medicines is quite astounding- thousands of dollars for one pill, but for those in need of such wonder drugs, it can mean life or death. Regulatory bodies such as the NIH in America have gained its own patents on human DNA, yet are also a major advisory body. Is this not a conflict of interest?

The government funding of universities and research organisations around the world is now deemed less politically or morally important than it once was, and so that funding burden is left to industry, to provide the answers that governments need.

It is naive to expect an unbiased result from the industry that actually pays for the research, but also the fault of politicians in failing to explain to their voters why government funding of independent scientific research is in the best public interest. The government funding of drugs for public health is a source of astonishing wealth for the pharmaceutical industry, so it is worrying, but little wonder that most of the details of these commercial decisions are not made public.

https://www.researchgate.net/profile/Sergio Sismondo/publication/5925070 Pharmaceutical company funding and its consequences A qualitative systematic review/links/54e4a6c80cf22703d5beff70.pdf http://www.amjmed.com/article/S0002-9343%2804%2900583-2/abstract?cc=y=

Universities were once regarded as the source of facts that could be verified by the latest unbiased information. However, their addiction to funding by industry, and the shaping of what is published, leaves their reputation for critical thinking suspect. This is not going to change any time soon. Up to now, there has been no completely independent agency that is not funded, or staffed by people, who are completely free from industry funding, anywhere in the world.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2298140##

Free Trade Agreements are strongly promoted as the way to stimulate the economies of the participating nations. However, many governments - elected by their citizens - are now subject to multimillion dollar lawsuits by multinational corporations, because when laws enacted by that country, that is, *obeying the will of its citizens*- result in financial loss for the overseas company, the overseas company can sue for damages and loss of income.

To give an example, in 2015, US tobacco giant Philip Morris sued the Australian government for \$US4.2 *billion* because of laws introduced by the government in 2012, that forced cigarettes to be sold in plain packages with graphic images showing the damage to health caused by smoking. Philip Morris is a US based business, and could not sue under an existing Australia/ US trade agreement, so it restructured its business so that its Australian subsidiary became wholly owned by the Hong Kong based Philip Morris Asia. It then sued the Australian government for compensation under a 1993 Bilateral agreement with Hong Kong. The legal cost to Australian citizens of simply defending this action has been estimated at \$50 million. That is an immense amount of money wasted in the defence of elected governments trying to obey their citizens, but it is only one small example in one small country.

The cost to nations worldwide is estimated at \$50 *billion*, for legal costs alone. This figure does not include any costs for "compensation" for multinational businesses enforcing their "rights" over a sovereign nation.

This is happening all around the world, and is made possible because of the ISDS, or Investor- State Dispute Settlement clauses contained in these agreements. These Free Trade Agreements are negotiated in secret, with the details being withheld from the same public that is expected to support and pay for it. They are being aggressively pushed by large countries, leaving the populations of small countries at the dubious legal mercy of large multinational corporations. What chance has a small country to refuse a multinational industry on environmental grounds, or of allowing its own home grown pharmaceutical industry to produce cheap generic medicines?

The Human Genome Project promised a new age of drug development, where hopes for individually tailored medicines would give the next great advance in human health. It was expected that within a few short years, drugs could be tailored to a persons' individual DNA profile, and so be completely effective. This hope has evaporated in the face of the astounding complexity of DNA, and conflicting patent claims over who owns the gene- that section of your DNA- that is responsible for the particular disease in question. It was assumed that every disease could eventually be traced back to an error in maybe just one gene, and a ready cure found. It soon became apparent that most disease, particularly cancer, is caused by many factors affecting many genes, in ways that are still unpredictable.

Each person's individual DNA genome has been responsible for their growth, repair and maintenance, from just 2 microscopic cells at their conception, into fully grown humans. It is the only mechanism of health or disease, because ultimately all health or disease is governed by what our genome does within us. This advance in our understanding of the true cause of disease is brilliant, and a testament to the researchers who have given us this knowledge. However, the current system of drug development completely prevents the prospect of DNA personalised medicines, because it takes many years and millions of dollars to get a new drug on the market.

The drug companies are simply not going to spend that amount on a medicine that is only aimed at a few people. This system can only provide medicines that are acceptably effective for as many people as possible- the opposite of personally tailored drugs.

