

The circular revolution and the Gbiota Club

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Abstract

Our guts do much more than help us digest our food. Our guts are part of the system which acts as an intelligent control system regulating our appetite, what and how much we eat and where and how much is stored as fat in our bodies. They are home to 70% of our immune system. 90% of people who die from the virus have been eating a diet lacking essential ingredients.

A healthy gut is critical to our health and increasing our health span.*

If we eat the right sort of food we have a healthy gut and can expect a long healthy life, if we eat the wrong sort of food our guts sense the lack of essential nutrients creating food cravings which lead to the chronic diseases of diabetes, obesity, heart attacks and dementia.

We need to incorporate into our diet gut food, Gbiota food, full of the food our guts thrive on - fibre, essential minerals and phytonutrients particularly what our bugs like even more than ice cream - fibre. These come from the soil so we need a nutrient rich biologically active soil.

OK you may say, I like the idea of eating health food but is it too expensive. 100% wrong. The main input is waste food and organic material which is not only a waste product but actually costs money to otherwise dispose of and pollutes our atmosphere.

Gbiota food increases our health span, lowers the risk of diabetes, obesity, heart attacks, dementia improves our immune system and the chances of dying from the virus and is actually cheaper.

So what is the snag? Gbiota food does not come from a supermarket in pretty boxes and supported by a multi billion dollar advertising campaign it comes from a farm down the road.

That is what Gbiota beds are for.

** life span is how long we live, health span is how long we remain fit, active and healthy*

Humans - the great success story

Humans are the most successful creature on the face of the earth, what we and our technology have achieved is simply stunning, yet we still seem beset by problems. What have we got right what wrong, what are our biggest problems and what do we need to do to solve them? That is what this article is all about and why we need the Gbiota club.

The three simple reasons for our success



First we are an intelligent creature, more than any other creature - artificial intelligence may perform calculations many times faster and remember more data than we can ever dream off but it still cannot develop new concepts like us humans or even show common sense.



Secondly we are adaptable. We have spread over the surface of the earth adapting to different conditions and thrived. When we fail it is because we fail to adapt.

Climate change is not an intrinsic problem, there is enough energy falling on a few square kilometre to provide all the power we need - but we fail to adapt.

We are producing enough **energy** food to feed the entire worlds population for years to come, we know we need food to replace our body parts and our guts which work as part of our intelligent control system which makes us overeat if it senses a deficiency - but we fail to adapt.

We are destroying our soils which are the essence of life - yet we fail to adapt.



Thirdly we are naturally a cooperative species. Put us naked in a natural environment and we have little chance of surviving let alone breeding, yet as a group we thrive.

Yet we often forget these three basic human characteristics which make us so successful.

Has the world gone crazy?



Just a few moments looking at any screen is enough to make anyone think the world has gone crazy, whether its the virus, autocratic Governments, the controllers of our mega corporations putting profits ahead of public benefit, climate change, the destruction of the planet, a food system which is damaging our health it's enough to make anyone wonder.

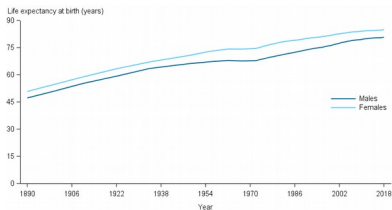
And those helpful individuals who point out how much worse things were before, - two worlds wars, nuclear destruction, the great depression, the Spanish flue - trying to make us think that things are not so bad, make things even worse.

Yet the fact remains that while we are the most successful creature on the planet we still face major challenges. What are they and what so we do about them.

OK Greta let me have my say

I am leaving climate change to Greta, she is doing a far better job than me instead I am going to talk about the bee in my bonnet, food, health, life span and health span.

Life span and health span



Medical science and practise has done a great job of increasing life span, we have increased our life span dramatically - go back a century and our average life span was under forty years until recently this has steadily increased and is now over eighty years.

But this is **average** life span, there has always been some people who have lived to a ripe old age the maxim length of life has not really changed, what has changed is that the deaths of younger people, particularly children under five, has dramatically been reduced, as we have increased our skill in managing infection, accidents and food supply. **Our average** age at death has been steadily increasing while **maximum** life expectancy has not really increased.

We have doubled our life span within a couple of generations, break out the champagne. No just hold on - our health span, the length of time we are fit and healthy has been steadily dropping. Go back a century or to any of the worlds blue zones where people not only lived well into their nineties but were fit, healthy and active through their lives.

