

Booklet Four: This synopsis was revised May 2009 but the booklet will shortly be reformatted as a Book included in the Book Section: It will therefore no longer be available as a booklet

Gaia and Ishmael

In its booklet format it was based upon the subject matter of:

- The Ages of Gaia. James Lovelock. Oxford Paperbacks. ISBN 0-19-286090-9.
- Ishmael. Daniel Quinn. Bantam/Turner. (US). ISBN.0-553-37540-7

In its Book format information will be sourced from additional books and as per the booklet will consist of relevant quotations together with my commentaries and beliefs

It is difficult to summarise the complexities of the arguments in a few pages.

Hopefully this will be sufficient to stimulate discussion. For those who may wish to contemplate the subject in its entirety I commend both of the above books.

The following contains the Preface, Introduction and some Abstractions from Booklet Four.

* * *

Part One of this booklet discusses the concept of Gaia: it is a concept not generally acceptable to established science.

This is largely attributable to the Inflationary Reductionism which has accelerated over the last fifty years: this is apparent in the words included in the foreword to James Lovelock's book, *The Five Ages of Gaia*, which states:

"The modern post doctoral student in a laboratory engaged in Molecular biology, for instance, feels no dependence on generations of forebears more than 20 years back".

"We are, quite literally, in a new world, a much more peculiar place than it seemed a few centuries back, harder to make sense of, riskier to speculate about, and alive with information which is becoming more accessible and bewildering at the same time".

James Lovelock's has, to date, worked on this concept for more than 30 years; all of it personally funded by him from his 'legit' occupation as an inventor, and developer, of scientific instruments.

This is what probably accounts for his relative freedom from I.R. and thus his broader vision.

Originally science was a rich man's hobby: this is no longer the case; it has become a professional activity that relies upon, "expensive and exquisitely refined techniques: there is now little, if any, room for the amateur".

In consequence it is unlikely anyone can truly be termed an independent scientist:

"They have traded freedom of thought for good working conditions, a steady income, tenure, and a pension."

If this is not restrictive enough, they are also subject to the bureaucratic restrictions of regulatory authority; and not least by their own evolved, 'Chinese Wall' disciplines, policed by peer review.

There is no longer room for independent thinking, or action, within the 'Establishment'.

Lovelock is one of the few who persists with his independence: it is little wonder his work is given little support, and is disparaged without question.

"It is the scientific establishment that makes itself esoteric and is the scourge of heresy."

We have learned little from the experiences of Copernicus and Galileo. The outlook, of the establishment, is clearly not conducive to progress.

The Gaian concept is surprisingly not that radical: it merely extends Darwin's thinking to include the interdependence of species with the evolution of the environment in which they exist: it also explores the likelihood, "that species and their environment are tightly coupled and evolved as a single system" Gaia is thus the living organism equivalent to the sum of these constituents.

The trend towards I.R. is no less prevalent in the field of the biological sciences, now divided into more than thirty specialities, making the possibility of extrapolating from the microcosm to the macrocosm, and visa versa, ever more difficult. It may well be this inability that will contribute to the downfall of mankind.

This difference of outlook divides Environmentalists and Gaians: it is compounded, as it will be always, by the Anthropocentrism of the various speciality subjects.

Note: It is of no surprise to learn that Lovelock was not the first to expound the alleged link: this was first propounded by James Hutton, in the 18th Century, when he suggested the need to introduce the subject of planetary physiology. Geophysiology is now the basis for planetary medicine: Lovelock makes the comparison of modern Geophysicists with physicians before the introduction of antibiotics.

It is to be hoped they will be more circumspect with their use in planetary medicine of the equivalent of antibiotics; whatever this is. Currently we are at the stage where the treatment of the planetary ills may be more destructive than the ailment: this will remain so long as the requirements of mankind continue to be given priority over those of the planet.

* * *

Part Two discusses the role mankind has played in the last 12,000 years based upon the novel Ishmael.

It is perhaps to be regretted that both James Lovelock and Daniel Quinn have had to use a popular outlet in order to spread what are undoubtedly serious messages.

However, there is an inevitability the truth will finally emerge: by bringing the two discussions within one cover I hope to add credence to their messages and make a small contribution to spreading them to a receptive audience, however small.

While anyone reading this booklet would benefit from reading both the original books – see above for details – I hope I have succeeded in showing that the two messages differ only in scale.

To some extent this booklet should be a natural follow-on from Booklet Five, titled Science and Faith: however, on balance I believe it more logically follows Part Two of Booklet Three: in any case, the pre-reading of either of those Booklets is not essential to the understanding of the arguments in this booklet.