This system of drug development is so expensive because it takes so long to produce drugs that we demand are safe and effective, yet cheap and widely available, and instantly on hand to combat new diseases. It is naive to expect these competing demands to simply disappear, and also naive to expect the drug industry to be able to continue indefinitely spending billions of dollars to make the less profitable drugs, regardless of the needs of humanity.

The problem of bringing new medicines to market is made many times more expensive because of their failure in the final stages of human trials. Using our current method of drug development, less than 10 % of new medicines that enter clinical trials ultimately make it to the marketplace.

(Clinical Pharmacology & Therapeutics (2007) 82, 21–32.)

After years of development and clinical drug trials, and many millions of dollars being spent, some serious side effect becomes apparent, forcing the drug to be scrapped. This immense waste of time and money is caused largely by having an incomplete DNA library to reference the new drugs against. Companies now have many thousands of drugs on their shelves, worth billions of dollars, that they can't sell because of these side effects. That effect may occur in only small number of people, but it is enough to prevent the drug being sold.

Armed with the information that only DNAMIQ.ME could provide, the pharmaceutical industry would now have an instant market for many of these dormant medicines, suitable for those types of people who are not prone to that particular side effect, and so recoup some of the immense cost of those drugs that are currently unsaleable. The era of personalised medication could begin. This benefits the existing industry by creating an instant market for developed medications that have failed human trials because of genetic incompatibility, and also by removal of huge legal cost in futile defence of the current system of claim and counter- claim by overlapping patent holders.

Such medications, that are accurately aimed at a patient, with reference to their own DNA, will be relatively cheap because it will be effective, doing away with the current broad-brush approach of multiple medications, testing, imaging, consultations, and hospitalisation. These treatments and procedures are themselves aggressively marketed, expensive, and not always to the patients' benefit. DNA targeted medications are not a new idea, but very limited at the moment, firstly because of the cost of sampling your DNA, and secondly, the lack of an independent reference base to refer the medication to for assessment. DNAMIQ.ME will preserve a sample of your DNA, so that as future research and development allows, your need for medications may be checked against your own DNA.

Medications that suit your individual DNA profile are, of course, only half the story. The other half is food, something you challenge your body with every day. It would be useful to know that what you are eating and drinking is not likely to cause you damage, for example you may be quite used to drinking tea, but coffee may be far better for you. The ability of science to completely understand these limitless changing factors that go to make up just one human is simply beyond us, let alone adding the constantly changing factors of age, environment, diet, and mental state. The adding of any medications to this mix shows the incredible range of factors that a human body can cope with, but to expect that science will completely understand how any medication works, is simply beyond us at the moment. Yet most medications do work reasonably well in most people, as the massive increase in the world's population shows.

DNAMIQ.ME will in the future offer dietary guidelines according to your DNA profile, as it changes through life, pregnancy, illness, geographic location, and the typical challenges of life.

It is not difficult to see a future when you are able to decide what medication, what food and drink, what sports, and type of schooling, etc are based on your DNA profile carried in an app on your mobile phone. Your DNA shapes every aspect of your life, and it should be available for you to use.

Partner compatibility and matching is popular, (as it has ever been through the ages), through websites linking common behaviours. DNAMIQ.ME will not give advice on genome compatibility with a prospective partner, simply because science can never explain matters of the heart.

The Pharmaceutical Industry produces the drugs that keep most of humanity alive, within a system that is teetering on failure. The frenzy of corporate takeovers of small drug companies by large ones is a clear indicator of the growing problems, made worse by insistent demand by shareholders for ever increasing profits.

http://www.thepharmaletter.com/article/an-all-time-record-year-for-pharma-biotech-m-a

Pharmaceutical companies see takeovers and acquisitions as a way to keep their revenues growing as fast as investors expect—and with today's complex medicines, it's often cheaper for a company to simply acquire the next miracle drug by taking over the company that developed the new drug, rather than to develop it in-house. There were \$221 billion worth of corporate takeovers in the pharmaceutical sector completed in the first half of 2015, triple the amount during the first half of 2014, according to a recent report from consulting firm KPMG.