Contrast this with modern society where people's health span has been steadily decreasing, not just the middle aged but even young adults, who should be at their health peak are becoming fatter less active and less healthy. Diabetes and obesity are now a feature of modern life.



As people get older they may not be so fit and healthy so there is the concept of **health span**, how long we can expect to be fit and healthy. And sadly this is getting shorter and shorter with time. This is associated with a number of chronic diseases the key ones are diabetes, obesity and its related heart attacks and dementia. A key factor is how much and where we store fat in our bodies.

We have become obsessed by calories but this never used to be the case. For millions of years our ancestors never thought about diets and animals still don't - our bodies naturally self regulate - given half a chance.

The green revolution

We can link this directly to our food system. With the green revolution starting some fifty years ago and pioneered by Norma Borlaug, fertilisers and irrigation we have increased the production of energy foods three times while population has doubled. We are now producing enough energy food to feed the entire world for many years to come, provided we could work out a way of distributing it uniformly.

But here is the snag, we need food for three reasons -

- energy, we are thermodynamic machines turning food energy, simple chemicals of carbon and hydrogen which we burn inside us to provide the energy to power our organs and propel us around our daily activities.

Give us a tick we have done a great job of growing enough energy food.

Three functions of food



We need energy food - basically fats and sugars. The bulk of the food we eat we simply burn off to provide us with energy, both internally to support our body functions and externally so we can do useful work.

But we also need food to replace our body parts as they wear out. We are like the ancient axe which has had twenty heads and fourteen handles but is still nominally the same axe.



Everyone knows and understands about energy and replacement foods - no issue.

The all conquering biota

We make like to think we are the most successful creature on earth, but wait a minute, go back a few billion years and there was nothing living on earth, just a bunch of dead rocks.

Then along from somewhere came a bunch of micro organism, particularly bacteria and fungi. They started to break down the rocks to make soil which allowed plants to grow then animals came along to eat the plants, then yet more animals to eat the animals that ate plants, then along came us.

We, and all living life would never have existed, if the biota had not kick started the process.

The biota inside us - our Gbiota - our intelligent control system

What gets overlooked is that we also need to feed the trillions of creatures that live in our guts. It is easy to think that the biota in our guts, our Gbiota is there simply to help us digest our food - which of course they do. But they do a much more important job.

Our guts are part of the system which acts as an intelligent control system regulating our appetite, what and how much we eat and where and how much is stored as fat in our bodies.

Our guts have looked after us for millions of years without us even recognising their existence, other than a few comments about gut feeling. The food we traditionally ate was full of the food that our gut biota needs so there was no need for us to even think about it.

It all just worked nicely.

Then we changed our diet to one dominated by energy food, and as a result changed our gut biota which led to the current health epidemic.

Our gut biota



The trillions of cells in our guts communicate with each other and our head brain sensing how our digestion is working and automatically take decision on what we should be eating and how much and where we should store fat in our bodies.

We have evolved over millions of years to have an intelligent control system to manage our bodies.

But this does depend on our guts having the right biology which comes largely from eating the right sort of food grown in nutrient rich biologically active soils.

Food with the right biology and a spectrum of minerals and fibre leads to a healthy gut and our immune system which protects us.

We need to eat phytonutrients, trace minerals, complex chemicals and biology from plants.



A diet too high in sugars and fats leads to an unhealthy gut which sends out the wrong signals which ends up with us overeating and becoming fat. Food cravings!

This is not solved by simply cutting back on sugary fatty foods, that may work short term but rarely works long term. We need to eat food which leads to a healthy gut so it sends out the right signals so we don't overeat the wrong food.

If we have a healthy body and immune system we don't have to think about counting calories in some special diet, we just have to follow the signals from our intelligent

controls system - our guts understand better than any diet based on measuring calorie intake. It senses that when we walk twenty kilometres we need to eat a good meal and if we have been stuck in an office we only need a tiny snack.

We simply need to follow our gut feelings.

And that works fine if we have a healthy gut which is sending out the right messages.

Sadly that is now not the case so we should ask why?

Changes in agriculture



Since the end of the second world war we have seen just astonishing changes in agricultural systems world wide.

Explosive factories were converted to the of production of nitrogen fertilisers. The green revolution has led to dwarf varieties which can handle much higher yields.

In round terms while the global population has doubled food production of energy foods (cereals) has increased by a factor of three.

We are producing enough **energy** food to feed expected world populations for many years (if we were to distribute uniformly). This has been simply an amazing technological revolution.