* * *

There are strongly defined links between the two basic contentions/arguments that suggests all life – as diverse as that may seem to be - differs only in scale.

In Anthropocentric terms this outlook is probably too simplistic; nevertheless there is a thread of commonality joining all forms of life: this is now almost universally accepted in genetic terms; it is possible its existence is much wider, and may even be fundamental to all process.

The Concept of Gaia is inextricable from Life at its most fundamental. It is likely these fundamentals are outside the realms of established science, and thus outside its pre-conceived notions.

In discussions, about the nature of 'Life', we have to accept that while its existence - and more particularly its cessation - may be evident, we are not able to clearly define its nature; nor, the fundamental step that is the key to something being in a state of living, as opposed to not-living.

Its recognition is instinctive, or intuitive: in this it is common to all first level conscious thinking i.e. before the process of analysis switches in. The situation is naturally non-definitive, and will thus remain outside the strict establishment of current scientific thinking.

It is perhaps significant that the Latin word for Life and Soul is the same.

The apparent lack of definition, for the state of 'Life', is all the more surprising when one realises there are an estimated 10 million species considered to be capable of being in that state.

Note: The one common factor is that all the various parts of every specie - down to, and including, the individual cells - are seen to be congregations; all subject to an interdependence which can be said to be Social.

It is the conditions, associated with this relevant Social Structure that determines the physical characteristics and habits of each of the species.

This innate 'wisdom' has been termed homeostasis.

* * *

Whatever the level of scepticism felt by those who consider themselves to be knowledgeable; it is evident there is some form of relationship between the constituent sub-cellular chemicals of those who are considered to be living; the physiology of the specie; and the 'Fundamental' Laws of the Universe.

Of these Laws the principle ones are given as the First and Second Laws of Thermodynamics: These state:

- firstly, that energy is always conserved; it may change its form, but the total remains constant:
- Secondly that energy has direction in that it always tends to move from order towards disorder.

Logically this excludes any 'fundamental law' of which we have no knowledge: thus we have to accept there is no such thing as 'certainty'.

* * *

A preoccupation associated with Gaia is the study of the Earth's atmosphere: in particular comparing it with the atmospheres of Mars and Venus, the lifeless planets. There is no doubt the Earth is unique

when compared with the other planets of our solar system: not the least of the unique properties is the composition of its atmosphere.

The hypothesised evolution of the atmosphere indicates its inextricable links with the forms of life inhabiting the surface of the Earth.

It was not until the last 40 years that the information, upon which these hypotheses are based, has become apparent: generally in conjunction with the activities of the American and Russian space programmes.

For reasons given in the booklet the exploration of Daisyworld is excluded from discussion.

* * *

An eon of time represents the passing of a thousand million years: this is the unit used by Lovelock. On this scale the Big Bang occurred 15 eons ago; life is thought to have started about 3.6 eons ago, in the period known as Archean, being the period from 4.5 eons ago to 2.5 eons ago: this last time was when the atmosphere changed significantly becoming dominated by Oxygen.

The Archean period may therefore be considered the post Super-Nova, pre-Oxygen period.

Gaia was born at the time life started, or very soon thereafter.

Clearly there was a period covering the first emergence of bacteria-like organisms and their spread to a large part of the Earth's surface.

Whether or not there had initially been a Gaian relationship, it is in the latter part of this period the potential for such a process would have certainly arisen. If such a process did emerge it would then have tended to inhibit reactions not in the general interest.

At some point in the spread of anoxic bacteria a critical point would arise when all the carbon absorbed from the atmosphere was not replaced by volcanic sources; this would result in a lowering of the ambient temperature until it was too low to support life.

The fact that life persisted suggests that either, the above model of a possible start is incorrect, or, there must have been some form of compensatory reactions between the life forms and their environment.

The Gaian Model is no more than one such possibility.

* * *

However it may have been achieved; it was the eventual production of free oxygen that was responsible for the retention of hydrogen in the form of water and water vapour. It is perhaps salutary that we remain prone to an outlook that gives inadequate consideration to the power of micro organisms to adapt.

The evidence for the existence of mutual aggression is evident in the various means plants have adopted to make themselves less desirable - toxins, spines, stings etc. - and the counter measures evolved in plant grazers.

The one factor most evident is that a state of balance is always met to the mutual advantage of both sides.