These massive conglomerates are unrecognisable from the original companies, and the stock market rewards such moves, because it makes sound financial sense. To suggest it is also to avoid responsibility for future claims for a failed drug by dissolving the company into a newly formed business entity incorporated in another country with different laws and taxation is somewhat cynical, were there not a history of this commercially wise, but morally corrupt practise.

https://dx.doi.org/10.1186%2Fs40064-016-2323-1 http://www.businessinsider.com.au/the-schemes-used-by-big-foreign-pharmaceuticals-to-pay-the-lowest-tax-in-australia-2016-4

Against this grim backdrop it must been seen that these problems are only human, a result of human error, belief, or greed.

Belief and greed are a natural part of humanity, and these same forces can be the engine of a better system.

The problem has been explained, the current situation criticised, but criticism is easily dismissed, if no better alternative is put forward.

DNAMIQ.ME is the only alternative.



Chapter 3 Solution DNAMIQ.ME - the human talent collective

DNAMIQ.ME is a unique business, unlike anything that exists. Its purpose is to publicly and legally state the right of its members to claim the total and permanent ownership of their own unique DNA, and to the financial benefits from using that property, now and in perpetuity.

This is the total foundation of DNAMIQ.ME

A person that becomes a member of DNAMIQ.ME agrees to provide small samples of their saliva and skin, and information about their health, diet, and ancestry. These are kept private and secure by DNAMIQ.ME, who then develop it into a unique, *totally anonymous* data profile that can be researched by industry and researchers, who pay a very small license fee for access to that pooled information. The licence fees collected are then returned to the members as a dividend. This process put a value on your unique DNA, and that value can then be profited from. Research and commercial development will then have a legal and ethical framework to proceed.

DNAMIQ.ME is something like a talent agency, which promotes the vast talents found in your DNA to a wider commercial audience. As a musical talent agency will promote the talent of a musical artist, so DNAMIQ.ME stands as your personal representative in making commercial use of your genetic talent.

To give an example, if a researcher seeks information from DNAMIQ.ME about a particular disease, and DNAMIQ.ME can provide the anonymous profiles of fifty members who are all immune to that disease, it will be very statistically relevant to that research. If however, DNAMIQ.ME provides fifty thousand such profiles, then those statistics become much more revealing. If that same inquiry reveals five hundred thousand people who are all immune to that particular disease, and all have the same particular DNA traits, then we may begin to show the underlying genetic cause of their immunity. Drugs can then be developed using the DNA information of this massive sample group, with the reasonable expectation of success.

The power of these statistics on a global scale is the reality that only DNAMIQ.ME can offer. It is the only genetic database organisation in the world that is completely independent of all industry or government funding. It exists only for the benefit of its members. All of humanity is invited to join.

You now have a way to profit from your genetic talent. That is the basic manner in which DNAMIQ.ME will work- very large numbers of people who have particular genome traits in common, which endow their owners with certain characteristics, allowing their genome to be anonymously explored by researchers, who pay a small fee.

Under DNAMIQ.ME's license agreement, and with the understanding that you retain ownership, a researcher can, with permission, explore the vast potential of your DNA, research and develop medicines and treatments specific to the statistical data nuances supplied by DNAMIQ.ME, and with your agreement, participate in drug trials related to that area. In short- make use of the value of your DNA, for the good of yourself, and your descendants.

The fees paid to DNAMIQ.ME me for access to the information, and for licensing of medications developed from your DNA, will be returned as a dividend to the members of DNAMIQ.ME. You, as a member, will profit from your DNA. After your death, your dividends will be paid to your nominated beneficiary, for as long as they live.

DNAMIQ.ME is a business entity that gives a legitimate foundation and legal weight to those wishing to make use of human DNA, as opposed to the current exploitation, as described in chapter 1.

DNAMIQ.ME provides the only alternative, the only way forward, in which the information contained in your DNA can be legally and ethically made available to the marketplace, on a sound commercial footing. DNAMIQ.ME is a business that is structured to take into account the best long term interests of its members, and to be guided by them, unlike normal corporations that have instant profit as the sole reason to exist. It is a modified form of the cooperative society model of business.