But there are buts.

The focus has been on energy food, not replacement food and certainly not food to feed our guts, we are eating an unbalanced diet.

An even bigger 'but' is what we are doing to our soils. It is easy to measure mineral content and we have historic data for comparison. The mineral content of our soils and plants has virtually halved - and these minerals are what we need for replacement and gut food.



But worse is what we are doing to our soil biology. Soil biology, all those little creatures and worms are needed to regenerate our soils. We are destroying our soil and the experts calculate that we will have destroyed our soils within sixty years.

We need beneficial biology to grow our food and to enhance our gut biology.



We could be sitting in a Ferrari with our foot on the floor heading for a brick wall.

While climate change receives considerable publicity the damage to our soils is an even bigger problem. But they are

linked. Current farming is a major contributor to greenhouse gases while regenerative farming is storing carbon in the soil.

Addressing this is a key aim of the Gbiota club.

We have been through many revolutions

We formed tribes when we came down from the trees, we created the agricultural revolution, then the industrial revolution, next came the chemical and plastics revolution and now we are in the data revolution.

Every revolution brought both benefits and negatives so now we enter the era of the next revolution the circular revolution which is a fundamental shift from exploitation to recycling and reusing finite resources.

That is what the Gbiota club is all about. We use our intelligence to develop technologies to reuse food and organic waste and transform our soils into a highly productive system full of nutrients and essential biology.

We adapt by saying that our food system should **not** be dominated by the profit motive but should work for the benefit of our community.

And we cooperate, just one person putting their left over dinner is not going to save the world, but by cooperating together we can reuse the vast amount of food we waste, we can reuse the organic waste that ends up in land fill or our sewage system which inevitably ends up in the sea.

It may not seem like a high tech revolution, compost worms, bacteria, mycorrhizal fungi, sea weed have been around much longer than we humans but we are using our intelligence, our ability to adapt and cooperate so our species will continue to thrive for generations ahead. We adapt to the modern communication system to communicate and share ideas and projects across the globe.

That is what the Gbiota club is all about.

The process of innovation

I have spent my life in innovation, I have had numerous failures which it an innovators lot in life, but some successes. I was selected as one of Australia's top one hundred innovators for my work in developing computer aided engineering in the day of punched cards (yes I am that old). But I do know how the process of innovation works.

It is decidedly not some isolated person having some brilliant idea, rushing out and getting a patent and sitting back while money just rolls in. That is just not the way it works.

There is typically a tidal wave of research and development work going on in centres around the world to create a bed rock of technology. But often the highly dedicated researchers living in their specialist niche cannot see the broad spectrum that creates the solution.

Then some non-specialist sees the big picture and the potential solution and brings it all together, may be adding a bit of new creative technology to develop what looks in retrospect as the final solution. A classic example is the smart phone. Steve jobs did not invent the smart phone, he brought together a whole range of technologies to create the I-phone.

But that is still only the start of the story, it then takes a group of people to appreciate the benefits of the new technology to use it themselves as early adopters, they then tell their friends who in turn tell their friends and incredibly rapidly the product goes viral and the world adopts the new technology.

The success of the first I-phone was not simply because Steve Jobs was a brilliant marketer, it was because he saw the need, integrated a range of technologies and convinced enough people to see the benefits of integrating multiple technology into one product and his customers enthusiasm for the new product led to smart phones going viral.

The development of Gbiota beds

It is he same story with Gbiota beds which were developed to provide food which would lead to a healthy gut so our bodies could control our appetite and how much and what sort of food we want to eat.

I did not invent worms, mycorrhizal fungi, flood and drain irrigation, mineral enriched rock dust, intensive planting, tipping technology, green smoothies veggie wraps and all the technologies that make up the Gbiota system.

I did develop a few sneaky innovations to make it work as an integrated system but without the base technology their would be no Gbiota beds.

But I did see the need for us to incorporate into our diet food to feed our gut biology - Gbiota food, I did see that our gut biology forms part of an intelligent control system and if we had a healthy gut we could forget all about calorie counting and just let our guts tell us what and how much to eat.

But even this is not really new, I have read many medical articles about how the cells in guts communicate and take decision, nutritionist also talk about the need to feed our guts soluble and insoluble fibres. There is much written in the farming literature about regenerative farming and in the environmental literature on food waste which end up in land fill producing green house gases.

All I have done is to see the need for an integrated system so regenerative farmers can recycle food waste to grow food which will enhance our gut biology so it can act as an intelligent control system.