As may be seen in the discussions raised in the Ishmael section of this booklet this state is not so evident in the affairs of mankind

As a consequence we are no longer able to escape the unsavoury by-products of a modern 'developed' lifestyle: the remotest parts of most countries are subjected to airborne atmospheric pollution, often sourced in another country, even another continent. Such undesirables are the inevitable consequence of the extra-normal activities of human existence.

What therefore is the real malady? Given the degree of anthropocentricity, contained within human thinking, the true answer is probably not perceivable.

* * *

A Theist view of Gaia

While it is easy - in common with all subjects stretching the limits of Man's perception and conception - to accept the Gaian Concept as being essentially atheist; there can be no definitive indication the process is not theist driven.

If viewed as a process of Positive Potentialism it is easy to accept that an omnipotent 'force' achieved on Earth something we, mere Men, would like to do on Mars. It is perhaps inevitable that whenever we consider the indefinable, we shall always be faced with three choices: Chance; God; or Extra-terrestrial: clearly God is, and will remain, more acceptable to the majority.

Any chance of recognising reality - i.e. natural reality - is possibly receding as our lives become more 'virtual', and our senses ever less acute. The logical extension of this statement is that there is a lesser

probability of a perception of 'God' in urban societies, compared with rural societies: thus, city dwellers are those least likely to have an awareness of 'God'.

Conversely, the 'bastions' of religious faith should now be most likely located in rural societies; as should an appreciation of Gaia.

We are therefore faced with an apparent Paradox that will remain until God and Gaia are perceived as being essentially one and the same. Even then the Paradox returns if we consider Gaia to be essentially 'Earth bound' but continue to allow God the freedom of the Universe.

* * * * *

Ishmael

Part Two covers the arguments propounded in Ishmael. It focuses upon Man's position within the natural ecology of our planet, and the way in which our development over the last 12,000 years has impacted upon it.

Any discussion on this, or any other, subject must be Anthropocentric, i.e. it must at the least be biased towards the relative importance of mankind, together with an acceptance of the impossibility of being able to perceive what the position would have been without the presence of Man.

Perhaps the principle facet of any such discussion is not the nuts and bolts of physical existence but the power of the human mind, and the acceptance, or non-acceptance, of the ethical beliefs generated.

Arguably it could be said that Gaia represents optimism, while Ishmael represents pessimism: in this case the balance point would be better placed nearer to Gaia than Ishmael.

The last obvious time there was evidence, of an acceptance of this situation, was in the Sixties when 'Flower Power' extended throughout most western developed countries; albeit largely limited to the younger age groups, and therefore had little impact upon any global commercial activities, other than those that evolved to make profit from it.

More recently, the Anti-global capitalist movement has carried the cudgels, making its presence felt by the rioting attendant with global financial summits.

While this movement could have brought into existence focus groups with the potential to spread ethical truths; it seems evident the anarchic minority are obscuring the issues, and thus are preventing speedy recognition of the problems.

* * *

Daniel Quinn, through his novel Ishmael, and his other books, together with an associated website, has the potential to spread the message further and speedier than was possible previously.

However, materialism, and the innate self-interest of human society, will continue to offer strong resistance: possibly proportionately stronger than the influence of the long established, oligarchic, self-interest groups that had dictated previously the evolution of human society.

The structure of community must depend, to some unknown degree, upon the summation of the perceptions of the individuals of which it consists. These are the perceptions relating to themselves and each other; dependent as they are upon factors such as location.

They will include language, culture, religion, and socio-economic factors: thus the English of the Home counties are likely to view all the other inhabitants of the UK as non-standard English, rather than people of a different region, or nation, with their own identity.

It follows that the facets of day-to-day behaviour, which make for normal social intercourse, have local peculiarities; these have to be allowed for whenever comparisons are made.

These differences are reflected in human response to events and incidents as well as to the various interactions - inherent to human existence - between individuals, individuals and the group, and between groups.

These permutations are reflected in the basic need to communicate, and in the manner of that communication: both are dependent upon the ability to understand, and harmonize, in order to promote peaceful co-existence.

This may offer a greater chance of companionship, but the perceived differences may be sufficient to invoke reaction of at least of curiosity; and - if the differences are seen not to be beneficial - could lead to some level of conflict. These conflicts are compounded by the secondary factors of understanding, such as relative intellect, differences in knowledge, and differences in culture based upon emotional and psychological characteristics.

Ishmael places significance upon these various facets of existence; looked upon as the lessons he wishes we would learn.

The first lesson is the difference between name and identity; a difference that may or may not have significance, nor are they necessarily of greater importance than other characteristics.