The information that DNAMIQ.ME collects will only be related to who we are as humans, and not what we do with our time. There will **NEVER** be any questions, or information gathered, by **ANY** means, about a member's financial, political, religious, or artistic matters. These issues are a private choice for all of us, and of no concern to DNAMIQ.ME

The basic tenet of DNAMIQ.ME is a person's ownership of their DNA, and all the information it contains, and the right to do what they want with it. Your DNA, however, is not a static unchanging thing, in fact, just the opposite. The fluid, unpredictable, tenacious ability of human development shows perfectly the power of DNA, and how it adapts to challenges. It is the sole means by which our physical characteristics are carried into the future.

The constant assaults of aging and environment on our DNA make it respond in ways developed over millions of years. This challenging scenario of life can also be applied to how artificial chemicals may affect our DNA, given the speed with which new industrial chemicals are being developed. It can take millions of years for DNA to respond to a new change in environment, by means of adapting and mutating. We are changing and modifying our world and inventing chemicals at a speed that DNA simply cannot cope with.

DNAMIQ.ME will be a secure reference base of our individual DNA, one that will provide safety and security for our most important asset, available for use with personal consent.

Given the certainty of our DNA responding to the world challenges of pollution and disease, who should own these improvements? Who should benefit from them, and who has the right to bequeath such a birthright? These rights belong to the individual person, not a corporation, nor a government.

DNAMIQ.ME plainly asks its members, who do you nominate to inherit the bounty of your DNA, now, and into the future? Who will be paid the dividends you earn, now, and after your death?

As a basic unchangeable principal, the data that DNAMIQ.ME provides for research will not contain any personal information that will identify you to any researcher.

The patenting of our DNA has resulted in astonishing profits for some, with all of those benefits retained by the patent holders, but the origin of that raw material is a human, with rights and obligations, who is due a fair return for the exploitation of their unique talents.



The commercial world can only speak in the language of commodities - how much something is worth when it is bought or sold.

DNAMIQ.ME overturns this paradigm by demonstrating that every human has an inherent, unchangeable worth for who they are – an irreplaceable treasure of DNA.

Chapter 4. The Future

Human evolution is achieved through our genes- our irreplaceable genome that makes each one of us unique. Genetics are at the foundation of every idea and debate that divides humans.

We now have the ability to alter the genome of a child *before it is born*, and that child will pass on those changes *to its children*, so we now have the power to shape humanity in ways that would seem almost god-like. We don't have such a wonderful record of using great power very wisely, so it no wonder that scientists are urging great caution in how this power is used.

http://www.nature.com/news/don-t-edit-the-human-germ-line-1.17111

It is sobering to know this warning has been utterly ignored, again, in the name of science. http://www.nature.com/news/second-chinese-team-reports-gene-editing-in-human-embryos

The power to alter DNA, that is, to genetically engineer a living organism, gives us a power that seems almost unreal. Our genetic engineering has given us many new forms of plants, bacteria, virus, food and medicines, all within the last few years. Nature uses evolution to genetically engineer living things too, but over many millions of years. Our whole environment has been altered by our genetic engineering, but with such speed that it is impossible to predict the future of these new organisms.

Such a prospect should be truly terrifying, but our lazy faith in science dulls those fears. The greatest danger to our *actual existence* is now the fact that these genetic engineering tools are available to anyone with \$A130, and access to the internet. With no training, supervision, or responsibility, amateur enthusiasts are modifying the DNA of pet animals, foods, plants, or anything else that takes their interest, simply because they can. Will they breed a living organism that nature has no answer to? https://www.indiegogo.com/projects/diy-crispr-kits-learn-modern-science-by-doing#/

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"The fall of the Roman Empire, and the equally (if not more) advanced Han, Mauryan, and Gupta Empires, as well as so many advanced Mesopotamian Empires, are all testimony to the fact that advanced, sophisticated, complex, and creative civilizations can be both fragile and impermanent." Motesharrei, Rivas, Kalnay: Ecological Economics Vol 101 May 2014

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Many previous civilisations have been eventually destroyed by their faith in the technologies they developed. Even though they were at the pinnacle of power and reason at the time, the problems involved with a large population proved to be fatally unsolvable for their science or religion.

https://www.theguardian.com/environment/earth-insight/2014/mar/14/nasa-civilisation-irreversible-collapse-study-scientists

We face total annihilation by our own inquisitiveness. Cheap gene engineering technologies allow us to play with the functioning of the very thing that brought us humanity - the evolution of our genome over millions of years. We tinker with genomes because we can, and because we are enthralled with our own cleverness. Global warming, terrorism and all other threats to our species is as nothing compared to the threat of amateurs interfering with a wonder that has taken millions of years to develop.