Even this is not new, all you have to do is to go to any of the blue zones where people are active to a ripe old age or indeed many rural societies that have as yet not been contaminated by the junk food and you can see it working in practise.

But that is only the start of the story, we need to move to where there is a global movement to people incorporating Gbiota food into their diet.

Getting acceptance

There is no point in having a great innovation if no one uses it, so what makes people adopt a new technology. Our economist friends will say it is all about money and if you have a better or cheaper product and spend enough money on advertising people will adopt it.

That is just not the way the world works. The third reason why we are the dominant creature is because we form cooperative groups. Why do people form cooperative groups? Joining a group typically involves making some sacrifice now to benefit the group as a whole. It is a question of what is right and wrong. You don't have to be religious to have a sense of right and wrong.

Far more people die from the side effects of diabetes than the virus. When people recognise that people get diabetes by eating fatty sugary food because it is promoted as a health food by devious and manipulative advertising they would simply say this is wrong and it is right that people should have access to healthy food at a reasonable price. Right and wrong is a powerful motivator.

So if advertising does not work to get a new innovation adopted what does? There are two key rules in the innovation business. If people can readily try it themselves or if an independent person tries it so people can see for themselves it works, they are likely to become adopters. And adopters lead to more adopters - it goes viral.

I have made information on how to build Gbiota bed freely available under the Creative Commons system so people with a home garden can readily try it and hopefully they will tell their friends - but where do those friends with no garden go to get their Gbiota food.

The easiest way is to set up a system where there are growers who can supply Gbiota produce and cafes who can prepare Gbiota food. For this to work three groups need convincing, end customers to go to their local cafe and buy, cafes owners who will put Gbiota food on the menu and Gbiota growers.

This is totally economically viable. True you can go to the supermarket and buy good looking fruit and vegetables but they are probably grown using chemicals that promote growth but are deficient in essential nutrient and biology. Typically a grower only receives some 20% of the retail price so while Gbiota food may be more expensive to grow it will be cheaper using direct buying.

Getting personal

Now let us get personal here. I developed the Gbiota system because I felt that having a system where people could readily access gut food at a reasonable price was the right thing to do and it was just wrong that people should suffer from the diabetes, obesity, heart attacks and dementia that come from eating sugary fatty foods.

But the fact is that I am an eighty years old, may be still fit and healthy but still just one person.

This is an important technology which could save many lives and more equally important increase health span.

But one person cannot do this by themselves. It takes a group with similar convictions about right and wrong.

I well understand that most people will not read a fourteen page document, but I don't need the world to read this I just need a small group of similar thinkers to say this is a project I support and will become an active member of the Gbiota club.

The Basics

The Gbiota club is simply an informal group of people who want to change the way we grow and manage our food so it increases our health span, recycles the mountains of waste food and we want to do this in a cooperative way with assurance of quality.

Our guiding principles

If our grand kids are going to have a life we need to resolve three critical issues.

Gut health

*Until recently **life** span has been steadily increasing with expected life rising from under fifty to over eighty years, largely due to advances in medical science. However **health** span has been steadily declining with an epidemic of chronic disease, diabetes, obesity, heart attacks and dementia occurring at steadily lower age levels, largely due to changes in diet.*

The cause is poor gut health, the solution is to feed our guts the food that will make them healthy.

Sustainability

Current demands on the planet are totally unsustainable, we are wasting some 40% of the food actually grown while simultaneously destroying the soil on which life depends, this is totally unsustainable.

Cooperative community

The success of humans, as a species, is because we are naturally cooperative, but the pressure for profits and power are overriding this natural cooperativeness. The Gbiota club provides an environment where people can work and trade cooperatively together for the benefit of the community.

All sounds good?

Circular processing



The Gbiota club aims to practise circular processing or recycling, this does not involve any expensive new technology - worms, bacteria and fungi are natural recyclers.

It does however require the collection of materials for recycling.

But surely all this is so obvious, why should we need the Gbiota club? It is a question of the way our society has changed.

We must ask why we inflict so much damage on ourselves and our planet - and why we seem to ignore the life of our grand kids - and their kids.

From tribal to global capitalism



Evolution is not simply about the survival of the fittest, it is about the ability to breed. All those years ago when we came down from the safety of the trees we were faced with seriously ferocious creatures which looked upon us as a convenient meal - an early version of the drive in take away, but for the ferocious beasts - we were on the menu.