Thus there is a significant difference between the loss of identity, and a lack of existence if something, or someone, does not have a name: on the other hand a loss of both individual identity, and a loss of an acceptance of individual existence, is generally exhibited when we become part of an enumerated, or coded, system.

A paradox arises when enhanced recognition and status within a group leads to relative isolation: granted this is usually associated with enhanced comfort and convenience; but these advantages do not necessarily balance the disadvantages arising from increased isolation.

The second lesson is that all relationships have a potential to be greater than the sum of the constituents involved.

This is illustrated by the example of one individual teaching another: at the time when all the teacher's knowledge has been effectively transferred, the process could be assumed to be complete; however the process may be extended by both individuals jointly seeking to extend their knowledge by mutual learning; when the limits of this stage is reached, the 'original teacher' could assume the role of research assistant to the 'pupil'.

This could be considered an organic process allowing 'learning' to progress both within and beyond the immediate generations. If it were otherwise Knowledge could not grow.

History has demonstrated the viability of such process: this viability is however dependent upon the true understanding of the subject and pupil: shortfalls in such understanding will, at the least, result in the failure of the pupils to reach their potential; at the worst, it results in misinformation of the community, a situation often leading to conflict.

Given these negative possibilities one may understand why evidently, beneficial, moral ethos has failed to become innate to modern culture. This failure, and the consequent dilution in proportion to the growth of a civilisation, may be the reason why civilisations seem to have a finite life.

Ishmael's third lesson interprets this as, "we are captive to a civilisation process that compels us to destroy the 'world' in order to live".

This could also infer we have a desire to hold the world captive and have yet to find the knowledge to halt the process.

The flower-power movement, referred to earlier, was perhaps the most recent attempt to achieve a halt.

* * *

It is evident to many that the World of Man cannot possibly survive indefinitely the accumulated effects of this process: The lessons of Ishmael, in the guise of Ishmaelism, could be the means by which the chains may be released.

The book Man on Earth (by John Reader, published by Penguin ISBN 0-14-012699-6) considers the elements of the various types of human existence and the benefits that each could offer to modern society. It is too much of a divergence to include all the comparative examples, but the practise of Swiddening is one that is directly comparable with established agricultural practise, and is yet another example of an appropriate 'technology/practise that was mistakenly junked in the name of progress.

A description is included as an example of how we may have followed the wrong path – although this is not yet been proved to be the case.

It does seem to illustrate: (

- 1) The psyche of mankind may be innately flawed:
- 2) Modern agricultural methods have not resulted in true increases in productivity: (
- 3) There is a possible niche for the best features of all the various types of existence described in John Reader's book.

Note The emergence of agriculture is generally considered to be the birth of Modern Society: This is associated with the emergence of a myth of justification seeking to show that the process dictating our lives has continued to offer increasing rewards.

This myth ignores the obvious, '**that in a finite existence, accelerating reward shortens the future.**'

The myth is merged with a general human perception that Mankind's evolutionary process stopped with this last listed event - or not long thereafter.

While, in the short term, we can never know whether this is true, we have to accept the possibility the evolution of society has replaced individual evolution.

Thus arose the ultimate, mythical conclusion; that the birth of Mankind was the central event of the whole process, with the Earth existing in order to be an automatic, life-support provider for Mankind.

Clearly such status of importance could not have arisen by chance; thus it became evident - to mankind - that the process had been engineered, for his benefit, by a God, or the gods.

* * *

In a society that consists essentially of Leavers and Takers, the Takers compound the myth by believing it was engineered for their benefit only. It is of interest to speculate whether the work of the gods finished with the birth of the Agricultural Revolution, or continues to the present day.

If it did so finish, it suggests it is the role of mankind to finish the task of replacing chaos with a state that is perceived as order.

In this scenario all the ills of modern existence must be Man's responsibility.

Our future is thus dependent upon the relative value of the steadfastness of an ethical cause, compared with the shallowness of greed and envy.

* * *

A majority of the developed world must be made to recognize:

1. They are not at odds with Nature:
2. Nature is not a foe to be conquered: (3) Man is not the Lord of the World: this message needs to replace the myth.

Man will not be the beneficiary if their replacement species are able to make the statement, **“there was once a specie called ‘Man’ who lived a lifestyle oblivious to the fact it would make them extinct”**.

* * *

Ishmael states this in the form:

“We now have in place all the major elements of your culture’s explanation of how things have come to be the way they are. The world was given to Man to turn into a paradise, but he’s always screwed it up, because he is fundamentally flawed. He might be able to do something about it if he knew how he should live, but he does not - and he never will - because no such knowledge is obtainable to him. So however hard he may work to turn the world into a paradise, he will continue to screw it up.”