We do face a Frankenstein future because intellectual self-restraint is not easily seen in humans, but mainly because nature will adapt to the new life forms we make, by evolving them into something we cannot predict, and may not recognise, or understand. Nature will ensure the survival of the fittest life form for that environment, regardless of what we think or hope.

Now that we are able to modify the genetic code in ways that are inherited to the next generation, it is not unreasonable to assume these designer modifications will also be patented.

As the human population grows and therefore DNA diversity increases with every new person born, it is naive to think that development of new medicines can keep pace. Researchers currently have limited access to only those parts of the DNA that their organisation has the patent rights to, and are legally prevented from exploring the effects of their research on the rest of our DNA that is patented by someone else.

Investigation and development of new chemical compounds is also not going to stop, but there is no time on an evolutionary scale for our bodies to develop tolerance, and no way to predict long term stability of genetically modified chemicals or organisms. The food industry manufactures non-foods from novel chemicals for sections of the marketplace that did not exist even a decade ago, e.g. non-dairy cheese produced from cow DNA for the vegan market- how can the safety of such chemicals be calculated?

Our current state of understanding, very limited as it is, reveals that we are individually unique, not only genetically, but chemically, in that we respond to each chemical input to our bodies in a way that may be usually predictable, but it is not guaranteed. For example, we may be able to eat certain foods, such as peanut butter, without problems, and then develop a completely different reaction to that food, or drug, or environmental factor, that was very different to how we used to react.

Therefore, the threat of a pandemic is real, and not limited to humans.

The Svalbard Global Seed Vault in Norway is an archive of seeds from of all the worlds' food crops, held in permanently frozen underground bunkers. It is an international example of cooperation, and by its very existence acknowledges how far science is from creating even the simplest form of life- let alone the staggering complexity of a simple grain of rice. If a plant becomes extinct, science simply can't make it again from scratch, It is gone forever. Far better to safely store these irreplaceable treasures.

If we can see the obvious value of archiving the food plants we rely on, how much more the value of human life?

DNAMIQ.ME will archive the DNA of its members as a safeguard against future disasters, not only because we can, but because we must. It is the only logical response to realizing what your genome is :- a once in a universe event.

Irresistible human ingenuity has yielded astounding technical leaps that has benefitted most of humanity, from the stone axe onwards. We like to think of ourselves as modern, sophisticated, the pinnacle of knowledge, with our gadgets and entertainments, but every generation thought the same, be it ancient, modern or current. Our inventions define the way we live, shaping our future, and while they become obsolete, so do we - for the purposes of the next generation. This is normal.

Our obsession with the mobile "smart" phone is a good example, by allowing us to have constant contact and computer services at our fingertips, at the expense of privacy. We have both created and destroyed governments across the world using only mobile phones; we talk face to face from the other side of the planet for free, and think it normal to do so. Twenty years ago this was science fiction, now it's expected. Young children in large parts of the world could reasonably imagine that Wi-Fi is a part of nature. In living with these computers attached to us permanently, we generate so much data that it is impossible to keep track of. Storage of this data is rapidly pushing computer science to the limit. The use of DNA as a storage medium is inevitable because of the huge amount of information that can be stored in a microscopic area. Nature has refined , over millions of years, the ability of DNA to store and retrieve massive amounts of information with great accuracy. The success of concept trials showing how we can use DNA to store data, plus the common use of DNA search engines in research, and the investment by Microsoft into this field, shows where this is headed.

http://spectrum.ieee.org/the-human-os/biomedical/imaging/microsoft-buys-into-dna-data-storage

Non-human DNA could be used for this purpose, but the lure of having limitless data storage carried by every person in their own DNA is very powerful. It is not too difficult to see this emerging technology coupled with microchips embedded into our bodies, in effect, turning us into walking computers.