But we survived because we learned to cooperate, throwing a barrage of stones at the ferocious beast so they decided to try the take away down the track. We only survived and breed by working cooperatively together as part of a tribe.

It is part of human nature to cooperate for the benefit of the community. It is what makes us human and the most successful creature on the planet.

Economic rationalism

The Gbiota club is not some anti progress anti technology club. But technology must be for the benefit of the community as a whole - not just the few.

We now live in the era of economic rationalism which says that the role of companies is to maximise profits for their shareholders regardless of the community. In food production we do this by industrial chemical farming producing sugary fatty foods processed to be both convenient and tasty.

And they sell like hot cakes - literally.

The Gbiota club - a cooperative group

Growing enough food for one person or family to be self sufficient may be an appealing concept but it is not practical to produce the variety of foods necessary for a healthy diet.

So we need a forum where we can exchange ideas, food and trade with each other, ensuring all members of the community receive a fair value whether they are buying or selling or just working together.

Whether we like it or not we live in the modern technological age but we need to make sure that the technology works for the benefit of the community overall.

The internet is one of the most powerful tools of the modern era, it is also the technology most exploited. We must use it for the benefit of our community.

www.gbiota.com is a membership website where people can share technology and ideas. www.pickandeat.shop provides an easy mechanism for fair trading.

Action not words

This is what we think - but the aim of the club is not just to think but to take action.

The first step is to learn how to grow plants that will lead to the beneficial gut bugs.

We have been doing this for over many years and have accumulated significant expertise and technology. This is shared under the Creative Commons system.

Club members

Home growers

Some members of the club just want to grow Gbiota food in their own garden for their own use and just want to benefit from the technology. Even if they are not actively participating in the club they are valuable members of the club by demonstrating the importance of gut health and spreading the message.

Spreading the word about the importance of soil and gut health is the most important role for every club member.

Commercial growers

But not everyone has the time, land and expertise to grow their own food. So we encourage members to set up micro farms to grow food for local people. Fortunately growing Gbiota food is very productive so significant food can be grown in a small area so it is possible for people to run a viable micro-farm within or close to a city.

But one of the issues facing all club members is that there is a massive food industry selling sugary fatty foods which they spend billions of dollars advertising as healthy.

So it is important that people know that the Gbiota food grown for sale has followed defined procedures. One aim of the club is to document the procedures for growing Gbiota food so people buying this food can be assured that this is grown according to procedures.

These procedures include adding essential nutrients and trace minerals to the soil, allowing beneficial biology to propagate in the soil which in reality means recycling waste organic material.

The Gbiota club does not manufacture or sell any products, but we negotiate with companies that produce products, such as minerals, biology and worms so club members can buy these essential materials with an assurance of quality and at competitive prices.

Group buying is a key part of the Gbiota club, not simply because of lower prices (but it certainly helps to reduce transport costs which can be a significant part of the cost) but because group buying leads to better quality control.

Growers offering Gbiota food are expected to use these products so their customers are assured the essential minerals and biology are in the food.

Suppliers

Club members selling produce under the Gbiota name need to buy a range of products, minerals, biology, seeds, Vermicast, seaweed and soils etc.

The club aims to establish equitable relationships with suppliers, so we receive products of the needed quality at reasonable prices, with the emphasis on quality rather than bulk buying at discount.

Gbiota cafes



While some club members are happy to buy Gbiota food from the Gbiota growers and cook themselves there are other club members who want to buy prepared Gbiota food so another group of members are the cafes and restaurants who want to offer Gbiota food.

Cafes are also part of our social structure, eating communally and just talking is part of being human.

Quality assurance

Gbiota™ is a registered name and anyone offering Gbiota food for sale can use the name but so the customer has an assurance of quality they must ensure they are using the correct procedures.

The club has the web site www.gbiota.com which is essential a technical resource with a combination of basic posts with some more in depths articles.

We also have a Facebook page 'Gbiota Club' to share information and we are establishing a web site www.pickandeat.shop where club members can display their products and people can buy directly with assurance.

Social movement

The club is primarily a social movement rather than being focused on profits, which is the basic reason why modern food is so unhealthy.

But the club has to survive as a viable organisation.

Membership of the club is free, there are no joining or annual subscriptions and we try and answer any technical questions on growing for free but there are small commissions on some sales made through the www.pickandeat.shop web site to contribute to the cost of running the web and the development of technology and support of members all of which are otherwise free.

So why not join the Gbiota club? Just email me colinaustin@bigpond.com