Note: There is of course an inevitable flaw in this statement; there are sufficient numbers of individuals aware of the deficiencies: they are also aware we are screwing it up: it requires only the means for these individuals to become coordinated, and to jointly elect to pursue an unflawed process of education, for the few to become many. That the plot of the replacement ‘story’ would have to be misanthropic is a significant barrier to any such process.

A fundamental element - perhaps the most important to the long-term existence of humankind - is population. It has importance because of the existence of a law/relationship; yet to be recognised as fundamental:

This Law states, “ Intensification of production in order to feed an increased population leads to a still greater population.”

There is another fundamental law/relationship: the law of competition: this could be defined as, “you may compete within your capabilities, but you must not hunt down your competitors, destroy their food, nor deny them access to food”. Otherwise phrased, “ you must not wage war”.

In turn, by definition, this suggests diversity must itself be fundamental.

* * *

The role of agriculture may be compared with the role of free oxygen in the ecosystem, as discussed in Gaia: it is both essential to existence, yet lethal outside the critical limits.

There is an inherent problem in that the solutions for slowing, or preventing, annihilation also require a re-adoption of some elements of the Leaver culture. Since this culture is perceived as being ‘primitive’, such a policy will inevitably be perceived as retrograde.

In reality a natural existence should invariably be a mix of the two cultures: resolution of this problem is possible provided one could arrive at an appropriate mix of the two cultures; essentially a solution acceptable to Man’s psyche. This state can arise only when Man is prepared to recognise both the Law of Population and the Law of Competition.

However viewed, the present situation: in which one billion of the 6 billion global population are seriously underfed, while at the same time there are one billion who are overfed to a state of chronic disability: is indefensible.

Viewed strictly as a logical exercise, the best scenario that would comply with the law of population would be to remove both of the extremes in order to reduce the population to 4 billion.

This solution - i.e. the extermination of both the obese and the starving - is clearly not an option.

Nonetheless a failure to adopt appropriate policies does illustrate a clear commitment to the Taker cause.

This commitment is the prime reason for the structure of our history of aggression, conflict, and conquest, however achieved.

Had we not been so committed we might be nearer to recognising the fundamental laws.

A logical conclusion is that if the Taker culture is in violation of fundamental law, the premises upon which the culture is based are invalid.

The probable consequence is inescapable; it is only the time scale that is in doubt.

* * *

Stephen Hawking opines that the judgement day - with total annihilation - will be in about 1,000 years: others are more pessimistic and talk of tens of years.

I am inclined towards a time scale of perhaps several generations, but cannot accept a certainty of annihilation.

That will depend upon whether, or not, Certainty and Uncertainty are fundamental

* * *

Change will have to result in the peaceful co-existence of both cultures, dedicated towards the same end, the long-term acceptance of difference.

This would not guarantee the continued existence of everything: there can never be a guarantee that natural events will not change conditions to those that are inappropriate to something. The natural law of, "adapt or become extinct" will always apply.

However persuasive the argument, to adapt at the expense of something else will always be inappropriate: it is the equivalent of assisted, voluntary euthanasia. This possible explains why the inequitable distribution of It follows that not all diversity is appropriate to the Law of Diversity: that which creates discord, and therefore disrupts natural harmony, must be judged as illegitimate.

"Almost every facet of existence has a limiting range and not a defined value"; this statement highlights an invariable Paradox: in consequence there can never be an equitable distribution of resource.

With a Taker attitude the natural state of adaptation and evolution can be suspended: with the Leaver attitude there is little, if any, interference to natural change.

The importance of this statement is significant, because it implies that a Taker culture is incapable of natural adaptation.

Further it seems to confirm the possibility that, in a Taker society, the process of evolution has been transferred to the artefacts upon which Man depends.

* * *

Have we arrived at a point where the options, open to Mankind, can be understood?

There are possibly six such options, of which the sixth is to recognise that human egotism, compounded by natural diversity, will be an insurmountable barrier, preventing any effective action.

The ego-factor may be considered by some to have the greatest influence upon the future of mankind: if they are correct it becomes a race between mankind destroying itself, and its destruction of the world. If this is the situation the race is subject to the same paradoxical logic as that which applied to the race between Apollo and the tortoise.

It is in the nature of mankind to waste time discussing this logic rather than to take positive recuperative action.

* * * * *