To publicly state ownership of our individual DNA will prevent such unauthorised exploitation, yet still make commercialisation available, with DNAMIQ.ME

We all hope to create a future that is better than the present, and we do so by technology giving us the luxury of having time to think. The convergence of ideas and technology has driven human development throughout our history, from the first use of fire forcing us to develop language, to today's language of computers. To give an example-

Very few people had heard of Martin Luther, a Roman Catholic monk, who in 1517, in a small German city, nailed a paper containing questions, to the door of his local church. In that simple, but brave act, he changed the *entire* course of human history. His questions were aimed at the blatant corruption and greed he saw in an organisation that he loved dearly. His questions challenged the basic power structure of the Roman Catholic Church, but his ideas would have gone unnoticed were it not for the new technology of the time- the invention of the printing press.

This new printing press allowed copies of his radical ideas to be widely circulated, and created such a tidal wave of dispute that within 3 years, his books were being burned in Rome by order of the Pope. An unknown monk in a small city, thousands of kilometres away, was threatening the world power of the day.

We would say his ideas went viral, but this was in a time of no mass communication. The effects of his ideas, coupled with the new technology of the printing press, which gave people cheap copies of his books, made people aware of their power to change a situation they thought was unjust. Those changes dramatically reshaped the world, and affect all politics in every country to this day.

Martin Luther did not set out to destroy the Roman Catholic Church, only to publicly protest about corrupt practises. His complaints found a wide and sympathetic audience, yet the Church refused to see any need for change. The situation at that time is hard for us to understand today, because the influence of the church so completely influenced every aspect of life, and every level of society. The nearest we can imagine today is perhaps displayed in North Korea, where the government has total control over what a person may think, do, or say, from the cradle to the grave.

The Roman Catholic Church refused to accept the need for change or compromise. Martin Luther, now backed by a large and powerful groundswell of public opinion and political-religious allies, refused to withdraw his accusations. He was excommunicated, i.e. kicked out, — and so decided to form a new church. So the Reformation began, a protest that became the *Protest*ant church movement. The Roman Catholic church lost control over millions of people, and a movement was started that would see the formation of new, non-Catholic churches, all around the world. That division exists to this day.

The medieval world super power was split apart by an idea, and technology. Common people were able to force change, and bring an end to corrupt oppression.

Chapter 5 Conclusion

Our human species is only about 200000 years old, a blink in time compared to the dinosaurs that existed for millions of years. Our DNA is constantly exploring every way to improve, and to adapt to our personal environment. Everyone will suffer from some type of disease at some stage in their life, so it is inevitable that we will die, eventually. Our dread of disease is based on pain, and ignorance of its real cause, and the likely outcome of our death. Those alive today are the first generation that doesn't have to explain the cause of disease by means of superstitions, religions, or fate. We can now see that all health, or the lack of it, is totally based on how our personal genome directs our bodies to respond to whatever is attacking it.

We all have our unique response to disease, because we all have our unique genome. If the shape of our genome allows us to not suffer from a particular disease, then we may live long enough to pass that immunity on to our children. We are all at the forefront of DNA's editing process, we are all of nature's greatest effort to cope with that environment, and to improve humanity.

The excellence of disease is an appropriate expression therefore for those that suffer disease, because without natures' attempts at DNA improvement, we would all have died out long ago. Rather than pitying those people that are not "healthy," whatever the current fashion for that is, we should recognise that these people, the diseased and "disabled", are actually the best efforts of nature to improve the human species. They are at the cutting edge of the life and death struggle to protect the rest of us from disease. Given the suffering they endure for the sake of humanity, obviously they are the strongest, the bravest, and if we see them as anything less, we are lying to ourselves.

Patenting is crucial to the commercial development of new inventions. It gives protection from theft of new ideas, and allows for new products to be brought to the marketplace. Without such lawful protection being enforced, there would be little improvement in all the technology we surround ourselves with.

To patent something is not hard, but it requires a complete description of the new invention, a complete description of how it works, an explanation of how it is produced, what it contains, and in some cases a working model. It is a gross failing and contradiction of the patenting system to allow a patent over something that is completely individual and unique, and cannot be reproduced. Patenting only provides for the legal protection of something that can be reproduced *exactly* as described in the patent.

The plain fact is all of your personal genome is patented, even though science cannot fully explain how it works, how it is produced, what it contains, or produce anything like a working model. The legality of patenting something that is so poorly described is not valid, and the morality of doing so is corrupt.

We witness an endless stream of corruption everyday thanks to the internet and media outlets, but this lack of trust in political, economic, or religious authorities, is brought into sharp focus when those powers repeatedly turn a silent blind eye to appalling acts of violence and greed. Justice seems available only to the rich. This is a global problem, a growing cynical despair that trusting anyone marks you out for a fool, someone to be taken advantage of. However, trust in one another has been a most basic ingredient in our evolution as social beings, it is in our nature to trust, to have faith.

The challenge is to find something worthy of your trust. The simple fact is that you can trust in your absolute uniqueness, because you are irreplaceable, and that is worthy of such trust.

The most basic human right is the sure knowledge that we own our self. We are deluded to think any of the growing lists of personal freedoms and rights recently won is worth anything at all, even though those freedoms may have been won at terrible cost, if we do not own *all* the rights to *all* of our body.

DNAMIQ.ME offers a clear future not limited by time- your DNA can last indefinitely with correct storage, but your body wont. Planning for our death is difficult, as we imagine it will happen later. Can you imagine your DNA lasting 10000 years? It is completely possible. When a person dies their DNA is not obsolete, just lost, but the storage and future use of their DNA is now a reality- with DNAMIQ.ME

How far do we think ahead?- it's human nature to do so, in fact, it is impossible not to think of the future, that is what makes us human. Do we think only about the next few moments, days, or years? Are we optimistic about the future, or see our destruction as inevitable?

Your DNA can be your investment in your very long term future. In the same way as a bank will pay interest on what you lend to them, over the long term, your investment will grow.

DNAMIQ.ME's joining fee is very modest, but invested over even 100 years it will grow to be substantial. The worth of your DNA over that time frame is incalculable.

Do you own yourself? The current answer is no - you don't. If we, as a species, do not insist that we always will be the owners of our own genomes, then human slaves will be grist for the mill of industry. The time for deciding is now.

Opposition to this development will be ruthless from some, as is the usual fate of new ideas, however, slavery is illegal. The right to own *our self* is the question that only this generation can face, and decide. This threat to our ultimate freedom was unknown to our parents, but now that we know, what will we decide? How will we explain this to our future generations if we do nothing? If we do not act now, the forces that wish to maintain the current state of ignorance will become more entrenched, more powerful, and more resistant to change.

The vast data base about you that is collected by using social media, shopping, travelling, and being entertained, is used to sell you more "stuff". It is a hugely valuable, and privately owned- but not by you. It is a massive, and rapidly growing, picture of what you do. Businesses like Facebook and Google rely on this form of data collection and targeted marketing to become ever more efficient, and ever more invasive. It is possible to have your DNA partially sampled for as little as \$100, and there are several organizations that charge about \$1000 for a more complete version. Exactly who owns the information that is found in your DNA is quite clear- it is <u>not</u> you. It is inevitable that genetic data from private DNA banks will be matched with commercial data to produce a personal profile with chilling implications, but you will not be aware of it, or its uses, because it is not owned by you.

Current research and commercial development ethics are stretched to the limit by outdated concepts and business models that are not able to cope with the flood, the tsunami of DNA information, let alone its ramifications. The impact of this on the developed world is unclear, but the wholesale genetic exploitation of undeveloped countries will, by comparison, make early colonial exploitation look like the work of amateurs, for the very people whose only asset is their own DNA.

Remember, the sole purpose of the United Nations Budapest Treaty is to patent *every living thing* on the planet.

Who will look after your DNA when you die? Henrietta Lacks died 65 Years ago, and her DNA is still being exploited to this day- can you say the same thing will not happen to you?

A parent may hope and dream many things for their child, but to bequeath slavery to your child is plain horror. This inheritance of slavery passed from parent to child by indifference to the reality of DNA patenting is an issue that cannot be ignored. The genie is out of the bottle, and now it is up to each individual to realise the personal responsibility of protecting the intellectual and physical property of their DNA. With clear vision of our options, we can shape our future.

DNAMIQ.ME offers the only way to publicly claim your ownership to be true - for centuries to come. The alternative is to do nothing, and remain a slave.

You decide.



join@DNAMIQ.ME

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